



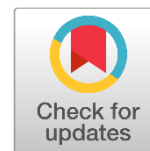
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Role of Jirga in Social Integration of Rural Farmers with Reference to Disputes Settlement in Water Distribution Practices

Habib ur Rahman^{1*}, Muhammad Jawad¹, Saima Sarir¹, Naushad Khan²¹ Department of Rural Sociology, The University of Agriculture Peshawar, KPK, Pakistan² Institute of Development Study, The University of Agriculture Peshawar, KPK, Pakistan

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ABSTRACT

The present study was conducted in Lower Dir, Khyber Pakhtunkhwa, Pakistan, with the intention of learning more about the function of Jirga in fostering social integration through the means of dispute resolution within the farming community with special focus on water distribution practices. The study found that a highly significant association was ascertained between role of Jirga in social integration and water distribution practice statements i.e., water distribution at clan level disrupted water cycle, Jirga allocate water rights among farming and non-farming community, hydrological changes and water lagging resultantly evoked for practicing Jirga, disputes over irrigation water among farming community could be addressed through Jirga, Jirga play role in rehabilitation of irrigation related infrastructure, Jirga maintain the unwritten roles of water distribution among the farming community, water is not stored for future disasters (water stress) for irrigation purposes among farming community, and there are unwritten water distribution rules developed by local community regarding water distribution for irrigation purposes. Thus, a holistic and institutionalized approach is the order of the day by disseminating the role of Jirga among social services providers, farming communities and conflict mediators through print, electronic and social media. Moreover, some micro and macro level policy recommendations were also highlighted based on the present study.

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1. INTRODUCTION

The Jirga is a time-honored and customary institution that serves as a forum for the assembly of Afghan individuals. Jirga has been a prominent mechanism for resolving disputes at both the tribal and national levels for

centuries (Rafi, 2017). A Jirga can be defined as a space where individuals within a community are able to freely express their emotions and opinions without the presence of intimidation or apprehension. The Pashto language assigns the meaning of "Jar" to the act of openly expressing oneself, while "Gah" refers to a physical location or place of business. As per Iqbal (2014) opined that the term "Jahar" in Arabic denotes a high volume or intensity of sound. The Jirga system is a highly structured and longstanding tradition within Pakhtun culture. Its historical origins, organizational structure, and operational procedures have primarily been transmitted through oral tradition. Jirga serves as a dynamic and progressive driving force for the entirety of human existence. The Jirga mechanism is widely regarded as a highly effective means of resolving disputes and mitigating societal tensions. From its inception, the

* **Corresponding author:** Habib ur Rahman, Department of Rural Sociology, The University of Agriculture Peshawar, KPK, Pakistan.

E-mail: habibhay@gmail.com

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utilization of Jirga has extended beyond the resolution of minor or major civil disputes, encompassing the practice and resolution of conflicts among tribes and groups. The selection of Jirga members is governed by a systematized and fundamental methodology. The selected individuals are predominantly elderly citizens and members of the aristocracy in the area, who are acknowledged for their integrity, intellectual acumen, and extensive understanding of Pakhtunwali jurisprudence, and conceivably, Islamic jurisprudence as well. According to scholarly sources (Khattak et al., 2017), it is recommended that the Ulama, or religious leader, be included in Jirga proceedings due to the involvement of Islamic law (Yousafzai and Gohar, 2012).

A Jirga is convened through the mutual agreement of parties involved in a dispute. The Jirga is a gathering of the local senior members, with the exclusion of women and children from participation. The selection of Jirga members is based on various criteria such as age, social status in the community, similar status, social respect, and moral traits including honesty, truthfulness, and their past experience as Jirga members (Ginsburg (2011). Due to the absence of state regulations, which had allowed outsiders, mainly militant groups, to operate from this region, the state's main goal was to manage the ongoing structural violence through the expansion of law and order by combining FATA with KP. The implementation of institutional social control would also put a stop to intra-tribal conflict and improve local peace. In order to recompense the indigenous people, it was also planned to approve development projects including water supply, mineral development, and building of fundamental infrastructure. Numerous regional and Sarkari Jirgas were organized to address the tribal issues and discover a potential solution. Therefore, it can be stated that Jirga has the ability to transform, settle, and win over numerous conflicts in order to advance Pakistan's "tribal" societies (Alam and Ali 2021).

