

Case Studies Series

**UNDERSTANDING
VILLAGE INSTITUTIONS:
Case Studies
on Water Management
from Faryab and Saripul**

Afghanistan Research and Evaluation Unit

By Adam Pain



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Table of Contents

Glossary	i
I. Introduction	1
II. Study Methods	2
III. The Context	4
A. Daulatabad District, Faryab Province.....	4
B. Sayyad District, Saripul Province	4
IV. Findings	6
A. Daulatabad District	6
<i>Livestock and Pasture Management</i>	6
<i>Irrigation and Water Management</i>	8
<i>Mirabs and Saatchis</i>	11
<i>Inter-village Water Distribution</i>	12
B. Sayyad District.....	14
<i>Irrigated Areas</i>	15
<i>Water Distribution Between Villages</i>	15
V. Summary Discussion	19
Further Questions	19
VII. Programing Implications.....	21
Bibliography	22

BOXES

Box 1. Checklist of Key Questions Prepared at the Start of Study	2
--	---

FIGURES

Figure 1. Villages' Location in Relation to Daulatabad Irrigation Canals	8
--	---

TABLES

Table 1. Irrigated Villages in Daulatabad with Estimated Irrigated Area	9
Table 2. Water Distribution in Daulatabad Village Three Irrigation Canals..	10
Table 3. Water Distribution in Daulatabad Village Two Irrigation Canals....	10
Table 4. Water Distribution in Daulatabad Village One Irrigation Canals	11
Table 5. Rota for the Distribution of Summer Spring Water	17

Glossary

Ausllol	Institution
Jerib	Unit of land measurement; five <i>jeribs</i> comprise one hectare (2000 sq. metres)
Mirab	Water manager
Paykal	Unit of land measurement; equal to 500 <i>jeribs</i> (100 hectares)
Saatchi	Time keeper
Seer	Seven kilos of grain
Sekiz	Uzbek land measurement term which uses a base of 164 households to calculate area; 180 <i>jeribs</i> equals one <i>sekiz</i>
Shura	Local council
Uluswal	District administrator

I. Introduction

This report describes how water is managed within and between villages in two districts in northern Afghanistan, and focuses on the rules that govern the distribution of water and the way in which these rules are or are not enforced.

The ways in which a village manages and distributes water between farmers is an example of a village level institution. Institutions are the rules that exist to govern or regulate the behaviour of individuals.¹ They exist at the formal level in governments and national laws and at an informal village level. Informal institutions are generally well understood, respected and observed. Examples of informal institutions include customs such as gender divisions of labour, what men and women wear, land inheritance practices, marriage practices and so forth. Informal rules may not be consistent with the formal rules that states deploy, nor are they necessarily written down. Informal institutions are also often an expression of existing social arrangements.

Understanding village level institutions is important for a number of reasons. First, informal institutions play an important role in regulating household² access to key resources on which livelihoods are based. In particular they are often concerned with the management of common pool resources such as water, pasture and fuel. There is at present little formal empirical documentation on the existence of these institutions and how they operate. Second, and given the specific Afghan context, these institutions may have played an extremely important role in providing support networks to villages during the last 20 years, when state institutions have been severely weakened or damaged. However, such institutions may also have become extremely susceptible or vulnerable to the influence and actions of individuals such as commanders and local power holders who through force have placed themselves beyond the reach of state or village level sanctions. Third, given the current attention on building what are seen as more democratic village organisations, as exemplified by the National Solidarity Programme, attention must be given to the existing rules that structure social relations at the village level. The superimposition of new organisations into a village does not mean that existing norms will necessarily change.

The next section of the report briefly describes the methods used in the study; it is followed by a brief discussion of the geographical context of the studies. Section IV summarises the key findings on a village and district basis and concludes with a district comparison. The final sections identify the unaddressed and unanswered issues and the programming implications of the findings from this study.

¹ Often the terms “institution” and “organisation” are used as if they mean the same thing. Strictly speaking they do not have the same meaning, and the term organisation will be used in this report to refer to an organised body of people that work together for a particular purpose with members, leaders and goals. Examples of these include businesses, non-governmental organisations (NGOs) and village *shuras* (local councils).

² In this report, the term “households” is used to denote the smallest family unit, although the communities in these areas used the local language word for “household” to mean the extended family or larger compound family grouping.

II. Study Methods

This study was carried out with EOCA/CHA (Ecumenical Office of Christian Aid and Coordination of Humanitarian Assistance) in Daulatabad District, Faryab Province and with German Agro Action (GAA) in Sayyad District, Saripul. The study was undertaken as part of the Afghanistan Research and Evaluation Unit (AREU) livelihoods monitoring research project³ and data were collected at the same time as two separate studies on wheat seed distribution and gender and livelihoods.

Prior to the field study a joint workshop of AREU and NGO staff reviewed the objectives of the study and considered the key questions that would need to be asked and to whom they should be addressed. The checklist of questions are summarised in Box 1.

Box 1: Checklist of Key Questions Prepared at the Start of the Study

1. Explain what are institutions and why we are interested in them.
2. List the institutions in the village and who and what they apply to.
3. Rank the three most important institutions in the village and select at least one concerned with the management of natural resources.
4. Provide details of the institution - what is its purpose, when was it started, how was it started, what kind of behaviour is it designed to regulate?
5. Who gets benefits from the institution/resources and what are these?
6. Is there an individual or group of individuals responsible for management of the institution? If so, who is he/are they and how is he/are they selected?
7. Whose behaviour is the institution aimed at - everyone or particular groups? Who benefits; do some benefit more?
8. What are the main rules that should be kept and who decides what these rules are?
9. What are the main consequences or outcomes of the institution?
10. Have there been any community conflicts over the institution?
11. What would happen if people stopped following the rules?
12. Has the institution changed over the last 25 years - who has been involved in these changes - what has brought them about?
13. What problems have there been as a result of the institution?
14. What are the bad things about the institution - who suffers?
15. Are there people who do not participate in the relations governed by the institution? Who and why?
16. What are the consequences of not participating in the institution or breaking the rules - what are the sanctions and penalties?
17. Is the institution linked with other institutions?

