The Impacts of Water Sector Reforms on Agricultural Productivity in Afghanistan

Atal Ahmadzai

with

Mujib Ahmad Azizi and Khalid Behzad

July 2017

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Acronyms

CDC	Community Development Council
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GoA	Government of Afghanistan
IA	Irrigation Association
IDI	In-depth Interview
IRDP	Irrigation Restoration and Development Program
IWRM	Integrated Water Resources Management
KU	Kabul University
MAIL	Ministry of Agriculture, Irrigation, and Livestock
MEW	Minister of Energy and Water
MoMP	Ministry of Mining and Petroleum
MoPH	Ministry of Public Health
MRRD	Ministry of Rural Rehabilitation and Development
MUDH	Ministry of Urban Development and Housing
NEPA	National Environmental Protection Agency
PARBP	Panj Amu River Basin Program
RBA	River Basin Agency
RBC	River Basin Council
SCWAM	Supreme Council for Water Affairs and Management
WB	World Bank
WUA	Water User Association

Executive Summary

Introduction

In 2009, Afghanistan enacted its Water Law based on Integrated Water Resources Management (IWRM) principles and aimed at making agriculture a more dynamic driver of the national economy. Though the sector has huge potential for contributing to sustainable development, its dynamism is heavily dependent on the functionality and efficiency of irrigation, which accounts for 95 percent of total water consumption.

The reforms introduced by the Water Law instigated new institutional frameworks and functional mechanisms at central, river, and sub-river basin levels in accordance with the IWRM principles. The reforms are focused on restructuring water management based on river and sub-river basins. This paper examines the impact of the reforms on agricultural productivity.

Methodology

This is a qualitative descriptive study intended to provide an in-depth understanding about the impacts of water reforms on agricultural productivity. In-depth interviews and focus group discussions (FGDs) were used as data collection methods. The study was designed to be conducted in all five river basins; however, Helmand River was excluded as no reforms have been implemented there. The study was conducted in Harirod Murghab, Kabul, Northern and Panj-Amu River Basins. In addition, in-depth interviews (IDI) were conducted with the representatives of relevant line ministries and national institutions.

Findings

The agenda as a holistic and integrated process has been implemented on a very small scale in different river basins. Limited aspects of the agenda, such as the establishment of community-based organizations, have been realized, though only slowly and according to the availability of funds and the security situation. In addition, the lack of political commitment hampers the agenda.

The implementation of the agenda was anything but coordinated and integrated. The relevant ministerial activities were in full disarray and lack of coordination existed within every aspect of the reforms, from policy choices, to decision-making, project/program design, implementation, and data sharing. A struggle for more power in the water sector, competition for donors and funds, and the politics of budget utilization/expenditure were the main reasons for lack of ministerial level coordination.

Cooperation among newly established grassroots organizations, including irrigation associations (IAs), water user associations (WUAs), river basin agencies (RBAs), and others, was much stronger at the horizontal levels than the vertical. Strong cooperation and contact existed between IAs and WUAs, while vertical cooperation between IAs, WUAs, RBAs and other higher organizations was weak. The horizontal cooperation was both inter- and cross-organizational. The implemented agenda was found effective in neutralising inter- and intra-community water-based conflicts between the water users. IAs and WUAs were highly effective platforms for farmers and water users to resolve their conflicts. Accessibility of conflict resolution platforms and instruments at grassroots levels, monitoring and supervision roles of the IAs and having decision enforcement mechanisms were the three main reasons for the effectiveness of the reforms agenda regarding conflict resolution.

The implemented reforms improved community-level agricultural productivity and were highly appreciated by the water users, including farmers. The improved agricultural productivity was facilitated either by the improved infrastructure, including lining the canals and installing gated offtakes, or by the resolution or prevention of conflicts. Improved infrastructure enhanced the flow of irrigation water in the canals by reducing the waste of water, minimising water stealing, and cultivating efficient water sharing. However, increased agricultural productivity did not augment farmers' income due to lack of market access.

Conclusion and Recommendations

The study recommends the creation of a technical, non-affiliated and empowered working group at the central level tasked with implementation of the agenda. The implementation should be revoked from the portfolio of the line ministries, which will neutralise their struggle for power and authority. The water sector portfolio of line ministries should be restructured from political administrative units to natural boundaries of the given river. There is a need for a systematic assessment of the impacts of the implemented reforms at national, sub-national and community levels within relevant national institutions. This study also recommends that no amendments should be brought to the reforms agenda before its full implementation. The study also recommends the creation of a mechanism between water sector institutions and the security sector of the country. This is not securitisation of the agriculture and water sectors; rather, it balances the nexus between food, water, environment, individual, and community securities.

1. Introduction

Afghanistan is an agrarian society and the national economic and social developmental objectives are heavily dependent on agriculture.[1] Agriculture employs 60 percent of the nation's workforce,[2] and is the source of livelihood for the majority of the 80 percent Afghans living in rural areas.[3] In 2015, the net output of the agriculture sector (value add)[4] accounted for 22 percent of gross domestic product (GDP).[5] This number was 27 percent and 38 percent in 2010 and 2000, respectively.[6] However, agriculture has yet to realise its vast untapped potential. However, agriculture is heavily dependent on the functionality and dynamism of irrigation and the water sector. Even though irrigation accounts for 95 percent of the total water consumption in the country, the lack of functional systems has caused underdevelopment and challenged socio-economic conditions.

Understanding this nexus and acknowledging the need for new and effective approaches for the management of water resources, the Government of Afghanistan (GoA) introduced reforms by ratifying the new Water Law in 2009. Following the global pattern, GoA placed the Integrated Water Resources Management (IWRM) at the centre of its national water reforms. Different institutional frameworks and functional mechanisms have been instigated at central, river, and sub-river basin levels to ensure the implementation of the reforms in accordance with the principles of IWRM. These principles, in general, are aimed at ensuring sustainable development, allocation and monitoring of water resources use in the context of social, economic and environmental objectives.[7]

The main source of water in Afghanistan is the rivers originating from different chains of mountains spread across over three-quarters of the land. Melting snow from these ranges constitute 80 percent of the country's freshwater.[8] Since these rivers are the lifeline of agriculture, the new reforms agenda is focused on restructuring the overall functional and structural management of water on a river- and sub-river-basin basis, that is, its natural boundaries. More specifically, these changes are aimed at providing river- and sub-river-basin-based governance in the contexts of social, economic and environmental objectives intended to facilitate inclusive sustainable socio-economic development at the national level.[9] The new agenda integrated and decentralised a disintegrated and highly centralised sector, making it more inclusive.