Even today, a wide range of topics and disputes are brought before Jirgas, including those involving women's immorality, property or land disputes, water conflicts, theft of money or animals, murder, and peacekeeping between two belligerent sides. A Jirga or Panchayat may order the accused to walk across hot coals among some tribes of Baluchistan and Punjab in order to demonstrate his innocence. Men from the village make up the entire Jirga/Panchayat membership. The decision of a Jirga or Panchayat cannot be appealed, and no one who is impoverished can afford to do so because doing so will inevitably result in his family being persecuted by criminals and the police on the orders of the tribal or feudal master, who will also enact their social boycott in the community (Gohar and Ali 2006).

The present research study aimed to examine the importance of Jirga and its viability in resolving conflicts in Pakhtun tribal areas, particularly among the agricultural community residing in rural regions such as Dir Lower, Khyber Pakhtunkhwa. The research also explores the importance of Jirga in conflict resolution, as well as its economic feasibility. This investigation may prove beneficial

to the various entities involved in the promotion of peace and resolution of conflicts within the tribal territories of the Pakhtun region, including associations, community development actors, and government line agencies.

Synthesis of review

Jirga is charged with overseeing the water framework as well as the work required to turn of watering the agriculture field, reclamation; support, and reconstructing of irrigation channel. Jirga will recalculate and redistribute water rights in accordance with the local division of land at the point in time when new water system channels are being developed. This demonstrates the flexible response of Jirga to changes in socio-hydrological conditions. The Ulasi Jirga is a social event that brings together the more settled members of a community, with each gathering representing a particular town or area. The level of this Jirga is higher than that of a Koranay Jirga. It is convened to explore problems such as complete property, rights, and the dissolution of water situation structural water, or central concerns, such as the choice of a location for a school, and so on. It is necessary for it to address the problems that pertain to the overall sense of the neighborhood clan. Every family contributes something to the cause. The entire neighborhood's faction votes on issues of total nature, such as disputes with other clans, the allotment and conveyance of different families' proposals in the ordinary common assets and the backwoods of the domain, discussions on developmental activities for the clan, and the distribution of water framework.

2. MATERIAL & METHODS

This study was conducted in Lower Dir district of Khyber Pakhtunkhwa with the purpose to explore the role of Jirga in social integration among rural farmers at community through sociological lens. As per the Pakistan Bureau of Statistics (2017) reported that, district Lower Dir had population of 1,435,917 with 155,338 households. Moreover, Lower Dir is consisted of 4 Subdivision (Adenzai, Lal Qila, Samarbagh and Timergara) which is subdivided into 07 tehsils namely Adanzi, Lal Qila, Munda, Samarbagh, Balambat, Khall and Timergara. As per socio-economic, environmental and geographic perspectives, the three tehsils (Samarbagh, Lal Qilla and Timergara) have farming community, forest, irrigation system and pastureland. In addition, Tehsil Samarbagh (24671 household), Lal Qilla (21276 households) and Timergara (24107 households) provided a broad base of population for the research study. Therefore, a sample size of 341 out of 2935 Household Head (HH) was chosen for data collection as per Sekeran (2003) criteria.

Further the selected sample size was proportionally allocated to each strata's i.e., tehsils as per Bowley (1925) formula with amalgamation of multi stage stratified random sampling technique. The proportional allocation of sample size in various villages of the selected Tehsils, Union Councils (UCs), and villages is detailed below. (see table 1).