The plan was that the questions would not be followed through in order and would act more as a general checklist. The first three questions, however, had to be asked first before a more general discussion on the institution was pursued. It was agreed that the questions should be asked both at the group and individual level and ideally should be targeted to those involved in the management of the institution, those who had been positively affected by it and those who might have been negatively affected by it. For the investigation into irrigation management this meant that the research team talked with the *shura*, the *mirab* (water manager), landowners and sharecroppers. In the case of pasture and livestock issues, the *shura*, livestock owners and shepherds were interviewed.

³ The AREU livelihoods monitoring research project works with partner NGOs to carry out cohort tracking in different parts of Afghanistan. The aim is twofold, to improve the monitoring and evaluation capacity of partner NGOs and to improve understanding of the ways in which the Afghan people are building their livelihoods.

Practical field considerations inevitably led to changes in how the research was implemented. The fact that two other studies⁴ were being carried out in the village at the same time meant that access to all potential informants was not always possible. Meetings with the *shuras* at the start of the studies by the whole team limited for each team the amount of time that could be spent asking about each topic. The gender composition of the team and language considerations limited access to all potential informants, particularly women. The study team spent about two days in each village.

In practice this meant that an exhaustive listing and ranking of institutions was not possible, although it emerged very quickly in both districts that the management of water was probably the key institution with which most people were concerned. Probably the second ranked institution in terms of economic importance concerned livestock, the management of sheep flocks and access to pasture and water.

As will become clear, different informants had divergent stories to tell, and consistency was not always present. It was not always possible to reconcile contradictory narratives. In some cases there was not time to cross-check information from one source with that of another. In other cases it was not possible to access all potential informants, most notably key power holders. These issues will be explored in the discussion of the findings.

Where possible, at least for irrigation, field visits were made to key water distribution points to discuss the application of the rules.

⁴ These two studies were conducted as part of AREU's rural livelihoods monitoring project. For more information, see Coke, A. *Wheat Seed and Agriculture Programming in Afghanistan: Its Potential to Impact on Livelihoods*. Afghanistan Research and Evaluation Unit; Kabul. 2004 and Grace, J. *Gender Relations in Agriculture: Case Studies of Five Villages in Northern Afghanistan*. Afghanistan Research and Evaluation Unit; Kabul. 2004.

III. The Context

The research was carried out in three villages in Daulatabad District, Faryab Province and in two villages in Sayyad District, Saripul Province. Study was undertaken in a third Sayyad village, but due to conflicting commitments and the onset of Ramazan, this case study was not completed. Further information on the villages studied in these districts is provided below.

A. Daulatabad District, Faryab Province

Daulatabad District lies some two and a half hours drive north of Maimana. The district lies in the low foothills of the Hindu Kush and is characterised by a substantial plain area ringed with low lying loess⁵ hills that support a substantial area of rain-fed grain cultivation. To the east lies the Dasht-e-Laili, an important pasture source to which Daulatabad villages appear to have had access for grazing in the past.

Flowing through the central plain is the Andkhoy River, which flows northwards from the foothills of the Hindu Kush to Andkhoy in Jowzjan Province. Agreements over the distribution of water between upstream and downstream villages are longstanding,⁶ but have over the last decade become deeply contested, as will be discussed later.

Daulatabad town is a small market town lying in the middle of the district and in the centre of the plain. This plain largely consists of irrigated land watered from the channels that flow from the Andkhoy River. The villages that receive irrigation lie mainly on the edge of this plain backed up against the foothills of loess or on the margins of the irrigated area. The three villages where CHA is undertaking the livelihood monitoring are located in this area. Daulatabad Village One is a Pasthun village (2000 families, 410 households) at the end of the Daulatabad irrigation system and about a 30 minute drive from the district centre. Daulatabad Village Two (980 families, 400 households) is reached by a gravelled road that runs directly from Daulatabad town, continuing into the Dasht-e-Laili and to Shebergan some three hours away. The village largely consists of ethnic Turkmen and in the past has been associated with high quality carpets. The village located furthest south is Daulatabad Village Three, which is comprised of some 550 families, and contains a mixture of people of both Uzbek and Turkmen origins.

B. Sayyad District, Saripul Province

Driving southeast out of Saripul District, the road to Sayyad District climbs over a plain of stepped, terraced fields. The lowest of these are irrigated by the Saripul River system, but as one approaches the loess foothills, some ten minutes along the road, the command area of the Saripul River is left behind and the fields are irrigated from the ephemeral flow of the Sarchashma River that runs north through the Sayyad District. The road climbs up onto a small plateau of flood irrigated land and then descends towards Sayyad Village Three, some half an hour drive from Saripul District. This village is home to roughly 1,000 families of Uzbek origin.

⁵ Loess are deposits of wind-blown soil.

⁶ Pain, A. *Livelihoods Under Stress in Faryab Province, Northern Afghanistan: Opportunities for Support*. A Report to Save the Children (SC-US) Pakistan/Afghanistan Field Office. 2001.

After climbing through Sayyad Village Three and along on the right-hand side of the river, the village of Sayyad Village One is reached. This is another Uzbek village with approximately 170 families who grow wheat, sesame, flax and melons. Sayyad Village One is the end of the road on this, the western side of the river. On the left or eastern side of the river, the road continues upstream through several villages, with the most upstream of these reportedly being another 90 minutes drive away at the head of the valley.

IV. Findings

A. Daulatabad District

The companion reports⁷ present findings on the impact of seed distribution and gender divisions of labour in the villages surveyed. Together the reports highlight the role of customs and informal rules in regulating the behaviour of men and women. The findings of this report focus on the institutions of livestock and water, which are two keys areas of resource management.

Livestock and Pasture Management

All three villages in Daulatabad District reported having substantial livestock populations in the past, although the relative importance of livestock seems to have differed between the villages. Current livestock populations are substantially lower than those of the past, but according to the district governor these are growing fast and have already recovered some 30 percent over the last two years due to both biannual lambing and a reduced culling from the flocks.

