

## Role of Informal Institutions in Climate Change Adaptive and Mitigative Measures: A Case Study of Jirga and Ashar Movement



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**Abstract:** *This research delves into the significant role of informal institutions, notably the Ashar movement and the Jirga, in addressing climate change adaptation and mitigation. Operating within traditional frameworks for conflict resolution, these structures play a vital role in fostering societal harmony and environmental stewardship. Focusing on Baluchistan, Pakistan, where the Ashar movement originated, the study examines its grassroots initiatives in combating issues like deforestation. The Jirga, as an essential component, formulates resolutions that blend tradition with modern challenges. Employing qualitative analysis and case studies, the research underscores the impact of these informal institutions. It highlights the necessity for greater synergy between informal and formal mechanisms to bolster climate resilience. Advocating for policy recognition and integration of community-driven efforts, the study emphasizes the pivotal role of grassroots initiatives in effective climate governance.*

**Key Words:** Climate Change, Mitigation, Informal Institution, Ashar Movement, Jirga System

### Introduction

Climate change is one of the most pressing challenges of this time, with far-reaching consequences that impact ecosystems, economies, and human societies. As global temperatures rise and weather patterns become increasingly unpredictable, the need for effective adaptive and mitigative measures becomes imperative. While formal institutions play a significant role in addressing climate change, the role of informal institutions is often overlooked. This research aims to shed light on the crucial role played by informal institutions in climate change adaptive and mitigative measures, using the traditional Pashtun informal institution; Jirga. Moreover, this study inculcates the essential case study of Jirga, and Ashaar Movement in Baluchistan that can play its role in adaptive and mitigative measures. The Ashaar movement operates within the format and structure of Jirga, so it is essential to understand the Jirga as an informal institution. It is a

civil society movement that works within the informal structures and its decision-making is through the format of Jirga.

Informal institutions, in contrast to their formal counterparts, operate outside the bounds of official government structures and are deeply embedded in local cultures and communities. They encompass social norms, customary practices, and community-driven decision-making processes that often hold considerable sway in shaping responses to environmental challenges (ACCORD, 2022). The Jirga, a centuries-old institution in Pashtun Society, serves as an intriguing case study to explore the ways in which informal institutions contribute to climate change resilience (Daur, 2004). Ashar is the local movement in Baluchistan that aims to create awareness within the society. It also identifies practical action to protect forests and wildlife in District Zhob and Sherani districts of Baluchistan. Moreover, the

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Ashar movement from Baluchistan has been taken as a case study to identify how these informal structures respond to Climate change and its effects (Amin, 2022).

The central argument of this research is that the Jirga, as an informal institution, plays a pivotal role in facilitating and implementing climate change adaptive and mitigative measures at the community level. This paper asserts that civil society representatives and members of the local community with the support of both formal and informal institutions should take the lead to strive against Climate change measures. This argument rests on the premise that informal institutions are often more attuned to local contexts, possess a deep understanding of community needs, and can mobilize collective action effectively. By examining the mechanisms through which the Jirga engages with climate change issues, this paper can glean insights into the potential of informal institutions to complement and enhance formal strategies.

To substantiate the central argument, this paper adopts a qualitative research methodology. Unstructured interviews with Jirga Masharan, the Ashar movement's founding members, and volunteers allowed for in-depth discussions on the functioning and impact of these informal institutions. The theoretical framework for analysis is derived from an extensive literature review on the intersection of informal institutions and climate change. Additionally, case study approaches were employed by conducting interviews with local residents and Ashar Movement members in Zhob and Sherani districts of Baluchistan, as well as analyzing the Jirga and Ashar Movement comprehensively. This comprehensive methodology ensures a nuanced exploration of the roles and dynamics of informal institutions in addressing climate change in the context of Baluchistan.

This research is particularly timely and relevant in the context of the global discourse on climate change, as it seeks to broaden our understanding of the diverse approaches needed to address this multifaceted challenge. By recognizing and leveraging the role of informal institutions, policymakers and climate change practitioners can develop more inclusive and contextually appropriate strategies that resonate with local communities. The variables under study through the role of informal institutions in climate change adaptive and mitigative measures are awareness, preservation of natural forests, plantation and social disorder caused by climate change.

## Research Questions

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Following are some of the research questions that are tackled in this paper:

- How do informal institutions, specifically the Jirga and the Ashar movement, contribute to climate change adaptive measures in Baluchistan?
- In what ways does the Jirga and Ashar movement mobilize and engage the local community in climate change adaptation and mitigation efforts?
- How do formal institutions, and governmental organizations, engage with informal institutions such as the Jirga in the context of climate change, and what strategies should be adopted to foster a more effective collaboration for adaptive and mitigative measures?