Table 1
Proportional distribution of sample size in various villages of selected UCs in the study area

S. #	Tehsil	UC	Villages within UC	Households	Sample Size
1	Samar Bagh	Darangal	Darangal	53	6
			Shahai	121	14
		Mayar	Badin	113	13
			Juni Kalay	211	25
		Samar bagh	Shontala	325	38
			Ghora Banda	185	22
2	Lal Qilla	Beshgram	Dalgram	290	34
			Markhanai	101	12
		Kotkai	Barghando	159	18
			Dokrai	135	16
		Zimdara	Margam Bala	73	8
			Dapur	99	12
3	Timergara	Khungi	Tangi Dara	189	22
			Begham Dara	130	15
		Noora Khail	Nagrai Bala	79	9
			Ajo Talash	167	19
		Bagh Dushkhail	Bagh Dushkail	365	42
			Tawda China	140	16
Total				2935	341

Source: Pakistan Bureau of Statistic (2017)

Furthermore, a structured interview schedule was used for taking primary data regarding the study dynamics as one of the appropriate approach being used to collect information from both literate and illiterate respondents (Cheung, 2021). Moreover, Likert scale was adopted to ascertain the responses/ attitude of the sampled respondents through sociological paradigm. All the statement were divided into three categories i.e., agree, disagree and neutral, to ensured higher degree of reliability (Nachmias and Nachmias, 1992). All these attitudinal parameters were constructed for each variable employing insight from the literature. Each responses was coded with a particular numerical representation like 1, 2 and 3 to analyze the collected responses like agree (1), disagree (2) and neutral (3) assertions (Kothari, 2006). Prior to all these steps the interview schedule was pretested and all the ambiguities and error were omitted accordingly.

All the information which was collected from the primary sources were coded and entertained in Statistical Packages for Social Sciences (26 version) for its analysis i.e. univariate (frequency and percentage distribution) and bivariate analysis. Purpose and procedures of the all the analysis carried out in the current study is explained below. To determine the level of association between dependents and independent variable's, cross tabulation and indexation methods were exercised through Statistical Packages for Social Sciences (26 version) to ascertain the degree of association between both the variables i.e. independent and dependent variable (Nachmias & Nachmias, 1992) through formula explained by Mary (2009) for Chi-Square Test statistics as mentioned below;

$$\chi^{obs2} = \sum_{j=1}^r \sum_{k=1}^c \frac{(O_{jk} - E_{jk})^2}{E_{jk}}$$

O_{jk} = observed frequencies in the cross-classified categories at the jth row and kth column.

E_{jk}= Expected frequency assuming there is no correlation between variables.

Calculating the degree of freedom is as follows: df = (r-1)(c-1)

df= degree of freedom

r = quantity of rows

c = quantity of columns (McCall, 1975).

The relationship devised by Fisher is under.

$$Fisherexecttest = \frac{(a+b)!(c+d)!(a+c)!(b+d)!}{N! a! b! c! d!} \dots\dots\dots (Kim, 2017)$$

Where, 'a,' 'b,' 'c' and 'd' are the individual frequencies of the 2x2 contingency table, and 'N' is the total frequency.

Table 2
Conceptual Framework

Independent Variable	Dependent Variable
Water distribution practices and Role of Jirga	Social Integration

3. RESULTS & DISCUSSIONS

Agriculture purely depends on water as one of its major input for its survival. Crops watering and animal posturing

is directly dependent on the availability of consistent flow of water. The table no. 4.3.2 summarizes the respondents' frequency and percentage distributions on the role of Jirga and water distribution practices (irrigation purposes). The majority of respondents, 76.8 percent, agreed with the assertion that water distribution at the canal level disturbed the water cycle in your area, while 15.2 percent disagreed and 7.9 percent were neutral. Khan et al. (2018) corroborated these finding by stating that some determinants were irrigation water sufficiency, water distribution at canals, canal maintenance, irrigation water disputes, and how these disputes were addressed through the use of the Jirga method. The irrigation water supply was enough at the canal's head but insufficient near the canal's tail, and water disputes were a major source of contention. Some farmers did not have irrigation water issues with other farms; as a result, these irrigation water problems are addressed through local Jirga. For this in most of the farming community have formal water user association in order to cater their water needs and disputes addresses their through the farmers active role.

