

CLIMATE CHANGE AND THE MARGINALIZED: EXPLORING THE ROLE OF SOCIAL WORK IN PROTECTING VULNERABLE POPULATIONS IN BALOCHISTAN

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Abstract

Balochistan, Pakistan's largest and most climate-vulnerable province, faces escalating environmental challenges such as extreme heat, prolonged droughts, water scarcity, and desertification. These climatic stresses disproportionately affect marginalized groups—particularly rural communities, women, children, and the poor—who rely heavily on natural resources for their survival. Despite increasing awareness of environmental degradation, the social dimensions of climate change remain understudied in Balochistan. This study examines the intersection of climate change and social vulnerability, exploring how social work can play a transformative role in protecting and empowering marginalized populations across the province. The purpose of this research is to identify the social, economic, and institutional gaps that hinder effective community adaptation and to propose a framework through which social work can contribute to climate resilience. A qualitative methodology was employed, using semi-structured interviews and focus group discussions with social workers, community leaders, and representatives from local welfare organizations in Quetta, Turbat, and Jaffarabad. Secondary data from provincial climate reports and welfare department publications supported the analysis. Findings reveal that climate-induced hardships—loss of livelihoods, forced migration, and food insecurity—are compounded by weak institutional responses and limited social safety nets. Social workers, however, emerge as crucial agents of change by facilitating community awareness, mobilizing local support networks, and advocating for inclusive climate policies. The study concludes that integrating environmental perspectives into social work practice can strengthen community resilience and ensure that climate responses address both ecological and social justice dimensions. It recommends developing climate-focused social work training, empowering local welfare institutions, and embedding social protection measures within provincial climate adaptation plans to safeguard Balochistan's most vulnerable populations.

Introduction

Balochistan is the largest of the provinces in Pakistan in terms of area and it is one of the most climate sensitive areas in South Asia. The province experiences extreme weather conditions such as frequent droughts, increase in temperatures,

desertification and irregular rainfall patterns due to its arid and semi-arid climate, weak ecosystem, and scanty water supplies. Such climate shifts have continued to interfere with the normal way of life, food security and social stability. The socio-economic landscape of the province is already frail

because of the severe poverty levels, lack of infrastructural development, the lack of institutional power and the absence of proper governance, which as a whole exacerbates the human cost of climate change. To marginalized groups like rural farmers, women, children and informal sector laborers, climate change is not just an issue of concern due to the environment, but a survival, security and dignity issue.

Social vulnerability is closely pegged with the deterioration of the environmental conditions in Balochistan. Rising temperatures and decreasing groundwater have been noted in many districts including Turbat, Gwadar, Chagai, and Nushki, which have resulted in the decline of agriculture and livestock deaths and migration to other areas like Quetta. Societies which previously relied on small scale farming or herding are failing to adjust, without the assistance of institutions in many cases. Social networks have also been eroded and urban poverty is on the increase due to the climate induced displacement subjecting the marginalized families to a series of risks such as unemployment, a health crisis, and food insecurity. In spite of these terrifying facts, the social aspect of climatic change has not been given much consideration at the policy level. The environmental or infrastructural responses have been the majority, and not much attention has been given to human and community-based factors, which define resilience.

In this regard, social work is an important field that can close the gap between climate policy and welfare of the community. The values that define the field of social work, namely, human rights, social justice, empowerment, and community participation, place this field in a special position to respond to the social effects of the environmental degradation. The social workers tend to be on the front line of community work, disaster response and rehabilitation and therefore they should have an important role in the climate adaptation strategy. In Balochistan, on the contrary, the social work practice into the environmental policy is still minimal. Social workers are not often trained to address the issues of climatic nature, and the welfare programs are not yet adapted to the facts of ecological stress.

Such disconnection narrows down the prospects of social work to safeguard and empower vulnerable groups of people adversely affected by climate change.