## Theoretical Framework

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The theoretical framework used for this paper is Institutional Theory. The institutional theory basically asserts how institutions respond and mould human behaviour. Institutional Theory is valuable for understanding how formal and informal institutions shape behaviour, decision-making processes, and responses to challenges within a society. It helps in examining the roles, rules, and norms that guide the functioning of institutions (North, 1990). Explore how formal institutions (government policies, international agreements) and informal institutions (Jirga) interact in the context of climate change. This framework can help analyze the impact of institutional structures on climate change strategies and responses at the community level. In this context, the theoretical framework of Institutional Theory can help understand how the Jirga and Ashar Movement influence and mould human behaviours, their decision making and responses to the challenges posed by Climate change. This theoretical framework can be holistically applied to Jirga and the Ashar Movement in relevance to Climate Change.

## Literature Review

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The literature review of this research paper is given in this section of the paper. In their publication titled "Informal Institution and Comparative Politics: A Research Agenda," Gretchen Helmke and Steven Levitsky define informal institutions as socially shared

regulations with an unwritten nature, developed and enforced outside official channels. They argue that these informal institutions, while interconnected with formal structures, serve in four distinct capacities. Firstly, complementary informal institutions fill gaps in formal structures and facilitate or align with the objectives of individuals within the formal institutional framework. Secondly, accommodating informal institutions provides incentives for behaviour that influence formal norms without directly violating formal rules, often reconciling people's demands with official institutions. Thirdly, competing informal institutions establish alternative and parallel norms in response to ineffective official regulations, seeking an advantage over formal institutions. The fourth category, substitutive informal institutions, replaces formal rules with their own regulations to achieve comparable outcomes (Helmke & Levitsky, 2004).

In a parallel perspective, Douglas North defines informal institutions, as mentioned in his 1990 work, as unwritten codes that complement and underpin formal rules and institutions. These unwritten codes collectively constitute what is referred to as informal institutions (North, 1990).

When it comes to highlighting an important instance of an informal institution, the Jirga serves as a fitting example. But, before we explore how the Jirga operates in terms of climate change adaptation and mitigative measures, it's crucial to first define what the Jirga is. The Jirga functions as a conflict resolution entity specifically dedicated to settling disputes and addressing various social and political matters. Within the Pashtun region, the Jirga stands as the foremost informal justice system, convening tribal elders and influential community members to collaboratively address and resolve conflicts. Essentially, it holds jurisdiction over nearly all community affairs, encompassing both public and private enterprises (Daur, 2004). Conceptually akin to Athenian democracy, the Jirga actively assumes the roles of the judiciary, executive, and legislative branches of government in the processes of arbitration and reconciliation. (Ullah et al., 2021) discuss the significance of the Jirga in the context of conflict resolution. Their study delves into the efficacy of Jirga as an informal mechanism for resolving disputes within Pashtun society. The findings indicate that Jirga serves as an effective and efficient means to achieve justice, uphold social order, and reinstate harmony in the community.

It is essential to conceptually analyze the role of informal institutions in climate change adaptive and mitigative measures. (Agrawal, 2008) asserts that Climate change is poised to reshape development in the twenty-first century significantly. The responses of nations, societies, communities, and households to the established impacts of climate change will play a crucial role in determining their trajectories for growth, equity, and sustainability. Agrawal point specifically delves into the involvement of local institutions in adapting to climate change, grounded in the belief that climate impacts will disproportionately affect disadvantaged social groups. Local institutions are seen as pivotal in influencing how diverse social groups access and employ assets and resources. The review asserts that adaptation to climate change is inherently localized, with institutions playing a critical role in impacting adaptation and climate vulnerability through three essential mechanisms: a) structuring impacts and vulnerability, b) mediating between individual and collective responses, shaping adaptation outcomes, and c) serving as conduits for external resources that facilitate adaptation, thereby governing access to such resources (Agrawal, 2008). Ealbeth Wilson argues that climate change is a critical challenge at global, national, and local governance levels. While local authorities have mainly focused on reducing greenhouse gas emissions, scientific consensus emphasizes the need for adaptation. Spatial planning at the local level plays a crucial role in anticipating and promoting effective adaptation. This study reviews the evolution of UK local authorities' climate change adaptation policies since 2000, revealing a gap in addressing broader implications like biodiversity and water resources. Challenges include a lack of political support, limited engagement of planning professionals with climate change networks, and difficulties in reconciling short-term local plans with the long-term implications of climate change (Wilson, 2006). Moreover, The community-based decision-making processes facilitated by the Jirga are identified by Baland and Platteau (1996) as essential for adaptive governance. Their work supports the argument that decentralized decision-making structures enhance community resilience to climate-induced challenges. Integrating informal institutions like the Jirga with formal governance structures is explored by Ostrom (2005) as a potential strategy for enhancing the overall effectiveness of climate change responses. The importance of bridging formal and informal institutions

is also emphasized by Agrawal (2010) (Eiadat & Fernández-Castro, 2021).