Similarly, 92.7 percent of respondents agreed with the statement that Jirga should apportion water rights to farming and non-farming communities in our area, while 5.3 percent opposed and 2.1 percent were neutral. These findings strengthen the Shahzada's (2013) assertion that Ulasi Jirga is a gathering of senior citizens comprised of representatives from each household in a particular town or local area. It is convened to evaluate issues such as collective property, water distribution practices with other civic affairs like school location, Masjid building etc. with the conscience decision of the community.

Furthermore, 87.7 percent of respondents agreed with the statement that hydrological changes and water scarcity prompted the practice of Jirga in their area, 10% disagreed, and 2.3 percent were neutral, supporting the statement by Nüsser and Schmidt (2016) has also alluded towards a fragmented and dynamic role of Jirga with the sole purpose of refocusing on the rising needs as per new provision of water channels and people needs, unclear the adaptability trend of the public. Additionally, the suggestion that disputes over irrigation water among farming communities in the research area may be resolved through Jirga 92.3 percent of sampled respondents agreed, 5.6 percent disagreed, and 2.1 percent were neutral. These data suggested that irrigational disputes in the research area were handled exclusively by Jirga, which was preferred for a longer period of time. Furthermore, it is also indicated towards the strong role of Jirga and people faith in its decision. These results were supported by the findings of UNESCO (2021) reported that water disputes are prevailed since long and predicted to be the future war among the nations. In our culture, there have recently been many contentious issues that have many negative implications. These disputes, whatever of the reasons they arose, have a highly negative impact on how well a society functions since they have long been the source of vicious arguments and animosities among farmers. Studies have indicated that dispute resolution facilities like "Jirga" can be crucial in reducing the effects of water disputes, and Jirga's effectiveness in resolution of these disputes can greatly reduce these negative effects.

Moreover, 96.1Percent of the respondents agreed that Jirga play significant role in the rehabilitation of irrigation related infrastructure while 1.6 percent disagree with the statement and 2.3 percent remain neutral. Similarly, 97.7

percent of sampled respondents agreed that unequal distribution of irrigation systems has a significant effect on the yield of indigenous crops, while 2.3 percent were neutral. Khan et al. (2018) had also explained such scenario by stating that certain factors such as irrigation water sufficiency, water distribution at canals, canal maintenance, irrigation water disputes, and how these disputes were resolved.in most of the situation where, water distribution is hit by the inconsistent mode of water flow and trial complication ought to be addressed through the Jirga council wisdom for attaining higher degree of tranquility in the area with maximum agricultural output.

Moreover, the following statement in this table, that indigenous foods and vegetables are dwindling due to excessive water wasting, (92.4) percent agreement, 5% disagreement, and the remaining 2.6 percent were neutral in nature. Additionally to the following statement that some farmers do not have irrigation water disputes while others do, 66.9 percent agreed, 31.1 percent disagreed, and 2.1 percent of the sampled respondents were neutral. These findings suggested that water distribution practices were not as stable and stability varied from area to area depending on the nature of the situation as pointed out by Khan et al. (2018) that some farmers do not have irrigation water disputes while others do. However, such disputes are mostly met with and addressed to Jirga. Similarly, 89.7 percent of sampled respondents disagreed with the statement that water is stored for future disasters (water stress) for irrigation purposes among farming communities, 7.6 percent agreed, and the remaining 2.6 percent were neutral. These findings suggested that local farmers had in-depth the wisdom of the water cycle of abundance and shortage period and had the management system of water shortage as well Khan et al. (2018).

Also, 56.3 percent of sampled respondents disagreed with the statement that there is any water management mechanism for future changes in farming community through Jirga, 41.9 percent agreed, and 1.8 percent were neutral. These findings were supported the statement by Khan et al. (2018) who disclosed that water management practices were focused on several factors that affect the yield of various crops in the command area. These determinants included irrigation water sufficiency, canal water distribution, canal maintenance, irrigation water disputes, and the manner in which these issues were settled. The irrigation water supply was enough at the canal's head but insufficient near the canal's tail, and water disputes were a major source of contention.