One of the main goals of foregrounding IWRM principles is to seek tangible solutions to problems at grassroots levels. As indicated by national water sector strategies and Water Law, IWRM principles are adopted to provide tangible solutions to water governance, allocation, and monitoring at river and sub-river basin levels.[10] Similarly, the Water Law is aimed at protecting water resources, ensuring its fair distribution and sustainable usage for the benefit of the national economy, and protecting the rights of the water users.[11] The initiated water reforms should be assessed by analysing their impacts on agricultural productivity at grassroots levels. In order to achieve this, the question that needs to be asked is:

1 The World Bank Group in Afghanistan. Country Update. World Bank. ISSUE 049 O C T. 2016.

2 The World Bank Group in Afghanistan. Country Update. World Bank. ISSUE 049 O C T. 2016. P#30

3 Islamic Republic of Afghanistan. Agriculture & Rural Development Sector Strategy 2007/08-2012/13. February, 2008.

4 As per World Bank, 'value add' is referred to adding up all outputs and subtracting intermediate inputs and it is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources.

5 World Bank. Country Profile: Afghanistan. World Development Indicators database. http://databank.worldbank.org/data/Views/Reports/ReportWidgetCustom.aspx?Report_Name=CountryProfile&Id=b450fd57&tbar=y&dd=y&inf=n&zm=n&country=AFG

6 World Bank. Country Profile: Afghanistan. World Development Indicators database. http://databank.worldbank.org/data/Views/Reports/ReportWidgetCustom.aspx?Report_Name=CountryProfile&Id=b450fd57&tbar=y&dd=y&inf=n&zm=n&country=AFG

7 Global Water Partnership, 2000. Integrated Water Resources Management. GWP Technical Advisory Committee, Background Paper 4. Stockholm: Global Water Partnership Secretariat.

8 ANDS. Water Sector Strategy 2007/08-2012/13. Vol. 2. Pillar 3 Infrastructure. February 2008. P#8

9 Water law. Official Gazette. Ministry of Justice. Islamic Republic of Afghanistan. Issue # 980. 26 April 2009.

10 ANDS. Water Sector Strategy 2007/08-2012/13. Vol. 2. Pillar 3 Infrastructure. February 2008.

11 Water law. Official Gazette. Ministry of Justice. Islamic Republic of Afghanistan. Issue # 980. 26 April 2009. (First Article).

How do the new water sector reforms affect grassroots agricultural productivity within different river basins?

This study is aimed at examining how the institutional frameworks and mechanisms for the allocation and sharing of water at river and sub-river basins introduced by the Water Law are affecting grassroots agriculture. The study seeks to provide relevant policy makers and practitioners with feedback from the five river basins regarding the successes and challenges of the implemented reforms. Since 2009, the GoA has been in the process of implementing reforms by creating different institutional frameworks and operational mechanisms within different areas in most of the river basins for reviving the agriculture sector of the country. This study assessed the impacts of these water sector reforms.

Accordingly, the study is specifically focused on the following:

- The success or otherwise of the implemented reforms in boosting agricultural productivity, and
- The challenges in the implementation of the reform agenda.

From a policy perspective, equality in water distribution and rights is a critical aspect of development and growth in a socio-economic context that is heavily dependent on agriculture. The policy recommendations of the paper are based on and reflect both successes and challenges of relevant actors and stakeholders, including River Basin Agencies (RBAs), River Basin Councils (RBCs), Water User Associations (WUAs), Irrigation Associations (IAs) and NGOs regarding the implementation of the water sector reforms. The conclusions offer policy makers a clear picture of required interventions and amendments in the reforms agenda/Water Law, if applicable.

IWRM and Water Sector Reforms in Afghanistan

In 2009, Afghanistan's first-ever Water Law was ratified. The law, drafted in seven chapters and 40 articles and passed by the parliament in 2008,[12] is aimed at protecting water resources of the country and ensuring its fair, effective and sustainable usageWith the new law, Afghanistan joined the club of the majority of countries that have already incorporated IWRM principles within their national water sector policies and strategies.

For the last couple of decades, the concept of IWRM has been diffused and translated across the globe as an effective remedy for water sharing, rights, and governance challenges. IWRM was first introduced in the UNESCO International Conference on Water in 1977.[13] Ever since, IWRM has transformed into an orthodoxy in water resources management. These principles inform and guide water governance in a huge number of countries; according to the UN Water Survey, by 2012, an overwhelming majority of countries around the world (81 percent) have adopted water laws informed and guided by the IWRM principles. [14]

Generally, IWRM is referred to as a process which promotes the coordinated development and management of water, land and related resources to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.[15] In addition to fairness and sustainability, IWRM is based on integrated and coordinated management for balancing resource protection while meeting social and ecological needs and promoting economic development.[16] It is decentralised and participatory, calling

12 Water law. Official Gazette. Ministry of Justice. Islamic Republic of Afghanistan. Issue # 980. 26 April 2009.

13 Jan Hassing & et al. Integrated Water Resources Management in Action. The United Nations World Water Assessment Programme's Dialogue Paper. 2009.

14 Jan Cherlet. Tracing the Emergence and Deployment of the 'Integrated Water Resources Management' Paradigm. 12th EASA Biennial Conference, Nanterre, 10-13 July 2012.

15 Hal E. Cardwell et al. Integrated Water Resources Management: Definitions and Conceptual Musings. Journal of Contemporary Water Research and Education. Issue 135, Pages 8-18. 2006

16 Odendaal, P. E. Integrated water resources management (IWRM), with special reference to sustainable urban water management. Conference and Exhibition on Integrated Environmental Management in South Africa (CEMSA) 2002, Johannesburg, South Africa.

for joint governance. Lessons from analysing different traditional approaches suggest that fragmented water management is not responsive to the contemporary needs and wants of both water users and the environment.

Before the introduction of the new reforms agenda, Afghanistan for centuries practiced traditional water management. While this might have worked in the past with less population demand and no pressing climate change effects, traditional approaches failed to provide a dynamic agriculture sector. In 2007, the ANDS delineated a number of main challenges confronting the water sector. These were mostly related to lack of adequate and functional infrastructure and institutional capacity, unclear delineation of responsibilities, disintegration of projects among line ministries, and lack of data infrastructure.[17]

Following the IWRM recommendations, ANDS, too, envisioned the transition of the Afghan water sector from a centralised to decentralised institutional structure by establishing jurisdictional boundaries conforming to natural river basins and sub-basins.

Though Afghanistan introduced river basin management systems in the Kajaakai Multipurpose Project in the 1950s by forming the Helmand-Arghandab Valley Association,[18] the new reforms agenda is the first to be implemented in all river basins.

At the central level, different line ministries are tasked with different responsibilities. In total, seven ministries and national institutions, including the Ministry of Energy and Water (MEW), Ministry of Agriculture, Irrigation, and Livestock (MAIL), Ministry of Rural Rehabilitation and Development (MRRD), Ministry of Urban Development and Housing (MUDH), Ministry of Mining (MoMP), Ministry of Public Health (MoPH) and the National Environmental Protection Agency (NEPA) have direct mandates in the water sector.[19] In addition, the Supreme Council for Water Affairs and Management (SCWAM), which was created in 2005, has been mandated as a central coordination mechanism. The specific tasks of the SCWAM are related to coordinating water-related tasks of national institutions, recommending development plans and strategies for cabinet approval, recommending drafted legislations/regulations for approval, monitoring the implementation of plans by line ministries, resolution of water-related disputes between ministries, and ensuring compliance of the Water Law by relevant ministries and agencies. SCWAM has now been upgraded to the Supreme Council of Land and Water (SCoLW).