### **Conceptual Understanding of Informal Institutions in Climate Change Adaptive and Mitigative Measures**

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Informal institutions, deeply ingrained in local cultures, serve as critical components in shaping adaptive and mitigative responses to the complex challenges posed by climate change. This extensive analysis explores the multifaceted roles played by informal institutions, emphasizing their impact on community resilience, resource management, and conflict resolution in the context of a changing climate.

Informal institutions often excel in localized decision-making due to their proximity to communities. As argued by Ostrom (2015), institutions that operate at the scale of the problem are more likely to implement effective solutions. Informal institutions, deeply embedded in local contexts, exhibit flexibility in responding to immediate and context-specific climate challenges, allowing for swift decision-making processes tailored to the community's needs (Ostrom, 2015). Moreover, the social capital fostered by informal institutions significantly contributes to a community's adaptive capacity. Adger et al. (2005) highlight the importance of social cohesion in successful adaptation to climate change. Informal institutions, as integral parts of community structures, strengthen social ties, thereby enhancing collective resilience and the ability to respond to climate-induced challenges (Adger et al., 2005).

Informal institutions often safeguard and transmit Traditional Ecological Knowledge (TEK), representing a wealth of insights into sustainable resource management practices. As emphasized by Berkes (1999), TEK can inform adaptive strategies by providing a nuanced understanding of the environment, thereby guiding decisions related to agriculture, water management, and other critical aspects of climate adaptation (Berkes, 1999). Moreover, Community-based approaches are essential components of successful adaptation strategies. Informal institutions are particularly adept at fostering community-based initiatives, mobilizing local resources, and engaging communities in climate-resilient projects. This grassroots approach, as advocated by Blaikie (2006), enhances the adaptive capacity of communities in the face of climate change (Blaikie, 2006).

Along with this, informal institutions are also playing an essential role in the dispute resolution induced by climate change. Agrawal and Gibson's (1999) argument is grounded in the understanding that informal institutions, deeply ingrained in the fabric of communities, possess an inherent understanding of local dynamics, values, and relationships. This embeddedness enables them to act as mediators in conflicts that may arise due to climate-induced resource scarcity. Informal institutions, deeply embedded in the social, cultural, and historical contexts of communities, have an intimate understanding of the dynamics that underlie conflicts. This embeddedness allows them to navigate the intricacies of local disputes and make informed decisions that resonate with community values and norms. The role of informal institutions in conflict resolution extends beyond immediate dispute resolution. Agrawal and Gibson (1999) argue that by preventing conflicts and fostering cooperation, these institutions contribute to the overall stability of communities facing the challenges of climate change. Stable communities are better equipped to adapt to changing environmental conditions and implement effective climate mitigation strategies (Agrawal & Gibson, 1999).

The following section of the paper will analyze how the Ashar movement via Jirga plays its role in climate change adaptive and mitigative measures.

### **Role of Jirga and Ashar Movement in Climate Change Adaptive and Mitigative Measures**

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Jirga is an informal institution that has long historical social recognition within the Pashtun Society. Jirga is an informal institution that regulates the lives of individuals living in the Pashtun society. Ranging from conflict resolution to generating public opinion, Jirga has a prominent role in retaining the social norms in tribal Pashtun society. It is deeply rooted in the social structure of the Pashtun belt in Pakistan and Afghanistan. Derived from Pashto and Dari languages, the term "Jirga" refers to a gathering or council of tribal elders, respected community members, and influential individuals who come together to address conflicts, make decisions, and uphold justice in their respective communities (Badarzai, 2017). The Jirga system operates based on customary laws, tribal traditions, and collective decision-making processes. It holds immense cultural significance, as it represents a manifestation of the principles of consultation,

consensus-building, and inclusivity within Pashtun and Afghan societies. While the Jirga's scope and composition may vary across different regions and tribes, its core purpose remains consistent: to resolve disputes, maintain peace, and ensure the welfare of the community. During the processes of arbitration and reconciliation, the Jirga is an active participant in all three branches of government: the judicial, the executive, and the legislative branches (Marwat, [2008](#)).