Similarly, 92.1 percent of respondents agreed that there are unwritten water distribution regulations formed by the local community regarding irrigation water distribution, 5.6 percent disagreed, and 2.3 percent were neutral. These findings suggested that an informal system of water distribution was in vogue, which had local endorsement had little interventions. It could further be assumed that this system had a strong availability in the area and people ought to be addressed their issues by themselves through their institutions (Jirga), the statement is supported by Younas (2017) He demonstrated that an Ulasi Jirga is a gathering of local elders comprising of representatives from every household in the concerned community or hamlet. Disputes about property, irrigation water allocation and rights, or other issues such as identifying land for a school are heard in this type of Jirga. After debating and detail discussions the issues is resolved by the Ulasi Jirga joined by elders of the community. The announcement for

conducting a Jirga is done by a band beat (Naghara). They decide the venue and time for the Jirga. The Jirga ensures the rule of law in the area. Everyone can express his opinions, and every viewpoint is listened and respected.

Jirga holds one or more than one session to take any decision. This Jirga has a wider jurisdiction than any other. Jirga can take-up any dispute or issue linked to the interest of national or community.

Table 3

Responses of sampled respondents regarding Role of Jirga and Water

S.#	Statement	Agree (%)	Neutral (%)	Disagree (%)
1	Water distribution at clan level disrupted water cycle in your area.	262 (76.8)	27 (7.9)	52 (15.2)
2	Does Jirga allocate water rights among farming and non-farming community in our area?	316 (92.7)	7 (2.1)	18 (5.3)
3	Hydrological changes and water lagging resultantly evoked for practicing Jirga in your area.	299 (87.7)	8 (2.3)	34 (10.0)
4	Disputes over irrigation water among farming community could be addressed through Jirga in your area.	315 (92.4)	7 (2.1)	19 (5.6)
5	You believe that Jirga play role in rehabilitation of irrigation related infrastructure.	328 (96.1)	8 (2.3)	5(1.6)
6	You believe that Jirga maintain the unwritten roles of water distribution among your community.	315 (92.4)	9 (2.6)	17 (5.0)
7	Some farmers did not have disputes over irrigation water while other have disputes over water with other farmers.	228 (66.9)	7 (2.1)	106 (31.1)
8	Water is not stored for future disasters (water stress) for irrigation purposes among farming community.	26 (7.6)	9 (2.6)	306 (89.7)
9	Is there any water management mechanism for future changes in farming community through Jirga?	143 (41.9)	6 (1.8)	192 (56.3)
10	There are unwritten water distribution rules developed by local community regarding water distribution for irrigation purposes.	314 (92.1)	8 (2.3)	19 (5.6)

Source: Author, 2021

Association between Water Distribution and Dispute Resolution

Availability of water crops is one of the basic input required for the agricultural production. Water distribution practices for this purpose have been patronized in order to satisfy each farmer requirements as put their needs in light of the allocated quotas. Table no 4.3.2 disclosed that a highly significant relationship ($P=0.000$) was noted down between role of Jirga in social integration and water distribution at clan level disrupted water cycle in your area. It could be deduced that water cycle are disrupted due to the clan level of water distribution at research area. It is pertinent to mentioned that land is being requested by the tribe/ clan/and family as joint enterprise in most part of KP. Although in some case fragmentation has taken with no define share, which often led to the emergence of disputes amongst these owner from the same clan. Khan et al. (2018) who revealed that some factors included irrigation water sufficiency, water distribution at canals, canal upkeep, irrigation water conflicts, and the Jirga mechanism's effectiveness in resolving these issues. Water conflicts were a key source of conflict because there was enough irrigation water at the canal's head but not enough near the tail. Some farmers did not have irrigation water problems on other farms, but in the majority of cases, water-related problems continue and are not resolved through Jirgas.

Similarly, the association between role of Jirga in social integration and Does Jirga allocate water rights among farming and non-farming community in our area was found highly significant ($P=0.000$)? It is concluded that water allocation management cycle was being assigned and maintained to the forming community by Jirga in the study area. The same as was illustrated by Shahzada (2013) who revealed that Ulasi Jirga is a gathering of senior citizens comprised of representatives from each household in a particular town or local area. It is convened to evaluate

issues such as collective property, water system rights and circulation, or routine considerations such as the location of a school etc.