17 ANDS. Water Sector Strategy 2007/08-2012/13. Vol. 2. Pillar 3 Infrastructure. February 2008.

18 Cullather Nick. Damming Afghanistan: Modernization in a Buffer State. Journal of American History. 89 (2): 512–537. doi:10.2307/3092171

19 Water law. Official Gazette. Ministry of Justice. Islamic Republic of Afghanistan. Issue # 980. 26 April 2009.

2. Methodology

The study utilised a qualitative approach to provide thick description and rich data for understanding the impacts of water sector reforms. Description becomes more relevant in social contexts that lack quantitative data. In addition, qualitative description was relevant to this study since the reforms have been implemented in small geographic areas in each of the river basins. Hence, it was not practical to generate aggregate data at national and sub-national levels or river-basin levels. In choosing a qualitative description method, the intended goal is to observe local actors and community-based institutions that are identified and created within the new reforms agenda.

In-depth interviews (IDIs) with open-ended questions and checklists for thematic key areas, along with focus group discussions (FGDs), were conducted with relevant stakeholders. Key areas of possible probing were identified under each open-ended interview question.

The study was originally designed to be conducted in all five river basins. However, during the actual data collection period, Helmand River basin was excluded from the list since none of the water sector reforms had been implemented there due to compromised security situations. The following four river basins were studied: Harirod Murghab, Kabul, Northern, and Panj-Amu river basins. In addition, IDIs were conducted with the representatives of relevant line ministries and national institutions.

Overall, relevant national institutions and local river basin organisations constituted the sample of the study. National institutions included the following: MEW, MAIL, MRRD, and Kabul University (KU). Additionally, river basin organisations included the following: RBAs, RBCs, WUAs, and IAs. Based on its history and scope of involvement in the agriculture and irrigation sectors, the Food and Agriculture Organization (FAO) was also included in the sample of the study. Respondents of the study were the representatives and members of the above-mentioned stakeholders both at the central and community levels. Two FGDs and two IDIs were conducted in each river basin. In total, there were seven FGDs and nine IDIs that were conducted in the four selected river basins. Furthermore, nine IDIs were conducted with high-ranking officials of the relevant line ministries. The interviews were conducted in local languages, mostly Dari, and then transcribed and translated into English for analysis. Thematic Analysis was used as the data analysis method. A total of six thematic areas were identified and information relevant to each was extracted and arranged under relevant themes for analysis. The key thematic areas are:

1. Implementation of the Reforms Agenda
2. Coordination at the central level
3. Cooperation at Grassroots
4. Agricultural Productivity
5. Reforms Agenda and Conflict Resolution
6. Water Sharing Practices of the Reforms Agenda

3. Findings

1. Implementation of the Reforms Agenda: It has been almost seven years since the ratification of the Water Law. The reforms agenda, however, has been implemented partially on a very small scale, and, as a holistic and integrated process of water resources management, has remained mostly in papers. Due to dependency on the availability of funds by and preferences of donors, as well as the security situation on the ground, only some aspects of the process, mainly the establishment of community-based organisations, have been realised in a limited scope in different river basins since 2014. Finally, compromised central-level political commitment is the third reason for the failures in the realisation of the reforms agenda.

It is to be acknowledged that the realisation of the IWRM-informed water governance has some internal technical challenges. The literature suggests that, contrary to its rapid dissemination and expansion around the world, the implementation of IWRM remains prolonged and challenged. There is still much debate about the practical value of IWRM, given its malleability and the lack of concrete guidelines for its implementation.[20]

The following statement from a high-ranking official at the MEW provides an overall picture regarding the current implementation status of the agenda:

> *"The agenda is implemented partially only in limited number of communities in Harirod Murghab, Panj Amu, Northern, and Kabul river basins. The agenda has yet to be kicked off in Helmand basin. The only RBC and RBA have been established in Panj Amu. In Northern basin, a few WUAs has been established by MEW and I guess MAIL has some IAs. In Harirod Murghab basin, MEW has WUAs and RBC and MAIL have some IAs. MEW could not establish WUAs in Kabul basin."*[21]

Since 2010, MAIL has established a total of 350 IAs in four river basins, namely, Kabul, Northern, Panj Amu, and Harirod Murghab.[22] To put it into context, MAIL, under the reforms agenda, should establish a total of 30,000 IAs all around the country. Establishing a total of 350 IAs in six years reveals the excruciatingly slow process of the reforms application. The challenged status of the implementation is acknowledged by policy makers and practitioners at ministerial level. and it is impossible to complete all the associations until the end of 2019.[23]

The Panj Amu river basin: From the most focused to the abandoned

Panj Amu River basin was the pilot project for the implementation and testing of IWRM in Afghanistan. In 2004, the practical work, including the construction of infrastructure, was initiated. Organisational development (establishing of WUAs and IAs) was undertaken in 2006 and the first-ever IWRM-related WUAs were established in Kunduz, Takhar, and Baghlan provinces under the Panj Amu River Basin Program (PARBP). Subsequently, other WUAs were established in Badakhshan, Takhar, Bamyan and Baghlan provinces. From 2007 to 2014, more than 91 WUAs were established in the basin. However, since 2014, with the worsening security situation in the area, mainly in Kunduz province, the IWRM-related activities in the area not only halted, but the established organisations become almost dysfunctional. This study found that current members and representatives of the established WUAs conceal their identity due to the ongoing terrorism by the Taliban. It was even difficult to find and contact potential respondents for this research. The WUA members are highly disappointed and hopeless. On top, most of the WUAs lost their equipment to looting and plunder during the capture of Kunduz in 2015. It seems that the established WUAs will disappear and all the achievements will vanish if the government does not take the required steps.

-- From study observations

20 Jan Cherlet. Tracing the emergence and deployment of the 'Integrated Water Resources Management' paradigm. 12th EASA Biennial Conference, Nanterre, 10-13 July 2012, Unpublished document.

21 Anahita Bakhshi, Director of Policy and plan, Ministry of Energy and Water. 8 March 2017

22 Naem Salarzai, Technical Coordinator On-Farm Water Management, Ministry of Agriculture, Irrigation and livestock (MAIL). 14 March 2017

23 Naem Salarzai, Technical Coordinator On-Farm Water Management, Ministry of Agriculture, Irrigation and livestock (MAIL). 14 March 2017

As mentioned, lack of security is one of the main obstacles hampering the reforms.