There are three key areas with respect to livestock management in which rules that govern behaviour are evident. The first relates to livestock herd management and the combining of sheep from several households into one flock under the management of a hired shepherd. The second relates to access to pasture and the third relates to access to water or drinking points for sheep flocks once they move beyond the river areas into the Dasht-e-Laili, which appears to be their major grazing area. A fourth area in which one might have expected to find evidence of between-household relations and practices is in the area of fertility management. However, in contrast to parts of India, for example,⁸ the hiring of sheep herds to fold onto individual landowners fields to provide fertility was not found, although informal arrangements probably exist. The apparent absence of the use of sheep herds for soil fertility maintenance may be due to a number of reasons, including the importance of the role of livestock dung for fuel purposes, the presence of extensive pastures away from the village areas and the relatively high fertility of the loess soils.

The management of sheep herds requires labour. Where household labour resources are limited and/or household sheep numbers are not optimal for full-time labour allocation, all informants reported the practice of households combining sheep to create flocks of some 600 sheep or greater for which they would hire a shepherd. In the case of related households collectively managing sheep, a household member would be responsible for its management. Terms and conditions under which shepherds were appointed, apparently on an annual basis, were similar across all three villages, although varied on particular points. Generally, shepherds were entitled to a ten percent share of the female newborn lambs and 20 percent of the cash value of male newborn lambs, which were usually sold. In addition (or as substitution), small cash payments, entitlement to some wool from the sheep and a share of the milk products might be allowed. Owners identified their own sheep through distinctive marks on their ears and the natural maternal instincts that keep ewe and lamb together ensured that lambs were effectively allocated to the correct owners.

⁷ See Coke, op cit. and Grace, op cit.

⁸ Wade, R. *Village Republics. Economic Conditions for Collective Action in South India*. Cambridge University Press: Cambridge. 1988.

A key issue for the maintenance of these sheep flocks is access to pasture. Here the picture is confused, reflecting both the ambiguity of traditional rights of use, legal status of land ownership and changing dynamics of access. For Daulatabad Village One, there was a clear view that the village had clearly demarcated pasture areas that was theirs for grazing and had been used for over 150 years. For Daulatabad Villages Two and Three, the view appeared to be more that the areas that they used (mainly in the Dasht-e-Laili) were government land that anyone could use. What emerged from all villages, and perhaps most strongly in Daulatabad Village One, were deep concerns over the fact that “power holders” since the drought had ended had been ploughing up traditional pasture areas for rain-fed cultivation and thereby depriving them of access to pasture that they had traditionally used.⁹ The evidence for this cultivation of pasture lands has been noted in a recent report,¹⁰ and was self-evident to the team from the drive across the Dasht. In Daulatabad Village Two, villagers reported that a group of them had been cultivating wheat in these areas. For Daulatabad Villages Two and Three there seemed to be less concern over access to pasture (possibly because of less important economic or cultural roles of livestock in their economy) and reference was made to the fact that they could still use the hilltop areas since the cultivated areas were restricted to the lower lying areas in the desert.

That there clearly were rules in the past with respect to use and access of the pasture is clear - see, for example, Dupree:¹¹

“Most of it is rolling hills and such prized pasturage that the main track is closed during the major grazing months so that vehicles may not disturb the thousands of animals which come to graze here.”

However, the details of these rules and how they were managed remain unknown and would require a major investigation to determine. As De Weijer¹² has noted, practice and rights of access have been dynamic over the last century, reflecting the relative political power of various claimants to the rights of access to pasture.

Related to the issue of access to pasture is watering points for the sheep in the desert. Based on detailed discussions around one watering point some 5 km into the Dasht, it emerged that there are a number of watering points in the desert that are owned and maintained by a group of individuals to whom sheep flocks from a number of villages may have access, subject to permission. The particular watering point was reported as being owned by a number of households in Daulatabad Village Two. These owners took it in turns, according to the number of sheep that they had, to come to assist in the watering of the group flock. There is apparently a rota system by which sheep herds come for water and all users have to take it in turn to assist in the watering. This watering system is based on a camel-drawn lifting system that tips the water into a basin and trough for the sheep to drink from.

That this water point was not available to all was illustrated by a group of Pashtun sheep owners who stopped their old Russian jeep at the well and asked the team

⁹ A key district official who had denied the existence of power holders or the ploughing up of pasture land was to state later in the discussion that the district militia had cultivated pasture land for food as they had not been paid and this was helping the district administration.

¹⁰ Favre, R. *Grazing Land Encroachment Joint Helicopter Mission to Dasht-e laili*. A report for the UN Food and Agricultural Organisation. 25-27 March 2003.

¹¹ Dupree, N. *A Guide to Afghanistan*. Kabul. 1977, 359.

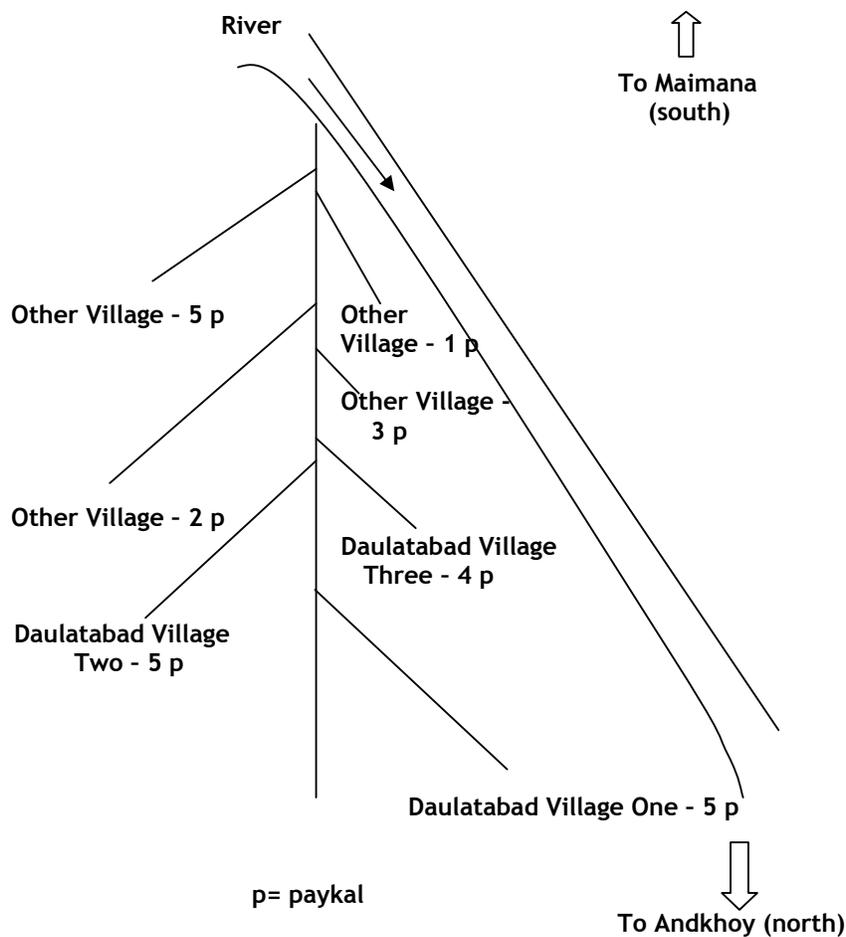
¹² In Favre, op cit.