Before going into the details of Jirga's role in climate change mitigation and adaptive measures, it is essential to analyze the structure and working of Jirga. The Jirga is convened whenever public-related issues arise and the structure and function of the Jirga are also related to the issue and dynamics of the areas. There is no strict mechanism for the Jirga to operate as it is an informal institution and has no written rules and regulations. The format of Jirga is according to the collective understanding and to the way the people respond to the issues. Members of the Jirga often sit in circles. It symbolises the Pakhtun tradition and human equality. Understanding Pakhtunwali, knowledge, and the ability to solve problems are the three essential requirements for participation in a Jirga. To keep the peace, the tribe Jirga resolves disputes in accordance with tribal tradition and custom (Sadiq, [2010](#)). Moreover, Jirgas are involved in establishing links to and from the government on a vertical scale, interacting with other tribes, and playing diplomatic, legislative, peacekeeping, developmental, and arbitral functions. Many non-governmental organizations usually consult the Jirga bodies in the local areas as the Jirga help them in the implementation of their projects. It serves as the bridge between the government and the local population which ultimately helps in the administration works. As the institutional structure and bodies are not strong in the tribal areas of Pakistan, therefore, the role of Jirga in playing the complementary role is beneficial for communication and the execution of the projects (Ali, [2014](#)). In a nutshell, along with conflict resolution, Jirga deals with any issue that affects the community and its domain expands to any issue and circumstance that affects the public order and community values. The Jirga is convened to ensure the protection of social values and peace in the community. However, there are also certain voices that question Jirga for its human rights violation and for taking the role of judiciary, executive and judiciary itself (DAWN.COM, [2023](#)).

Jirga plays its role in both climate change adaptive measures and as well as mitigative measures. Regarding climate change, Jirga is important because it helps in create awareness among the general public about the worst effects of climate change. The rationale behind convening Jirga on climate is that Jirga's decision is considered as important and is easily implemented. The Jirga acts as a communication hub within the community, disseminating information about climate change impacts and adaptation strategies. Any violation of the Jirga decision is dealt with a heavy hand. Jirga is being convened in many parts of Khyber Pakhtunkhwa and Baluchistan province to ensure the protection of the environment and avoid public deforestation, wildlife hunting, and large-scale emission of Green House Gases.

The Jirga serves as a forum for community decision-making, providing a platform where community members can collectively discuss and decide on matters relevant to climate change adaptation. The inclusive nature of the Jirga allows for the participation of diverse community stakeholders, fostering a sense of ownership and shared responsibility in addressing climate challenges. The Jirga, deeply rooted in local traditions and customs, is well-positioned to develop and implement localized adaptation strategies. It can leverage traditional ecological knowledge (TEK) to identify climate-resilient practices that are culturally appropriate and tailored to the specific needs of the community (Muzamil et al., [2021](#)). The Jirga serves as a custodian of traditional practices and values. In the context of climate change, where rapid changes can pose a threat to traditional ways of life, the Jirga can play a role in preserving and integrating these practices into adaptive strategies. This preservation helps maintain the resilience embedded in traditional knowledge (Yousaf & Barrech, [2022](#)). With its authority and legitimacy within the community, the Jirga can facilitate the mobilization of local resources for climate adaptation initiatives. This includes manpower, funds, and other necessary resources that can be directed toward implementing adaptive measures identified through community consensus.

The Jirga can serve as a bridge between the community and formal institutions, facilitating collaboration in climate change adaptation efforts. By establishing connections with government agencies and other stakeholders, the Jirga can ensure that community perspectives are considered in broader climate policies and programs (Daniel & Ahmed, [2014](#)). The other case study that can be helpful in

assessing the role of informal institutions in climate change adaptation and mitigative measures is discussed in this section of the paper. Ashar is the climate change resistance movement that got started in 2019. The word Ashar comes from one of the aspects of Pashtun Culture.

### **Ashar Movement and its Role in Climate Change Adaptive and Mitigative Measures**

Ashar is essentially synonymous with community labour, representing a collaborative effort where members of a community come together to accomplish various daily tasks, either for individuals or the community as a whole. These tasks encompass a range of activities such as constructing walls and roofs for small dwellings, engaging in minor construction projects, and participating in the harvest of crops. The term "Ashar" is predominantly used during the wheat harvesting season due to the complexity and time-consuming nature of the process, especially in the absence of modern technological advancements. Moreover, the Pashtun society exhibits minimal economic polarization and lacks pronounced class distinctions. In this context, any family or individual, irrespective of their economic standing, has the liberty to invoke Ashar and seek community assistance for the completion of their routine tasks (Daur, 2004)

The Ashar movement, initiated in 2019 in the Zhob and Sherani districts of Baluchistan, originated with the goal of fostering a collective effort for plantation activities in the region. Motivated by a desire to make the area greener and create a healthier environment, particularly in response to the isolating effects of COVID-19, the youth began a plantation drive in the mountains. Recognizing the limitations of state machinery in addressing climate change, especially at the community level, the movement adopted a bottom-up approach.