Generally, the implementation of the Water Law is difficult in Afghanistan, and insecurity has had a remarkable impact on the agenda. In Faryab province, we needed to construct a big water intake valve, but due to insecurity we could not go and survey the area.[24] Helmand River basin is affected the most by this insecurity. Due to its dire security situation, nothing pertaining to the reforms has been implemented in the basin. We were unable to start establishing associations in Helmand and unfortunately no donor is willing to allocate funds for the basin.[25] Additionally, insecurity in distant districts directly affected the implementation of the new reforms and the sustainability of the already-implemented reforms. Thus, we cannot currently establish community-based associations or monitor the work and activities of the remote established associations.[26]

The fact that the security situation was different within a given river basin not only restricted the implementation of the agenda, but also limited and challenged the outcomes of the reforms in secured communities. In the Harirod Murghab river basin, the reforms have been implemented in the secured downstream communities including Engil, Ghoreeyan, Guzara and Zendajan districts, while reforms have yet to be initiated in the upstream districts of Chest, Obeh and Pashtun Zarghoon due to insecurity. This restricted the improvements in the agricultural productivity as the amount of water from upstream, insecure areas was left unchanged.

The variation in the security situation within a river basin caused imbalanced implementation of the agenda. For example, in Harirod Murghab basin a total of 80 IAs have been established. All of these were created in the secured districts of the three provinces of Herat, Badghis, and Ghor. No IAs have been established in Farah province and in insecure districts of the above-mentioned three provinces. Lack of security is the main reason for not establishing IAs in the unsecured districts of Herat, Ghor, Badghis, and Farah provinces as a whole.[27]

The lack of centre-level political commitment to the reforms seems to be another main factor for the stagnated implementation of the agenda. IWRM requires strong political commitment to reform and to inter-organisational, cross-sectoral management.[28] The clear manifestation of the compromised political commitment was the lack of inter-sectoral/inter-ministerial coordination. In addition to the lack of coordination, the unwillingness at the ministerial levels to diffuse and delegate power and authority to RBAs was yet another manifestation of the lack of political commitment. Establishing RBAs is aimed at overall planning of water resources, protection of the environment, equitable distribution of water, and regulation and development of other water-related issues.[29] This means that much of the water sector's specific authorities and the responsibilities of line ministries, mainly MEW, MAIL, and MRRD, will be transformed to RBAs. The absence of RBAs is the reason that all interventions in the water sector are on an ad hoc basis, uncoordinated, disintegrated, and in some cases duplicated. RBA plans have not been finalised yet, despite the fact that it has been many years since the initiation of the reforms agenda.

2. Coordination at the central level: Coordination among line ministries was found to be lacking, both centrally with regard to policy and on the ground. High-ranking officials from every involved line ministry was blaming the others for the failures in coordination and integrating efforts. The representative of MEW acknowledged that besides budget limitations, the lack of coordination among line ministries is the main reason for the slow and limited implementation of the reforms agenda in the field.[30] IWRM theoretically is aimed at addressing problems that result as the

24 Esmatullah, General director of North River Basin. 11 April 2017

25 Naem Salarzai, Technical Coordinator On-Farm Water Management, Ministry of Agriculture, Irrigation and livestock (MAIL). 14 March 2017

26 Naem Nawabi, director of Panj Amo River basin. 29 April 2017

27 Field Observation from Harirod Murghab river basin

28 Wietske Medema. Brian McIntosh. Paul Jeffrey. From Premise to Practice: a Critical Assessment of Integrated Water Resources Management and Adaptive Management Approaches in the Water Sector. Ecology and Society 13(2): 29. [online] URL: http://www.ecologyandsociety.org/vol13/iss2/art29.

29 Water Law. Official Gazette. Ministry of Justice. Islamic Republic of Afghanistan. Issue # 980. 26 April 2009. (Article 12)

30 Wais Ahmad Basiri, Technical advisor of MEW, Kabul. 8 March 2017

fault of fractured planning and disconnected processes. It involves multiple organisations and stakeholders operating across sectors and scales.[31] However, what was observed and found within the IWRM-informed reforms agenda in Afghanistan was completely fractured planning and disconnected processes, mainly at the centre level. The lack of coordination seemed to be due to the struggle for more authority/power in decision making and implementation, and more funding. Every ministry wants to have the most donors and thus seeks to illustrate that others engage in few activities, while their ministry engages in many.[32]

The struggle for power between central-level line ministries affected the implementation of the reforms agenda. Consensus is crucial for realising the IWRM agenda. To reach this horizontal and vertical reconciliation of varying sectors and levels, IWRM counts on some form of Habermasian communicative rationality: actors reach, through consensus building, a common understanding of the problems and the desired actions.[33] Each of the line ministries, namely MEW, MRRD and MAIL, are exclusively and independently focused on creating and supporting the community-based organisation that is under its respective portfolio. MEW reported that MRRD does not comprehend and acknowledge the need for creating and forming the new community-based organisation of water users or WUAs. Instead, MRRD argues that with the existence of Community Development Councils (CDCs), it is unnecessary and an example of organisational inflation to create WUAs. Similarly, MAIL is independently focusing on establishing IAs, without coordinating its efforts with MEW.

> *"We have lots of challenges in terms of lack of cooperation with MRRD and MAIL. MRRD was asking that CDCs are already in place and there is no need to have WUAs, while MAIL was insisting on having IAs. They (MAIL and MRRD) are not sharing their project plans with us at least for having useful management of water at the river basin, canal, and on-form levels."*[34]

MEW considered the structures of CDCs and IAs as overlapping with WUAs and RBCs, and claims that these two community-based structures are designing and implementing water sector projects without coordinating with MEW's community- and river-based organisations.

The competition for donors and funds also resulted in the duplication of activities. For example, MEW undertook the Irrigation Restoration and Development Program (IRDP) project, while MAIL is implementing On-form Water Management, a similar irrigation project from the same donor. CEBALE is a third irrigation project being implemented by MRRD.

In addition to the struggling power dynamics and quest for authority, the politics of budget utilisation/expenditure may have had a role in the lack of coordination between line ministries. For example, MAIL has established many tertiary canals and built small dams without coordinating its efforts with MEW, which is responsible for the main canals. In the absence of functional main canals, tertiary canals cannot contribute to agriculture. Most of the construction projects of MAIL are similarly uncoordinated and, from a cost-effectiveness perspective, represent a misuse of the budget.[35] However, politically for the MRRD or any other relevant ministry, the main point of concern is not misusing the budget, but the underutilisation of the budget. The primary goal for ministries is to have a high budget expenditure rate at the end of the fiscal year, as parliament impeaches ministers with low budget expenditures. While inter-ministerial coordination requires more time, line ministries prefer to use the available budget on an ad hoc basis rather than in a coordinated manner. In Afghanistan, ministries are evaluated solely on the rate of their budget spending, without thinking about the impacts of a project.[36]

31 Wietske Medema, Brian McIntosh, Paul Jeffrey. From Premise to Practice: a Critical Assessment of Integrated Water Resources Management and Adaptive Management Approaches in the Water Sector. Ecology and Society 13(2): 29. 2008. [online] URL: http://www.ecologyandsociety.org/vol13/iss2/art29.