for assistance and claimed that they had difficulty watering their sheep. After they had left it was made clear that this group of people were not allowed access to the water on account of their behaviour in restricting access to pasture and watering points under the Taliban.

Irrigation and Water Management

This discussion on water management starts by first describing the water management institutions in each of the three villages. However, to do this, an overview of the irrigation system in Daulatabad is first needed. Reference is made to Figure 1, which locates each of the villages in relation to the Daulatabad irrigation canals.

Figure 1. Villages' Location in Relation to Daulatabad Irrigation Canals



The irrigation system of Daulatabad is fed off a single 14 km canal that is taken from the eastern side of the river some 8 km south of Daulatabad. Nine villages are fed through this irrigation system that, according to all reports,¹³ irrigates some 25 *paykals* (a *paykal* is equal to 500 *jeribs*) of land. Table 1 summarises the distribution of irrigated area by village.

Table 1. Irrigated Villages in Daulatabad with Estimated Irrigated Area (Sampled Villages in Bold)

Village (ordered from north to south [or top to bottom]) in the Irrigation System	Irrigated Area (<i>paykals</i>)
Other Village	0.5
Other Village	5.0
Other Village	1.0
Other Village	3.0
Daulatabad Village Three	4.0
Other Village	2.0
Daulatabad Village Two	5.0
Other Village	5.0 between the two villages
Daulatabad Village One	

The three villages this report is concerned with lie in the lower half of the irrigation system. The canal works on a continuous flow system between villages, with off-takes along the main canal distributing water to the villages through a main tributary canal. Although these were not inspected, these village level off-takes were reported to be concrete structures, designed to apportion water according to the irrigated area.

Wheat is the major crop that receives irrigation, the water supplementing the winter and spring rains. Critical periods for irrigation are from March to May and most farmers reported that ideally irrigation should be carried out every eight to ten days during this period. Irrigation may also be used for the summer crop of melons as well as for vineyards and vegetables.

Daulatabad Village Three has two off-takes from the main canal. The western side of the canal irrigates a reported 500 *jeribs* (one *paykal* of land) and farmers can expect to receive water every ten days. The second channel on the eastern side of the main canal irrigates a total of three *paykals* (1500 *jeribs*) distributed between three sub-canals, respectively irrigating 100, 400 and 1000 *jeribs*. Water is distributed on an eight-day rotational basis to these canals, the three canals respectively receiving about one, two and five days of irrigation.

All informants in Daulatabad Village Three reported that irrigation water was distributed on the basis of three hours for every 40 *jeribs* (one hour for every 13 *jeribs*) or sometimes less if there was not enough water. It should be noted that this reported rate of distribution is not consistent with the irrigated area per hour calculated on the total irrigated area and rotation time¹⁴ (see Table 2). All would appear, on the basis of these figures, to receive rather more water (in the case of village canal west, five times more) than was reported, although some allowance would be needed for transmission time and losses.

¹³ Note that the areas may refer to the historical position but may not reflect the current irrigated area.

¹⁴ Note that these calculations assume a uniform flow rate within the village.

Table 2. Water Distribution in Daulatabad Village Three Irrigation Canals

	Village Canal West	Village Canal East			Village Average
		Sub-canal 1	Sub-canal 2	Sub-canal 3	
Area (<i>jeribs</i>)	500	100	400	1000	2000
Irrigation Time (hours)	192	24	48	120	384
Irrigated Area (<i>jeribs</i>) Per Hour	2.6	4.2	8.3	8.3	5.2
Irrigation Time Available (hours) for 10 <i>jeribs</i>	3.85	2.4	1.2	1.2	1.92

Also noteworthy is the fact there would appear to be differences between the canals in terms of the amount of water received. A sharecropper who had worked in various parts of the irrigation system confirmed that the eastern side of the irrigation system was indeed worse off with respect to water availability, but he preferred to sharecrop there since it was closer to his home.

In contrast to Daulatabad Village Three, Daulatabad Village Two has just one off-take from the main canal, which then divides into two sub-canals with further tributaries. Apparently some water from one sub-canal passes through to a small village downstream of Daulatabad Village Two, but no figures on area or time could be found. Water was reported to be received once every 12 days and irrigation to be provided at the rate of ten minutes per *jerib* or one hour for each six *jeribs*. In contrast to Daulatabad Village Three, the amount of water reported to be available by various informants is fairly close to the estimated irrigated per hour based on irrigation time and area (Table 3). Moreover, the distribution of water across the tributary canals appears to be relatively equitable.