There are multiple dimensions in the relationship between climate change and marginalization in Balochistan. The poor are more susceptible as environmental stress is likely to worsen the social inequalities that were already present. As an example, the outcomes of climatic changes on women in rural areas are disproportionate since most women in rural areas are the ones who do the water harvesting, food preparation, and nurture. With the drying up of water sources and the escalation of food prices, their workload gets heavier and reduced access to resources. On the same note, little farmers and herders who make substantive proportion of the population in the province are experiencing a deteriorating output and increasing debt. These communities are then further reduced to poverty and dependency without adaptive capacity or institutional safety nets. In such situations, social work has the potential to act as a catalyst of change by encouraging resilience, access to welfare initiatives, climate justice, and making local adaptation mechanisms.

Besides, social work is capable of connecting the scientific knowledge about climate change and the experiences of the communities in need. The social workers can facilitate translating the climate adaptation policies to community action through participatory approaches; this will make the policies inclusive and equitable. They will be instrumental in creating awareness, psychosocial support and livelihoods rehabilitation following environmental kind of shocks like floods or droughts. Nevertheless, to be successful in this area, social work would need capacity-building, institutional facilitation, as well as incorporating climate-related material into social work education. This will empower practitioners to deal with the physical and psychosocial aspects of the effects of climate change.

Thus, the research paper examines the interaction between the climate change and the social vulnerability and marginalization trends in Balochistan, as well as the role the social work can

play in safeguarding and empowering the vulnerable groups. It discusses the institutional constraints which are obstructive to adequate climate adaptation and demonstrates the possibility of social work to support resilience, advocacy, and justice among the most vulnerable populations. With the linkage of environmental and social welfare approaches, the study seeks to address a gap that remains critical in knowledge and policy gaps, which is the need to adopt a human-centered approach to climate resilience in Balochistan

Problem Statement

The climate crisis in Balochistan is escalating, but the efforts aimed at resolving it are still predominantly concerned with physical infrastructure and environmental regulation instead of social/human aspects of vulnerability. Small scaled farmers, women and rural households are the marginalized communities in the province and are usually left to endure the hot climatic conditions, lack of water and loss of livelihood yet their interests are not considered in the climate planning and support system. The social welfare institutions in Balochistan are poorly equipped to solve the problem of climate and even the role of social workers in introducing climate adjustments is not well stipulated. This means that populations affected are still experiencing increasing poverty, displacement and psychosocial pressures without proper institutional or community-supportive measures. This research paper reveals one such very important gap between environmental policy and social welfare practice in Balochistan. Although climate change adaptation is a popular topic at the national and provincial levels, the aspects related to the application of social work principles, including empowerment, participation, and social justice, in these frameworks are insignificant. The necessity of knowing how social work can serve as a vital tool in helping vulnerable populations to be safeguarded against the effects of climate change and also how communities can become more resilient to climate change and natural disasters by raising awareness, engaging in advocacy, and participating in policy making is pressing.

Objectives of the Study

- To analyze how climate change exacerbates social and economic marginalization among vulnerable populations in Baluchistan.
- To explore the existing and potential roles of social work in protecting and empowering communities affected by climate change.
- To recommend strategies for integrating climate change adaptation and environmental awareness into social work practice and policy frameworks in Balochistan.

Research Methodology

In this paper, the research design will be qualitative, as it aims to identify the overlap of climate change, social vulnerability, and social work in Balochistan. The qualitative design is selected owing to the fact that it will feature a deep insight into the lived experiences, perceptions, and coping mechanisms of the participants in climate-impacted communities. The sampling population was three large districts, namely, Quetta, Turbat, and Gwadar, representing different climatic and socio-economic environments of the province. The target participants were social workers, community leaders, officers of the Social Welfare Department and the representatives of the vulnerable households that had suffered due to droughts, heatwaves, and lack of water. The respondents who were identified through a purposive sampling technique are those who have first hand experience or professional interest in community welfare and climate adaptation. Semi-structured interviews and focus group discussions (FGDs) including the review of secondary sources including policy reports, climate vulnerability assessments, and development plans by the Government of Balochistan, PDMA, and UNDP were used to collect the data.