32 Anahita Bakhshi, Director of Policy and plan, Ministry of Energy and Water. 8 March 2017

33 Saravanan et al. Critical review of Integrated Water Resources Management: Moving beyond polarised discourse. Natural Resources Forum 33 (2009) 76–86

34 Wais Ahmad Basiri, Technical advisor of MEW. Kabul. 8 March 2017

35 Anahita Bakhshi, Director of Policy and plan, Ministry of Energy and Water. 8 March 2017

36 M. Aref Mirkhil MRRD. 20 March 2017.

While the new Water Law allocated more policy- and implementation-related portfolios in the water sector to MEW, the study revealed that, between the three line ministries of MEW, MAIL and MRRD, MEW criticised the other two ministries most for overlooking its role in designing and implementing water sector projects. The lack of coordination is a serious challenge for the reforms agenda and has a technical reason that is worth noting. Within the last one and a half decades, MEW has always remained a highly politicised institution at the centre of the power struggle between the existing political entities. For a majority of these years, the leadership of MEW remained highly political, which apparently took a toll on the technical capacity building of its staff and donor attraction/attention. MAIL and MRRD, based on their crucial role in the envisioned development of the country, were at the epicentre of donor attention during these years. This enabled both ministries to have the means and tools for technical capacity building, including but not limited to, attracting donor funds. Currently, in comparison to MAIL and MRRD, MEW is not successful in obtaining funds for different projects, which made it lag behind in the implementation of its reforms agenda, subsequently misaligning and disintegrating activities pertaining to water and irrigation. The pattern in Afghanistan is that institutions that are able to negotiate with the donors will get more money and thus, more projects. MEW cannot get projects as it does not have the technical capacity to negotiate, while MAIL and MRRD do.[37]

> Each of the three ministries [MEW, MAIL, and MRRD] is trying to establish a holistic empire of their own in all aspects of the water sector without thinking that it is impossible to have it all, while not being able to manage it.
>
> -- Arif Mirkhil, MRRD

Subsequently, the lack of coordination among the line ministries affected the implementation of the agenda in the field. For example, main canals are within the working scope of MEW, while MAIL is responsible for constructing and rehabilitating tertiary canals. "Instead of spending the budget on the main canals and intakes, the money goes to small canals. As such, if there are no intakes in the main canals, how can an off-take or tertiary canal have water?"[38]Another example of the lack of coordination is the Salma Dam, the construction of which was the portfolio of MEW since it was a national hydropower project. MAIL, however, did not or could not integrate its plans for irrigation canals in this project. The result is that, upon its completion, the multimillion national project could not expand the irrigation system in the area. MAIL blamed MEW for not integrating other relevant ministries in the Salma Dam project.[39]

3. Cooperation at Grassroots: It was found that cooperation among newly established organisations including IAs, WUAs, RBAs and others was much stronger at horizontal levels than at vertical ones, meaning that there was strong cooperation and contact between IAs and WUAs. Vertical cooperation between combinations of IAs, WUAs, RBAs or other higher organisations was weak. The horizontal cooperation was both inter- and cross-organisational. For example, while IAs had good relations with WUAs of their respective communities, they also established cooperation with IAs of other areas. Similarly, inter- and cross-organisational patterns of cooperation were observed in the case of WUAs. For example, upstream and downstream WUAs in the Harirod Murghab basin supported each other in pressuring the government to open the gates of the Salma dam canal for irrigation.

The cross-organisational cooperation at the community level was facilitated both by needs and wants. The technical knowledge of IAs in water sharing and irrigation influenced and motivated the WUAs to establish links and contacts. In the Harirod Murghab river basin, the representatives of WUAs acknowledged that their cooperation with IAs was to benefit from their technical knowledge.

> *"We have close cooperation with IAs and they are well-trained and know more about the cultivation of crops and irrigation."*[40]

37 Naeem Eqrar. Dean School of Geosciences at Kabul University. 30 March 2017

38 Wais Ahmad Basiri, Technical advisor of MEW. Kabul. 8 March 2017

39 Fahimullah Ziaee' DM of MAIL Date: 15 March 2017

40 M. Ibraheem Cashier of WUA Joy Pashtun Zarghoon. FGD with WUAs of Harirod Murghab river basin. 19 April 2017

The horizontal inter- and cross-organisational cooperation at the community level was further strengthened by regular meetings and contacts.

> *"We [the WUAs] have close cooperation among ourselves and we are sharing our experiences in the monthly meetings."*[41]

The existence of strong grassroots horizontal cooperation suggests that community-based organisations deemed ground realities much superior than their respective affiliation with institutions at the centre level. These organisations did not seem to follow the politicisation of the reforms agenda that originated at the ministerial level. This can be an indication for restructuring the water-related organisational structures of line ministries at sub-national levels from geographic units to river basin administration. While horizontal cooperation was apolitical, vertical cooperation was found highly political and hence challenged.

This study found that the vertical cooperation between community-based organisations and entities at the top of the hierarchies was highly challenged. Within the studied river basins, it was revealed that cooperation between RBAs and community-based organisations including RBCs, WUAs, and IAs was lacking. For example, most of the respondents of an IA FGD in the Kabul river basin knew and acknowledged good relations with other IAs, but they could not comprehend the existence and role of WUAs.[42] Similarly, in the Northern basin, respondents at the community level complained that RBAs and WUAs are implementing projects without consulting with IAs and the community.[43] This apparently made designing and implementing irrigation projects quite difficult. As such, these projects were based on skewed or speculative data about the command area of the canals that subsequently led to incompatible intakes and offtakes. This mismatch caused water users at the community level, including IAs and farmers, to seek better coordination and cooperation with WUAs, but they failed.[44] The need for establishing and strengthening the vertical cooperation was demanded by respondents at the grassroots levels. Having horizontal cooperation between WUAs is not enough and there is a need for close cooperation and coordination with other relevant governmental departments.[45]

4. Reforms Agenda and Conflict Resolution: The community-based institutional reforms were found to have mitigated inter- and intra-communal water-based conflicts among the water users. These organisations, including IAs and WUAs, became desirable alternative platforms for farmers and water users to resort to from the corruption-stained and elitist formal conflict resolution mechanisms. Three reasons were apparently significant in the effectiveness of the water reforms with regard to conflict resolution:

A. **Accessibility:** Conflict resolution platforms and instruments were accessible within the implemented reforms. IAs are composed of elected representatives of the community and they were always available and accessible. Previously, people were seeking the traditional conflict resolution mechanism including the Mirabs, district governor or elders of the village. These sources are not always available and accessible as they are not exclusively mandated for transforming water conflicts.

B. **Monitoring and Supervision:** Monitoring and supervision roles of the IAs at the community level reduced conflicts among water users. In addition, it provided a mechanism for rapid transformation of conflict on water sharing. In different river basins where the community-based institutions were created, the IAs reportedly played a dynamic role in the prevention of water stealing by monitoring and supervising water-sharing practices.