Table 3. Water Distribution in Daulatabad Village Two Irrigation Canals

	Sub-canal 1	Sub-canal 2			Village Average
	Tributary 1	Tributary 1	Tributary 2	Tributary 3	
Area (<i>jeribs</i>)	1000	250	625	625	2500
Irrigation Time (hours)	120	24	72	72	288
Irrigated Area (<i>jeribs</i>) Per Hour	8.3	10.3	8.7	8.7	8.7
Irrigation Time Available (hours) for 10 <i>jeribs</i>	1.2	0.96	1.15	1.15	1.15

Daulatabad Village One is the last village on the irrigation system and shares some 2500 *jeribs* (five *paykals*) with the village of Char-Shangi. In addition, for reasons that are not entirely clear, information on the land irrigated was given in units of *sekiz*.¹⁵ This measurement apparently relates to a unit of 164 households and in some way converts into an area figure, with 180 *jeribs* per *sekiz*, a figure confirmed by both the district irrigation officer and village level informants. Daulatabad Village One was reported to have seven sub-canals flowing off the irrigation system, four located further up the canal from the lower three. It was only possible to collect information on the lower three of these sub-canals (Table 4), although various sources stated that there were no differences between the upper and lower off-takes. Water is rotated through these three sub-canals on a

¹⁵ Reported to be an Uzbek term, which curiously is used in this Pashtun village but not the other villages of study.

16-day rotation basis, with water distributed at the rate of one hour for four *jeribs* of irrigated land.

Table 4. Water Distribution in Daulatabad Village One Irrigation Canals

	Sub-canal 1	Sub-canal 2	Sub-canal 3	Village Average
Area (<i>jeribs</i>)	180	1080	360	1620
Irrigation Time (hours)	48	240	96	384
Irrigated Area (<i>jeribs</i>) Per Hour	3.75	4.5	3.75	4.2
Irrigation Time Available (hours) for 10 <i>jeribs</i>	2.7	2.2	2.7	2.4

It is clear that the reported rate of irrigation is very close to that calculated from the area and time data and that there appears to be distributional equity across the three sub-canals.

It also is clear from Tables 2 to 4 that there are some important differences between villages with respect to the frequency with which they irrigate, the area that can be irrigated in an hour and the irrigation time available per ten *jeribs*. While these issues will be explored in more detail, first this report will look at the way in which water is managed at the village level.

Mirabs and Saatchis

In all three Daulatabad villages, a *mirab* (water manager) is appointed to oversee the management of water within the village. The process by which a *mirab* is appointed is opaque and appears to be common to all villages. The *shura* and other informants all referred to a consensual process by which a person known for honesty and hard work is selected and appointed on an annual basis, renewable by mutual consent. The process by which a person is identified and put forward is not clear, but it was presented as a position of honour. Underneath a *mirab* a *saatchi* (time keeper) may be appointed and again this is reported as being done by the *shura*.

All three villages have a *mirab*, but only in Daulatabad Villages Two and One was a *saatchi* also appointed. The reason for there being no *saatchi* in Daulatabad Village Three was stated as there being no need. *Mirabs* are paid at the rate of two Kabul *seers* per household, although in Daulatabad Village Three the *mirab* reported that he was paid at the rate of two Kabul *seers* of wheat per 20 *jeribs*.

The function of the *mirab* in all three villages was reported to be the same; they were responsible for oversight of the water distribution within the villages, ensuring rotation on the agreed schedule between sub-canals and the distribution of water between farmers within the sub-canals. No *mirab* had written records on the allocated time for each farmer and the system appears to operate on memory.

In addition, *mirabs* have the right to call labour from all farmers cultivating irrigated land for canal maintenance. The extent to which the *mirab* or *saatchi* was directly involved at every stage is unclear, although it is clearly seen to be a full-time job. When asked about issues concerned with fair water distribution the almost inevitable reply was that the *mirab* was responsible, although at the local

level, agreement between farmers with respect to water distribution was also important. There was evidently flexibility at the local level and farmers reported the sharing of water on a flexible basis and according to need with their neighbours. There appears also to be a small market for water, particularly during the summer, with rates ranging from 10 Afs per minute to 100-150 Afs per hour.

Everyone talked to stated that they were well aware of the rules by which water was distributed within the village. Everyone was also adamant that there was no conflict concerning water distribution within the village.¹⁶ When pressed on this issue, there might be some admission that if there was a problem the *shura* would step in and advise the person that this was not acceptable behaviour and it should be stopped and, if necessary, order irrigation time to be repaid if it had been wrongly taken. What appears to be at stake here is the sanction of shame and the importance of maintaining reputation. Individuals in the village could ill afford to take water out of turn and in practice it was logistically very difficult to do so because of water scarcity and the interest of individuals in maintaining their share.

Another vantage point with respect to understanding conflict is to look at the turnover of *mirabs*, although the evidence could be equivocal here. While rapid turnover could indicate some issues of conflict, long-term stability could also disguise some well entrenched inequities and unfairness that those without power were not in a position to challenge. For two villages, Daulatabad Villages Two and Three, the positions of *mirab* appear to have been held for fairly long periods. In Daulatabad Village Two there had apparently been a *mirab* in position for 20 years, followed by another for a 12-year period. When this man had died in this position, his son inherited the position for a further three years and then he in turn died. The current *mirab* was in his second term of office and his son was the *saatchi*. In Daulatabad Village Three, the current *mirab* has been in position for three years and his predecessor for six years. The latter had apparently resigned for family reasons.

In Daulatabad Village One a somewhat different position emerged, although the details were vague. One informant reported that three *mirabs* and *saatchis* had been terminated before the end of their one-year contract. The indications were that there had been some conflict over the *mirab* and this had to do with the *mirab* selling water to other villages but details on this were difficult to pin down. This issue takes us into the matter of water distribution between villages.

Inter-village Water Distribution

While village discussions presented a consistent picture of equalities and lack of conflict with respect to water distribution within villages, they were also equally consistent with reference to inequalities of water distribution between villages. Two types of inequalities appear to exist.

The first appears to be a structural one in relation to the design of the irrigation system. As noted earlier, the irrigation distribution system is structured around a continuous flow system. One consequence of this is likely to be that the flow rate of the water (in litres per second) is likely to be greater at the top rather than bottom unless dividers allowing water off-take of each village are scrupulously maintained (and equitable) with respect to the share that the village should have.

¹⁶ While in the field by the irrigation canals in Daulatabad Village One, as this statement was being made, a scrap in which shovels were raised in the air and people being pushed around was going on in the background around a new cut in the irrigation canal that someone had just made.