Furthermore, a highly significant relationship ($P=0.000$) was identified between role of Jirga in social integration and hydrological changes and water lagging resultantly evoked for practicing Jirga in your area. It could be inferred that due to hydrological changes and water lagging induced for practicing Jirga system in the research area were some of the emerging issues, the community was facing which resolution was at the arrival order to bring consistency and reliability to the prevalent social order. This statement was supported by Nusser and Schmidt (2016) who disclosed that when new water framework channels are developed, Jirga recalculates and allocates water rights while also taking into consideration regarding neighborhood portion of land. This demonstrates the neighborhood's adaptability to socio-hydrological changes.

Additionally a highly significant relationship ($P=0.000$) was noted down between role of Jirga in social integration and disputes over irrigation water among farming community could be addressed through Jirga in your area. It could be presumed that such disputes over irrigation of water among forming community are solved through Jirga system in the research area. Thus intimating a dynamic and vibrant status of the Jirga system. These data suggested that irrigational disputes in the research area were handled exclusively by Jirga, which was preferred since long.

Furthermore, a very highly significant relationship ($P=0.000$) was recorded between role of Jirga in social integration and Jirga can play role in rehabilitation of irrigation related infrastructure. It could be deduced that unequal distribution of irrigation system severely affected yield of indigenous crops as well as affect the forming community as of the existence of traditional irrigation

system, still Jirga play role in the maintenance and rehabilitation of irrigation system in rural areas. Such role on part of the Jirga is deemed vital for bringing congeniality to environment of social cohesion and integration. Khan et al. (2018) also support these results who disclosed that certain factors such as irrigation water sufficiency, its canal maintenance, and other aspects like irrigation water distribution practices are thoroughly looked into by the Jirga. The unjust distribution with head, middle and tail at the water channels are constantly being monitored to address any unjust particularly, to the farmer at the tail.

Similarly, a highly significant relationship (P=0.000) was identified between role of Jirga in social integration and Jirga maintain the unwritten roles of water distribution among their community. It could be deduced that water is having a vital role in the irrigation system because of less water system crops and vegetable are lesser due to it and Jirga maintain the unwritten role of water and distribution affect the production accordingly. Khan et al. (2018) also opined that some farmers do not have irrigation water disputes while others do. These irrigation water issues are addressed through local Jirgas. Likewise, a highly significant (P=0.000) association was found between role of Jirga in social integration and some farmers did not have disputes over irrigation water while other have disputes over water with other farmers. It could be inferred from the statement that some of the farmers having disputes over irrigation of water and some of them were not having such disputes. Thus the existence in this regards is undeniable and perhaps indicting towards the mal distribution of head, middle and tail. The same statement was supported by Khan et al., (2018) who found that irrigation water was sufficient at the head of the canal but insufficient at the tail of the canal, and water disputes were a major source of contention.

Furthermore, the relationship between role of Jirga in social integration and water is not stored for future disasters (water stress) for irrigation purposes among farming

community was found highly significant (P=0.000). It is obvious that people had the water storage capacity. Moreover, it also indicated that stores like situation in the crops patterns cycle was in occurrence in the study as well. It could be concluded that water is stored for irrigation purposes to address in stress like situation. These same results were also highlighted by Khan et al., (2018) who revealed that the command area's water management procedures were centered on a number of variables that affect the yield of different crops. These factors included the availability of sufficient irrigation water, the distribution and upkeep of canal water, the resolution of irrigation water conflicts, and canal maintenance. Water conflicts were a key source of conflict because there was enough irrigation water at the canal's head but not enough near the tail.