41 Miragha Head of WUA Joy Guzara. FGD with WUAs of Harirod Murghab river basin. 19 April 2017 (Paraphrased)

42 Observational finding from FGD with Heads, deputies and members of irrigation associations of Kabul river basin at MAIL (On-Farm Water Project) meeting room. 5 April 2017

43 Noorullah Cashier of IA Merza Qasem. FGD with IAs of Northern river basin. 12 April 2017

44 M. Naseem Head of IA Taghayee Baghee. FGD with IAs of Northern river basin 12 April 2017 (Paraphrased)

45 Ghulam Farooq Head of WUA Joy Kohsaan. FGD with WUAs of Harirod Murghab river basin 19 April 2017

C. **Enforcement of Decisions:** The "fine" system enabled the community-based organisation to have the instruments for implementing their decisions for regulating water sharing and/or transforming conflicts. Some farmers were stealing the water by opening a drain from the upstream users to their land.

The community-level participants acknowledged the ability of the new reforms in resolving water-based conflicts among the water users. Currently, conflicts have reduced as people know that IAs monitor water sharing and charge fines.[46] In addition, the specific allocation of water for every farmer at the offtake enables IAs to effectively transform water-sharing-related conflicts.

It is important to notice that the reduction in conflicts and the effectiveness of the implemented reforms seemed to be the cumulative result of different factors, including implementation of the hardware (intake and offtake gates), building physical infrastructure (lining the canals), introducing new frameworks and including system-related factors such as the strengthening rule of law in secured areas where the reforms have been implemented.

The effectiveness of the implemented reforms lay in the very participatory and egalitarian nature of the structures and frameworks in both mitigating conflicts and sharing water. The traditional Mirab or formal interventions are authoritative, hierarchical, and prone to corruption. During the long years of dysfunctionality, the Mirab system failed to gain the trust of water users and farmers at the community level. Grassroots participation and transparency of the decision-making mechanisms brought high effectiveness to the reforms regarding conflict resolution. The decisions that were made by Mirab or village elders were mostly biased and unfair due to corruption within these traditional resolution mechanisms. In addition to being participatory, the success of the newly implemented mechanisms stem from its hybrid model of conflict resolution and reporting processes. As a community-based entity, IAs resolve conflicts and report the decision to the on-farm management for attesting and registering of the decision. This approach creates a bridge not only between the community and the state, but also between community-based conflict resolution mechanisms and formal decision-making authorities.

Traditional Mirab conflict resolution mechanisms are prone to corruption because the decisions are individual-centred. As such, power elites in the area can easily manipulate the system. Powerful people put pressure on the Mirab or threaten him to close upstream offtakes.[47] Within the implemented reforms, the Chakboshi or Mirab is not the only one responsible for operating canals and the distribution of water. On the contrary, it is the IA members who, in the company of the Mirab, are involved in both water sharing and conflict resolution.

It is crucial to know that the conflict prevention and transformation abilities of community-based organisations are very limited at the main canals. As main canals are within the administrative scope of different units (districts), the IAs are reportedly not effective in preventing and/or mitigating water-sharing-related conflicts along the main canals. IAs are effective only within a single administrative unit. However, only in the Panj Amu river basin did the reforms transform inter-provincial water-based conflict. The establishment of WUAs helped resolve the problems between upstream and downstream canals in Kunduz province of the Panj Amu river basin. Before the rehabilitation of the canals, installation of the gated intakes and offtakes, and the establishment of the community-based organisations, the downstream and upstream conflicts were reportedly very high. Mostly, the upstream users were stealing the water of the downstream communities. WUAs in Kunduz province helped resolve the conflicts by patrolling the canals and creating a transparent process for the designation of Mirab.

> *"All the times there was complain that upstream people are stealing the water which was right, so, we resolved all these issues after establishing of WUA."*[48]

46 Abdul Ahmad Head of IA Khwajagi Bushran Engil. FGD with IAs of Harirod Murghab river basin. 19 April 2017

47 M. Rafee Cashier of IA Auofa Malek. FGD with IAs of Northern river basin. 12 April 2017

48 Abdul Bashir Head of WUA Abdullah canal Aliabad. FGD with WUAs of Panj Amu river basin. 1 May 2017

Because the authority and portfolio of the RBA is not restricted to the administrative units or provinces, it was able to resolve the enduring conflict between the upstream and downstream provinces. These agencies are responsible for a river basin that incorporates both upstream and downstream provinces on the course of the given river. Previously, it was the provincial authorities that were involved in the management of water and mostly in conflict with other provinces with regard to water sharing. In the new reforms, water management and other related issues are under the authority of the RBA, whose scope transcends traditional administrative units ,that is, provinces. However, the lack of cooperation between line ministries at the central level and between different directorates of these ministries at the provincial level made it difficult for RBAs to be established or deliver their services effectively. Respondents acknowledged that the structure and functions of RBAs are more participatory and water-user oriented than the previous water management aystem that was Mirab-centred. The lack of cooperation between the relevant state-owned institutions created hurdles for RBAs.

In the Northern river basin, the implemented reforms helped water users to effectively resolve water-sharing conflicts. Respondents considered the effective community-based conflict resolution mechanisms as one of the most important achievements of the IAs. In the Harirod Murghab basin the newly implemented reforms also helped transform inter-community water-based conflict. In some parts of the basin, such as the Chest-e-Sharif district, respondents acknowledged that warlords and other power elites including the Maliks or Arbabs are still influential enough to interfere in conflicts and transform them as per their benefits and interests. In the Joy Chest canal, it is still the warlords and powerful people who are the decision makers regarding water-based conflicts.[49]

> The objective is sustainable development of the country, but it is not easy. However, we are moving in the right direction. The increase in the production of the saffron of Herat, pistachios of Badghis, grapes of Herat, and watermelons of Farah are the signs of such a development. We are having increasing amount of agriculture production in our region. The need, however, is that government should provide us with access and links to market. I am sure that Hari Road River Basin will have lots of improvement in the agriculture products.
>
> -- Abdul Karim, head of WUA Joy Engil

5. Agricultural Productivity: At the centre level, the line ministry representatives reported an improvement in the agricultural productivity due to the implementation of the reforms agenda. However, there were no systematic mechanisms (relevant ministries) to assess and evaluate the impacts of the reforms on agricultural productivity. The sources for the speculated figures couldn't be traced. Hence, different official sources were reporting different numbers about the outcome of the reforms pertaining to agricultural productivity. Some of the high-ranking participants mentioned that the new reforms increased agricultural productivity by up to 35 percent.[50] There, however, did not exist any credible source to support this claim, which was articulated for political consumption at the quarterly or monthly meeting of the Supreme Counsel of Water (SCoW) headed by the president. The only existing source for this claim was a document containing minutes of the quarterly meeting of SCoW. In the meeting, the 35 percent claim was made by the deputy minister of MAIL.[51] However, a participant of this study, who was representing MAIL, stated that the increase in agricultural productivity in areas where the reforms agenda has been implemented is around 15 percent. He further elaborated that this increment in productivity subsequently caused an increase in the livelihoods of farmers by 40-50 percent.[52] Nevertheless, what was not undisputed was the unanimous grassroots understanding within all the studied river basins about the role of the implemented reforms in the improvement of agricultural productivity.