While it was not possible within the scope of this study to examine the system engineering (flow rates, time of irrigating, areas irrigated, etc.) the fact that the three villages received water on different and declining frequencies¹⁷—respectively for Daulatabad Village Three, Daulatabad Village Two and Daulatabad Village One once every eight days, once every 12 days and once every 16 days — it is evident that there are some gross inequities in terms of water distribution between villages.¹⁸ The fact that Daulatabad Village Three has two off-takes off the main canal also should be noted.

Data on irrigation time available per ten *jeribs* of land shows that on average Daulatabad Village Three, Daulatabad Village Two and Daulatabad Village One respectively have 1.92, 1.15 and 2.4 hours to irrigate ten *jeribs* of land. Even if the water flow rates are equal at all points of the irrigation system (which seems improbable given the decreasing frequency of irrigation) the declining frequency of irrigation means that Daulatabad Village One gets only 1.2 hours of water per ten *jeribs* every eight-day period in contrast to Daulatabad Village Three's 1.9 hours. More detailed information on flow rates in various parts of the irrigation system would be required to work out the extent of the inequities.

A point that is worth noting is that there is no information on the date or accuracy of the irrigated area data and it is entirely possible that there have been differential changes in irrigated areas between villages since these figures were first established. For example, an area of irrigated agriculture east of Daulatabad Village Two lies outside the main plain and may well reflect an extension of the irrigated area. It is not known on what basis irrigation time in relation to irrigated area was first established and although there was reference to an agreement over 50 years ago, there does not seem to be documentary evidence of this. Informants in Daulatabad Village One talked of a 1925 agreement, others referred to the time of Zahir Shah and the existence of documentation.

The second issue, which probably compounds the first, is the extent to which villagers and water users upstream respect the original agreement and do not use various measures (from blocking water flow to using lift pumps)¹⁹ to increase water flow to their fields and reduce water flow downstream. There was constant reference to power holders upstream who were withholding water or taking more water than existing agreements allowed. Equally strong were statements that there was nothing that they could do about it. Informants from Daulatabad Village Two stated that they had already made two complaints to the *uluswal* (district administrator) this year but nothing had been done.

There are two levels affecting power and the appropriation of water. The first is between districts and there is evidence²⁰ that in upstream districts the expansion of cultivation and increased use of lift irrigation during the last decade has led to substantially reduced flow of water. Reference was made to a new agreement for

¹⁷ A point confirmed by the District Irrigation Officer but contradicted by the *uluswal*, who stated that everyone received two hours of water according to area. The Daulatabad Village One *mirab* on the other hand felt that there were more lands that water in the bottom three villages and more water and less land in the top most villages.

¹⁸ If the villages were to receive water on a unified frequency e.g. each village every eight days then theoretically Daulatabad Village One would receive 1.2 hours of irrigation per 10 *jeribs* compared to 0.8 hours per *jerib* for Quraish and thus receive more water. Daulatabad Village Three would receive the same - 1.92 hours per *jerib*. However, irrigation frequencies according to all informants are not equal.

¹⁹ From field evidence it was clear that there was an expanded area of irrigated lands in Daulatabad Village One on the western bank of the river, based on the use of lift pumps. While this would not affect water distribution in Daulatabad it would affect the amount of water received by Andkhoy.

²⁰ See Pain, op.cit.

water distribution during June, July and August between the districts, but at least one village still appears to release water late and stops early.

Within districts, breach of rules also takes place. The issue was raised with district level officials who agreed that the inequities observed were real and that there were those who were taking more than their agreed share of water. But as they put it, “We can talk of Rassoul and what he did - he is dead but we can not talk of the present. These are armed people, we can do nothing.”²¹

There is in fact a district level *mirab* who is meant to have oversight of the irrigation system. By tradition the *mirab* has been selected from one of the three villages that are at the bottom of the irrigation system (Daulatabad Village Two, Daulatabad Village One and another village²²) and the current holder came from the latter of these. This method of selecting the *mirab* indicates an element of equity has been built into the system, since downstream representatives would have a vested interest in ensuring fair water distribution. However, as the district official observed, he could do nothing more than supervise the work of the village *mirabs*.

B. Sayyad District

As with Daulatabad, the evidence from the two villages studied (Sayyad Villages One and Three) and presented in the companion reports to this case study provide ample evidence of a range of customs and practices that regulate people’s behaviour with respect to gender divisions of labour, sharecropping and the management of livestock. For the Sayyad villages it is necessary to focus again on the issues of water distribution between and within villages, although reference will be made to issues of pasture as well. This starts with a description of the geography of these villages and their ethnic identities.

Six villages lie within the Sarchashma River proper. The majority of residents of these villages are Uzbek, with one primarily Hazara village at the river valley. The villages upstream of Sayyad are located along the edge of an increasingly narrow valley as one moves upstream, although one of these reportedly has access to a broader plain area.²³ From Sayyad northwards the valley opens out towards Saripul District and the villages have access to more level and potentially irrigable land. The ethnicities of these villages include Arabs, Tajiks and Pashtuns.

The information on ethnicity was collected primarily from informants in Kotarma Village after the Sayyad *mirab* had made reference to eight different ethnicities in the villages. This information was not corroborated in Sayyad Village Three or the other downstream villages, but was confirmed in Sayyad Village One for this village and those villages upstream of it.

²¹ This statement stands in contrast to another key official of the district (see footnote 7) administration who stated that there were no armed power holders in the district. A listing by an informant of the key power holders in the district included the name of this key official. Rassoul was a former commander who was killed in the 1990s.

²² The district *mirab* during the time of the Taliban had come from Daulatabad Village One.

²³ Consistent with its ability to expand its irrigated area as discussed later.

Irrigated Areas

Information on the irrigated areas along the Sarchashma River has been compiled, according to various village sources. It will be noticed that there is substantial variation according to source, although most of the information seems to have been provided by the *shuras*. There are obvious concerns over the basis of the discrepancy that cannot be resolved here, but note should be made of one potential source of difference. The meaning of irrigated area is ambiguous. It would appear that much of the irrigated grain area for the main cropping season is irrigated by ephemeral flood sources available during February to perhaps April after which the volume of water flow is reported to have declined substantially. From April onwards the irrigation would appear to come from spring sources along the river valley, to which river recharge may contribute. During the summer months water sources are exclusively limited to spring sources.