Like the above findings, there was a highly significant association (P=0.000) between role of Jirga in social integration and is there any water management mechanism for future changes in farming community through Jirga? It could be deduced that, through Jirga system all the management mechanism for the future changing of forming community where in existence. It indicated the vibrant and viable role of Jirga, which was enriched with local experienced and wisdom to mitigate the returned situation through social schmoozing. These results were also supported by the findings of Wardak (2003); Mahmood & Ashfaq (2018); Panikkar et al., (2019) respectively.

Moreover a highly significant relationship (P=0.000) was identified detected between Jirga in social integration and there are unwritten water distribution rules developed by local community regarding water distribution for irrigation purposes. It could be inferred from the above statement that for the irrigation system the people of local community are kept an unwritten rules for the distribution of water in forming community. It was due to the traditional ways of life which guided the local community since long as having a strong faith in it. These results were also consistent with preceding and Shinwari (2011) respectively.

Table 4
Association between Water distribution practices & role of Jirga in social integration

S.#	Statement	Indexed Dependent variable	Chi-square	P=
1	Water distribution at clan level disrupted water cycle in your area.		$\chi^2 = 15.421$	P=(0.000)
2	Does Jirga allocate water rights among farming and non-farming community in our area?		$\chi^2 = 128.945$	P=(0.000)
3	Hydrological changes and water lagging resultantly evoked for practicing Jirga in your area.		$\chi^2 = 70.993$	P=(0.000)
4	Disputes over irrigation water among farming community could be addressed through Jirga in your area.		$\chi^2 = 128.945$	P=(0.000)
5	You believe that Jirga play role in rehabilitation of irrigation related infrastructure.		$\chi^2 = 39.156$	P=(0.000)
6	You believe that Jirga maintain the unwritten roles of water distribution among your community.	social integration	$\chi^2 = 128.945$	P=(0.000)
7	Some farmers did not have disputes over irrigation water while other have disputes over water with other farmers.		$\chi^2 = 39.238$	P=(0.000)
8	Water is not stored for future disasters (water stress) for irrigation purposes among farming community.		$\chi^2 = 45.567$	P=(0.000)
9	Is there any water management mechanism for future changes in farming community through Jirga?		$\chi^2 = 79.74$	P=(0.000)
10	There are unwritten water distribution rules developed by local community regarding water distribution for irrigation purposes.		$\chi^2 = 42.275$	P=(0.000)

Source: Author Calculation

4. CONCLUSIONS

Concerning the role of Jirga in water related disputes and water distribution practices (irrigation purposes), a majority of 92.7% agreed with the notion that Jirga allocates water rights among farming and non-farming communities in our area. 87.7% elaborated that hydrological changes and water lagging resultantly evoked Jirga. Similarly, 92.4% agreed that disputes over irrigation water among the farming community could be addressed through Jirga in their area. Likewise, 97.7% supported the statement that Jirga plays a role in the rehabilitation of irrigation related infrastructure. Along with this, 92.4% of the respondents stated that Jirga maintains the unwritten roles of water distribution among your community. 56.3% of the respondents also stated that there is no water management mechanism for future changes in the farming community through Jirga. 92.1% of the respondents also explained that there are unwritten water distribution rules developed by the local community regarding water distribution for irrigation purposes.

Recommendations

A convenient and traditional way of their disputes settlement had its existence in guise of Jirga. It was mostly preferred over the formal court as it is unbiased, swift and least time and finance consuming. The government needs to strengthen this institution in letter and spirit by documenting the code of ethics, criteria of member's selection, the nature and limits to which the Jirga may operate and honor in its decision in the formal court of law.

Agriculture and water distribution has reciprocal relationship in term of its effects on the total agricultural outputs. Moreover, it also contributes to a greater degree of congeniality in the social environment, if the community is enjoying a sequence and smooth relationship. The Jirga as an institution do extend its jurisdiction in resolving such disputes as well. The government and all the allied official departments need to devise a sound and unbiased criteria of water distribution in light of landholding needs and requirements while establishing a strong working land with the local Jirga for swift deliverance of justice in this vital impact of production.

Novelty Statement

This research is one of the few studies, which attempts to highlight the role of Jirga in farming community in light of irrigational disputes.

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Competing Interests

The authors did not declare any competing interest.

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