49 Mir Shafaqatullah Member of WUA Joy Chesht. FGD with WUAs of Harirod Murghab river basin. 19 April 2017

50 Among others, Mr. Basiri mentioned this number in the interview.

51 Wais Ahmad Basiri, Technical advisor of MEW. Kabul. 8 March 2017

52 Naem Salarzai, Technical Coordinator On-Farm Water Management, Ministry of Agriculture, Irrigation and livestock (MAIL). 14/3/2017

At the community level, the implemented reforms were highly appreciated and welcomed by the water users, including the farmers. The changes in infrastructure seemed to enhance the canals by reducing waste, minimising water stealing, and efficient management of water sharing. At the grassroots levels, increased agricultural productivity was reported in all river basins. In the Harirod Murghab basin, mainly in Herat Province, agricultural productivity improved in areas where the new reforms have been implemented. Within different canals and water schemes, water users including the farmers acknowledged that their agricultural productivity has increased. Similarly, in the Northern River basin, farmers and other community respondents reported increased agricultural productivity. For example, in Balk district, an IA representative reported that within the specific irrigation area agriculture products increased 20 percent and 30 percent compared to 5 and 10 years before, respectively.[53] As in other river basins, respondents at the Kabul basin reported that the newly implemented reforms increased agricultural productivity, with some respondents reporting high-percentage increments. Prior to the reforms, a farmer used to harvest 280 kg of wheat from one acre of land, but with the reforms this increased to 700 kg of wheat.[54]

In parts of the Harirod Murghab basin where the reforms were implemented, water users at the community level reported an increase in the agricultural productivity. For example, in the Joy Zendajan canal, farmers used to rotate 33 percent of land cultivation every year.[55] With the application of the reforms, the farmers increased the size of land for annual cultivation from 33 percent to 50 percent. Based on this improvement, the local farmers and water users reported a 20 percent productivity increase.[56] Respondents at grassroots levels also acknowledged an increase in the agricultural productivity of the area. Even in places where reforms were implemented downstream but not upstream, the respondents acknowledged that the reforms increased irrigation efficiency. This study has found that the reforms increased the amount of production mostly by increasing irrigation efficiency, not the amount of water allocation. Irrigation efficiency was reported in all of the studied basins.

As discussed earlier, the water sharing in the Harirod Murghab basin, mainly in Herat province, employs a century-old system that identifies users' rights. The newly implemented changes did not, and could not, change the water rights. Rather, they introduced effective and efficient mechanisms for the utilisation of Aqaba (water allocation). The increase in agricultural productivity in the Kabul basin was related to the increased efficiency in irrigation practices due to the improvement in water flow and the prevention of water wastage. The efficiency in irrigation practices caused an increase in arable land.

> *"Before, we used to irrigate only four acres of land in 30 minutes; now it is up to 6 acres in the same amount of time."*[57]

The irrigation efficiency enabled famers in downstream areas to cultivate more land that they couldn't irrigate before the reforms.

> *"Previously, water took up to 5 hours to reach our lands [from the upstream] but now it reaches in a half an hour. In addition, during the end of the spring season, the downstream areas used to not have water but now water reaches there three to four times per season."*[58]

In the Northern river basin, where water reforms have established new community-based organisations, the respondents reported that the efficiency of irrigation has improved multifold. In Balk district, it was reported that the amount of time required for downstream farmers to irrigate their land has been reduced, which helped increase the amount of arable land.[59] These

53 M. Rafee Cashier of IA Auofa Malek. FGD with IAs of Northern river basin. 12 April 2017

54 Hayat Khan. Head Mirab of Dasht-e-Archi IA in Dasht-e-Archi district. Kapisa province. FGD with representatives of IAs of Kabul river basin. 5 April 2017

55 Hayel is a local practice that is referred to a cultivation practice of rotating 33 percent of land every year for irrigation.

56 Qudoos Head of WUA Joy Zendajan. FGD with WUAs of Harirod Murghab river basin 19 April 2017

57 Yar Mohammad Khan. Head Mirab of Khawja Chesht wali IA in Deh Sabz district. Kabul province. FGD with representatives of IAs of Kabul river basin. 5 April 2017

58 Shir Mohammad Khan. Head Mirab of Koftiba Canal in Char Asyab district. Kabul Province. FGD with representatives of IAs of Kabul river basin. 5 April 2017

59 M. Dawoud head of IA of Dehrazi. FGD with IAs of Northern river basin

established local organisations and management mechanisms helped agricultural productivity by preventing water wastage and theft. Subsequently, the increase in the amount of water led to the expansion of command areas of the given canals which enabled farmers to cultivate more land and generate more income.[60]

However, it should be noted that the reported increase in agricultural productivity may not be optimal. There still exists potential to increase productivity by increasing the amount of water in the main canals. In addition, enhancing the capacity of IAs and WUAs, mainly through training on best irrigation practices and equipping them with the proper measurement tools, will enable them to further enhance productivity.

> The onions produced in my village were enough for the entire province. As there was no market, the farmer didn't even bother to harvest them. The price reduced to the level that a Ser of onion (7 kg) was only 15 or 20 AFN [up to 30 cents]. This price is not enough even for compensating the wages of the labourers needed for the collecting of onions in the field.
>
> -- Noorullah Cashier of IA Merza Qasem

In addition, it is crucial to understand that increased agricultural productivity does not mean improvement in the livelihood of the farmers in terms of high income. The lack of market access for agriculture products was reported in all areas where reforms boosted productivity. In Balk district on the Northern river basin, the increased amount of agricultural productivity caused lower prices for agriculture products. Here, respondents criticised the Department of Agriculture for not finding market access for farmers to sell their products. While reforms were influential in increasing the production, it was once again the lack of coordination and the disintegrated nature of the reforms implementation that prevented the farmers from benefitting financially.

6. Water-Sharing Practices of the Reforms Agenda: A common misunderstanding about the new reforms is that the agenda introduced a new water rights approach and conflict resolution mechanism. The reality is that while water rights remained traditional, the newly implemented reforms brought new instruments and frameworks for better operationalising the traditional approaches. Though participants at grassroots levels in all river basins demanded changing the existing water rights, it is not possible to do so without bringing land reforms. Water rights are integral to land ownership and usage rights within both customary laws and religious doctrines. Practically, changing water rights in a country like Afghanistan, which has weak formal institutions and widespread customary laws, is a troublesome process. While changing water rights without initiating land reforms is not practical, land reforms are politically and socially a high-risk process and any state with weak institutions will not consider it lightly. Hence, it is almost impossible in the current socio-political contexts to change the existing water rights and introduce new ones. This reality is well understood by the new Water Law, which promotes integrated, decentralised, and participatory mechanisms and frameworks for optimising the century-old water-sharing systems.