For all villages, access to summer drinking water and for irrigation of supplementary crops (clover, vegetables) outside the main cropping season is a major concern and it appears that in some cases it is the irrigated crop area during this season that is being referred to in the statistics in Table 5 (see page 17). In other cases the supplementary irrigated area during the major cropping season is what the irrigated area refers to. It is likely that the summer irrigated area is only a small proportion of the main season irrigation, but data on this are not available.

The following section focuses largely on the distribution of water between villages, since all the informants at the village level, where water had been received, considered that there were no issues over water distribution within the village.

Water Distribution Between Villages

Sayyad Village Three appears to have at least two water sources, one of which is spring-based and feeds the section of the village on the eastern side of the river and downstream of it. The portion of the village that is on the western side of the river, and this is the largest part, is fed by a water source that flows through Sayyad Village One and is fed by the river during the spring flood and from a spring source in another village that flows through the river bed during the summer months.

Sayyad Village Three has up to 5000 *jeribs* of flood irrigated land, although this does not necessarily mean that this is all cultivated every year. According to the village *shura*, two springs provide the water supply, and this is distributed through three sub-canals. There is one *mirab*, who notes that he is responsible for the summer and winter irrigation. Although reference was made in a meeting with the *shura* to both a Sayyad District *mirab* and a Sayyad city *mirab*, the city *mirab* was not aware of the district *mirab* position. This *mirab* was not entirely clear or consistent in his description of how the water system worked and it was not always possible to establish if he was talking about the spring or summer water distribution system, but given the problems of summer water access, to be discussed later, it is probable that he was referring to the spring water distribution system. He did not appear to discuss the summer water distribution system at all. He described the water distribution system as shown on the next page:



Water is distributed on a 20-day rotation, with ten days being allocated to Sayyad Village Three and ten days between the five villages downstream. Within Sayyad Village Three there are apparently three canals that reportedly receive two days of water each. Information on the areas under each could not be provided. When asked about what the balance of four days of water was used for (ten days minus three channels x two days of water each) this was explained in terms of two days needed for the water to travel through the system and two days for filling up the ponds of the mosques. Travel time of two days was also used to explain the full use of the ten day period for the five lower villages, whose time for irrigation only adds up to eight days.

Given the elevation of the fields of the five downstream villages above the river bed, it is likely that most of the water that they need for spring irrigation of wheat has to come from the irrigation channels that flow through Sayyad Village Three, as it is unlikely that villagers can directly take water from the river. The indicated travel times, in view of the distances, do however seem excessive.

The *mirab* was unclear about the basis on which he was paid within the village or by the villages downstream and suggested that it was organised according to what they wanted to pay him. According to him, ten persons from each village were involved in the water distribution, but he could not be more specific than that. Given the lack of clarity about irrigated land areas and the major discrepancies by source, the calculation of irrigation time per area by village is not possible.

Information on the water distribution system was also taken downstream from another village. This village also reported that they had in the past had their own *mirab* but the system had now broken down. The village in question is populated largely by people of Arab origin, most of who had left during the time of the Taliban and drought and had only just returned.

The informants from this area expressed fairly strong views with respect to the claims of the Sayyad Village Three *mirab*. They did not understand how this *mirab* had been elected or had become responsible for organising their turn for receiving water. Furthermore, they claimed not to know who the *mirab* was. In their view they had not received the right amount of water during the spring irrigation period and their wheat yields had suffered by as much as 50 percent as a result.

They expressed even more strongly the view that they had not received any of the spring-sourced water to which they were entitled during the summer period. In the past it was reported they had received spring-sourced water every 10 days. The summer spring water appears to be from a separate source from the irrigation water used for their flood-irrigated wheat lands, which are on the western side of the river.²⁴

²⁴ It was noticed that a small rivulet of water was flowing through the main street during the time of the visit and this was claimed to be the first day on which water had been received.

In the view of the households in this other village, the issue of the lack of water in summer was not so much a problem with the water distribution from Sayyad Village Three but had more to do with another village not respecting the summer water distribution system and using all the water for irrigating summer vegetables. They had made a complaint to the *uluswal* in Sayyad District Centre, who had asked for a written complaint. When this was provided he advised them to take it to the provincial headquarters, which they did, but no action appears to have been taken.

When asked if these problems had occurred in the past, it was stated that there had been disputes in the past with this village and that appeals to the provincial government had led to a resolution of the problem again. It was stated that a written agreement had been made with the village, in which it was stated that it would not take such action again. On account of a funeral in the village it was not possible for the villagers to show us the document.

The informants also reported that they had traditional grazing rights of about 5000 *jeribs* to the south on which they had grazed their large sheep flocks. However, they had found last year large parts of this had been ploughed up for rain-fed grain cultivation, by people from other surrounding villages.

Sayyad Village One is the next village upstream (and a few kilometres away) from Sayyad Village Three. The key informant here was the head of the *shura* and in many respects his story of water distribution confirmed the information that had been given in the other village. For Sayyad Village One, with relatively limited continuously irrigated land (both spring and summer irrigation), the issues appear to be similar. During the spring irrigation of the wheat crop there is sufficient flood water in the river for the villagers to easily fulfil their water requirements for the three irrigations required for the crop, at about 25-day intervals from around March to mid-May. They could construct temporary channels off the main river. This provided them with plenty of water and there were no regulations in place concerning the distribution of this spring flood water.

However, in the case of the summer water, which came from the spring above the village, there had been clear agreements in the past. For the villages upstream there had been a *mirab* (south) who had been selected by the elders from the six villages. There had been a *mirab* (north) also for the downstream villages. The *mirab* was appointed for a four-month period during the summer (equivalent to June to September) to assure fair distribution of water for drinking purposes and for irrigation of vegetables and the poplar trees. According to the *shura* head, the water had been distributed as given in Table 5.