To formalize their efforts, the youth called for a Jirga—a traditional assembly—to take substantive steps for forest and wildlife preservation in Zhob and Sherani districts. The first Jirga of the Ashar movement, held on Oct 20, 2020, comprised 580 notables and Masharans (Tribal Leaders). Unanimously, the participants passed a resolution banning deforestation and hunting. Violators faced fines or punishments determined by the Jirga, with the possibility of police intervention through the forest department for more severe cases (Tribune, [2022](#)).

Beyond regulatory measures, the Ashar movement, facilitated by Jirga, played a pivotal role in raising awareness, mobilizing local communities on climate change impacts, conducting capacity-building activities, and ensuring public participation in climate governance. This initiative aided local communities in planning, designing, and implementing climate adaptive measures. In line with Levitsky's argument about informal institutions complementing formal ones, the Jirga and Ashar movement contribute to the government's mitigation and adaptive efforts. However, the lackadaisical approach of government departments, such as the forest and climate change departments, towards supporting local movements against climate change remains a challenge.

An interviewee Haseeb Shah responded that the Ashar movement focuses on behavioral changes related to deforestation, wildlife conservation, and tree plantation. It sensitizes people in the Pashtun belt of Baluchistan to the severe impacts of climate change and encourages the responsible use of water in a region facing water shortages. The movement's functional method includes establishing social customs (laws) that discourage deforestation and wildlife hunting, aligning with the Pushton code of conduct. Volunteers respond promptly to violations by documenting and sharing evidence on social media, urging government institutions, especially the Forest Department, to take strict action (Amin, [2022](#)).

Regarding its impact, Salamin Khan, a founding member of the Ashar movement, an interviewee responded, that over 100,000 trees have been planted in regions like Chaman, Pshin, Killa Abdullah, Quetta, Harnai, and Sherani. Despite challenges such as water scarcity and harsh weather conditions, around 25,000 trees achieved a 100% survivability rate. The movement focuses on raising awareness about the importance of forests, preserving ecosystems through collective efforts, and fostering a collective response to climate change effects. Notably, Ashar movement members were the first responders to a forest fire in the Sherani district, actively engaging local communities and utilizing social media to pressure the government into taking effective measures to control the blaze. The above view is also asserted by another interviewee Said Nasar Khan.

### **Conclusion**

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In conclusion, the Ashar movement and the Jirga exemplify the impactful role of informal institutions in



climate change adaptation. Originating in Zhob and Sherani districts, the Ashar movement, driven by community-led initiatives, addresses environmental concerns such as deforestation and hunting. This research shows that the both Jirga and Ashar movements in terms of their work reinforce each other while dealing with climate change adaptive and mitigative measures. The Jirga within the movement establishes resolutions, showcasing the synergy between tradition and contemporary challenges. Despite successes in tree planting and community response to forest fires, challenges persist due to a lackadaisical approach from formal government departments. Bridging the gap between informal and formal institutions is crucial for a more effective response to climate change. As Levitsky suggests, informal institutions can complement formal ones. The Ashar movement and the Jirga provide a localized, community-driven approach that enhances climate change resilience. Their success underscores the need to recognize and integrate informal institutions into climate policies. This research emphasizes the pivotal role of grassroots initiatives in fostering sustainability and resilience within communities. In summary, the findings advocate for recognizing and leveraging the impactful contributions of informal institutions for more effective and inclusive climate governance.

## Policy Recommendations

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- Invest in capacity-building programs at the community level, focusing on enhancing awareness and skills related to climate change adaptation and mitigation.
- Encourage formal institutions, such as government departments responsible for climate change and forestry, to actively collaborate with informal institutions like the Jirga and the Ashar movement.
- Integrate the resolutions and practices identified by the Jirga and the Ashar movement into formal climate change policies.
- Provide financial support to the community-led initiatives, ensuring that resources are allocated for sustainable practices identified by the Jirga and the Ashar movement.
- Launch comprehensive education and outreach campaigns to raise awareness about climate change, emphasizing the impact of individual and community actions.
- Promote inclusive decision-making processes that involve diverse community members, ensuring that the voices of marginalized groups are heard.

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