The main differences between the newly implemented reforms agenda and the traditional Mirab system is the nature of decision making. The reforms agenda is participatory and diffused from a single source to representatives within the elected bodies, including WUAs and IAs. The Mirab system, on the contrary, is centralised, allocating all of the power to one individual who is mostly biased towards power and warlords. As mentioned by a respondent in the Harirod Murghab basin, the Mirab system had no accountability and mostly ignored downstream farmers and equitable water sharing.[61] It should be clear that the role of Mirab is still incorporated into the new community-based organisations, mainly IAs. However, the Mirab is not in the position to individually decide on water sharing or conflict resolution. He is, on the contrary, part of a mechanism with identified instruments for decision-making.

60 M. Rafee Cashier of IA Auofa Malek. FGD with IAs of Northern river basin 12 April 2017 (Paraphrased)

61 Ghulam Habib, Head of WUA Joy-e-now Engil. FGD with WUAs of Harirod Murghab river basin 19 April 2017

In areas where reforms have been implemented, conflict resolution is delegated to the established organisations. In these areas, water users were found to exclusively use the mechanisms introduced by the reforms agenda. This finding is not in sync with UNAMA's Rule of Law field assessment that revealed how water users continue to rely exclusively or, at least, predominately on local water masters to resolve disputes.[62] Such a finding is highly contextual. In general, people resort to customary conflict resolution mechanisms instead of formal justice systems. However, in places where the new reforms have been implemented—very limited in scope—water users are exclusively using the newly introduced mechanisms for resolving water-based conflicts.

As mentioned earlier, the new reforms did not change the water rights system, but only introduced new instruments and organisations for better efficiency and management. The role of the Mirab as the water-sharing expert is incorporated into the new reforms within IAs and only provides technical knowledge on water sharing and conflict resolution. The decision is participatory and based on collective consensus. One factor that facilitated the new reforms is the reduction of corruption opportunities for the Mirab, who can no longer sell downstream water to upstream farmers because there is a WUA.[63]

62 UNAMA. Water Rights: An assessment of Afghanistan's legal framework governing water for agriculture. Page 2

63 Abdul Karim Head of WUA Joy Engil. FGD with WUAs of Harirod Murghab river basin 19 April 2017

4. Conclusion and Recommendations

The implementation of the IWRM-guided reforms agenda has not been completed in any of the river basins. Ever since its ratification in 2009, its implementation has remained very slow and the agenda has been put into practice on a small scale within different river basins. Additionally, the organisational structures recommended by the Water Law have not been established in any of the river basins. The agenda was not initiated in the Helmand basin at all. Community-based organisations, including WUAs and IAs, have formed in limited numbers in the Panj Amu, Northern, Kabul, and Harirod Murghab river basins.

The setback in the implementation of the agenda is mostly caused by the lack of coordination, limited financial/funding resources, and challenged security situations. The agenda is further hampered by a complete lack of coordination at the ministerial level. The power struggle among the line ministries made the implementation highly politicised. It seems that with the existing power dynamics between line ministries, it is not feasible to implement the agenda as a holistic, integrated and decentralised process.

Though the agenda has been implemented only in limited areas in the different river basins, it has resulted in high satisfaction of water users and other stakeholders at grassroots levels. In addition, the agenda is highly effective in water-based conflict resolution at the community level and it has led to improved agricultural productivity. Aimed at operationalising the agenda, sources including some studies and even line ministries (including MRRD and MAIL) suggest amending the Water Law. Such a suggestion would undermine the implemented reforms pertaining to water distribution, irrigation efficiency and conflict transformation/resolution. This study could not find any justification for changing the Water Law.

The main challenge in the implementation of the agenda is the incompatibility of IWRM-informed governance structures and the current administrative structures. IWRM suggests water governance to be based on the natural boundaries of the given river, while the water sector is based on political administrative units. This incompatibility ultimately stymied the agenda.

There exists no systematic and scientific approach within the line ministries to evaluate and assess the effectiveness of the implemented reforms agenda pertaining to agricultural productivity and conflict resolution. This is causing speculative figures, information, and biased judgments about the effectiveness of the implemented agenda.

Security was one of the main factors regarding the successful implementation and sustainability of the reforms agenda. The implementation of the agenda was rendered impossible in unsecured areas. Furthermore, the implemented agenda was not sustainable in the face of prevailing insecurity.

As mentioned earlier, the implemented reforms improved agricultural productivity at grassroots levels. Increased harvest, however, did not directly translate to improved livelihoods or income for the farmers. In addition to improved agricultural productivity, having access to local, regional, and even foreign markets is crucial for a high income.

Policy Recommendations

The agenda is suffering as it is in the middle of a power struggle among line ministries. In order to operationalise the reforms agenda, it is highly recommended to create a technical, non-affiliated and empowered working group at the central level. The implementation of the agenda should be revoked from the portfolio of the line ministries in order to neutralise their influence. The existing Supreme Water Council is a political entity that is mandated to coordinate and facilitate initiatives for the expansion of water.[64] The working group should be a technical entity at the central level and should be mandated exclusively with implementation of the reforms agenda.

Any call for amending the reforms agenda and Water Law is unsubstantiated, premature, and lacking in evidence-based justifications. The failure of the agenda is not due to any inherent challenge, but to the line ministries at the central level. The logic is to first give the agenda a chance before judging it as ineffective or not applicable. It is applicable and highly effective if supported by a strong political will.

At the core of the agenda is restructuring water governance on the basis of natural boundaries, while current institutional setups are based on political administrative units. The recommendation is that the water sector portfolio of line ministries should be restructured from political administrative units to natural boundaries of the given river. This incompatibility has caused not just a power struggle among line ministries, but also provided justification for line ministries to follow highly centralised interventions.

At the central level, speculations exist about the effectiveness of the reforms agenda on agricultural productivity. The reason is the disconnect between public policy and scientific inquiry. This study recommends the institutionalisation of systematic assessment for the impacts of the implemented reforms at national, sub-national, and community levels within relevant national institutions. A strong link between public policy and scientific inquiry needs to be established.

As mentioned, lack of security was one of the main challenges for the implementation of the reforms agenda. In addition, insecurity interrupted the reforms. This study recommends the creation of a coordination mechanism between relevant institutions involved in the water and security sectors. This is not securitisation of the agriculture and water sectors. It is, however, protecting individuals, communities, and society by balancing the nexus between agriculture (food), water, environment, individual, and community securities.

Despite the implemented reforms having increased agricultural productivity and caused high satisfaction among the water users, the farmers could not optimise their income due to the lack of access to markets. This study recommends the integration of a market-finding and facilitation mechanism within the reforms agenda. The farmers need to convert their harvest to income. Access to markets will enable them to have a dynamic livelihood.

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