Table 5. Rota for the Distribution of Summer Spring Water

Village	Mirab	Days of Water in Summer
Other Village	South	3
Other Village	South	3
Other Village	South	2
Other Village	South	1
Sayyad Village One	South	1
Sayyad Village Three	North	4
Northerly villages	North	6

It was the view of the *shura* head that during the time of the Taliban the water distribution system worked well and there were strict sanctions on those who broke the rules. He cited the example of one offender who had been caught and paraded by the Taliban in Sayyad Village Three.

However, after the Taliban the system had broken down and no *mirab* had been elected since then. This summer they had received no water at all during the summer period and had to rely on drinking water from wells provided by two NGOs. The reason for the lack of water was, in his view, the expansion of potato cultivation in a neighbouring village, which had used all the water. As a result of lack of water during these last two summers, a number of trees had died. He had been to the provincial governor at least ten times and nothing had happened.

Water had only started flowing again during the last three weeks – in effect from the beginning of October – and this was being used to power the three privately owned water mills in the village.

This picture of the collapse of water regulation during the summer months was subsequently confirmed by the Sayyad *uluswal*. The *uluswal* stated that he was powerless to do anything about it, as everyone was armed, and he hoped that over time it would be possible to gradually address the problem.

In summary, what is clear is that previous rules and practices on water distribution within this river basin have effectively broken down. For the spring flood irrigation period, this is generally not a concern for villages upstream of Sayyad Village Three since there is sufficient water to irrigate their wheat and their irrigated area, on account of the narrow valleys being relatively restricted. Downstream, however, where regulated distribution systems of the irrigation system are needed, it appears that the rules of the past are not being followed and downstream villages may be suffering lack of access to water and are not in a position, possibly by virtue of ethnic identity, to do much about it.

During the summer period almost everyone appears to be suffering as a result of the actions of one village to divert water for the expanded potato cultivation area and to ignore previous agreements. However, neither the district nor provincial administrations appear to be in a position to do anything about it.

V. Summary Discussion

What has emerged from this preliminary investigation of village level institutions (and supported by evidence from the companion reports) is there are many areas of village life where rules and customs operate with broad acceptance and in various ways regulate the behaviour of individuals. Major differences have not been found between the two study areas, although there are clearly distinctive ethnic identities of villages, reflected sometimes in dress and visibility of women.

One theme that has emerged with respect to the management of common pool resources is that internal village management of these resources is relatively well regulated. It does not, of course, mean that these institutions are necessarily fair or equitable. If there can be power holders that can frustrate common pool resource distribution between villages, they can surely operate in a similar manner within the village.

However, previous rules governing the distribution of common pool resources between villages appear to be under severe challenge and, in various instances, completely broken down. In Daulatabad District, water systems have not completely cut off water supply to villages even though water flows have been reduced. During 2001, however, it was the villages of Daulatabad that blocked the flow of the river, stopping water flowing down to Andkhoy. In Sayyad District, water flows appear to have been completely cut off during the summer and a system of seasonal *mirabs* fallen into disuse. Similar sets of issues appear to have arisen in both districts over pasture. There is considerable evidence that areas which in the past various communities have used for pasture have more recently been ploughed up and cultivated by other parties, thereby restricting access to grazing lands. At present, while livestock numbers are historically low, there is evidence of recovery of these populations and access to pasture in the future is increasingly likely to be an axis of conflict.

What has been heard during the research is various voices, all with rather different stories to tell according to both geographical location and identity. While many have appealed to traditional rights of use, it is useful to remember that tradition is something that can be invented to support a case and institutions are not always permanent. Those who feel themselves to be oppressed or denied rights today may have been those in the past who exercised power and control. Institutions and rules can change according to context and the history of rights of use of the Dasht-e-Laili is a case in point. Attempts to seek to codify rights and traditional agreements should therefore proceed with caution.

Constant reference to “the power holders” and a surprisingly strong appeal to what government had done in the past, particularly in Sayyad, is an important alert to the fact that cross-village conflicts not only may not be amenable by appeals to tradition but also may not be resolvable at the local level.

Further Questions

There is much that this research, given its limited focus and duration, has not been able to address or cover. With respect to both water and pasture issues, the story that has been sketched should be regarded as an outline of a story where much of the detail needs to be cross-checked. In both cases this would require more detailed interviews, searching for documentation and in particular field verification. In the case of irrigation it would require by location monitoring water

flows, irrigation timing and area and interviews with farmers in the field. For pasture visiting areas with sheep flocks, talking to all parties and more extensive tracking of flock movement at various scale would be required.

In addition, there is much at the village level that this research has not even touched upon, which deeper understanding of village social structures and decision-making processes would reveal. It is difficult to believe that the conflict-free image presented would hold true in practice. Equally, the lesson of one village – where the apparent sway of the head of the *shura*, with by all accounts a doubtful reputation, could enforce an apparent decision for all men to be absent for a series of planned meetings – is revealing of an aspect of village level decision making.

The key point is, however, that there is much about informal institutions that is still unknown. These questions may both provide opportunities on which to build as well as challenges to be addressed in relation to social change.

VII. Programming Implications

The findings reported in this paper have some important practical implications for the NGOs working in the study areas.

First, the evidence suggests that villages are rich in institutional arrangements that may or may not be fair and equitable. They are most certainly based on existing social structures. Their existence is something that has to be understood and factored in to attempts to build or superimpose new organisational arrangements on villages. Creating organisations is the easy part - building institutions is much more difficult and rules for the new organisations that challenge existing arrangements will not easily embed themselves.

Second, the conflicts over water and pasture between villages that have become so clear from the study are illustrative of underlying power relations. These are not issues to be ignored or sidestepped in programming, since they so clearly relate to issues of vulnerability of populations exposed to this threat.

Third, NGOs have to be extremely careful that in their interventions they do not inadvertently play into or reinforce existing inequalities. At one level the performance and impact of seed distribution programmes may critically depend on access to water. At another the distribution of vegetable seeds and the encouragement of vegetable production may encourage additional irrigation and have downstream effects that have not been considered and may exacerbate conflict. Equally building permanent irrigation structures at a village level and ignoring the wider dimensions of water distribution may entrench inequalities.

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