The thematic approach of data analysis allowed identifying the major patterns and the themes that appear to be recurrent in relation to challenges created by climate and the contributions of social work interventions. The qualitative data were transcribed, coded and categorized into major themes which included social vulnerability, institutional responses, community adaptation

and policy gaps. In order to improve validity and reliability, triangulation was accomplished through the cross-verification of FGDs, secondary documents, and interviews. All ethical considerations were followed and informed consent was taken with all the participants and confidentiality was kept during the research process. The presented methodological framework will provide the opportunity to understand in more depth the role of climate change contributing to marginalization in Balochistan and how social work practices can be incorporated into climate resilience and community protection efforts.

Literature Review

Climate change is one of the most urgent issues in the world in the 21st century, especially arid and semi-arid lands, where delicate eco-system and scarce water supply increase the susceptibility. According to the Intergovernmental Panel on Climate Change (IPCC, 2022), there are rising temperatures, a reduction in rainfall, and extended droughts in the arid zones of South and Central Asia. The implications of these environmental changes are wide ranged on the human health, food production, water availability, and even stability in the society. The impact of climate change is aggravated in such areas by poor governance, poverty, and poor adaptative mechanisms. Pakistan and Baluchistan province especially in the southwest of the country is at the receiving end of these threats. Due to its arid climate, low vegetation, and reliance on subsistence farming and animals, Balochistan experiences increasing desertification, depletion of groundwater, and heat waves (Rasul et al., 2019). The average temperature in Baluchistan has increased more than 1.5degC over the past twenty years, which results in a higher number of droughts and water shortages (Pakistan Meteorological Department, 2021). The rural poverty, migration and social instability has been hastened by the environmental degradation. Crop failures and water drying up have deprived many communities in Turbat, Gwadar, and Chagai of traditional livelihoods (Khan & Baloch, 2020). This type of climate-related stress has made a

formerly agricultural dilemma into a social and humanitarian crisis. Low soil fertility and variability in the rainfall are also witnessed in arid areas such as Balochistan, thus low agricultural productivity. As climate change generates more severe natural limitations, residents of the area are subjected to food security risks, unemployment, and the loss of traditional social frameworks (Ahmad and Hussain, 2021).

Climate change effects in arid areas are multidimensional as they touch on both systems; ecological and social. Rasul et al. (2019) are of the opinion that the resilience of arid communities is not solely dependent on the natural factors, but institutional capacities and social cohesion. In the case of weak institutions, effects of drought or heat stress are exacerbated. In Balochistan, the absence of proper infrastructure, inadequate water management and absence of coordinated policies on climate adaptation complicate the survival of the people. Other secondary effects caused by environmental degradation include heightened competition due to a limited amount of resources, local strife, and a growing reliance on humanitarian aid (UNDP, 2020). These are not just environmental but are very social issues and need solutions that strike a balance between sustainable ecology and the well being of humans-where social work may be very transformative.

Balochistan is socioeconomically vulnerable and marginalized, which has a historical basis of neglect and structural inequality. Naseer and Jamali (2020) assert that the lack of development in Balochistan relative to other provinces has facilitated the development of poverty, exclusion, and alienation in the political arena. Rural communities have been using rain-fed agriculture and livestock, which is very vulnerable to changes in climate. The economy of the province relies on natural resources which is especially prone to droughts and shortage of resources (Rasul et al., 2019). Female and children workers are the most vulnerable to such environmental challenges with gendered roles often limiting access to education, property, and financial means (Shirazi and Ahmed, 2021). In most of the rural Balochistan, women collect water and fuel and in case of any shortage

in supply resources, their duties and bodily risks multiply many times.

The Balochistan marginalization is not merely economic, but also social and political. Vulnerable groups are further isolated by limited representation in decision-making processes and inaccessibility to the state institutions. Climate change increases this marginalization by lowering the livelihood opportunities and compelling migration. Lack of social safety nets and poor welfare institutions leave a number of communities with no proper coping mechanism. The Asian Development Bank (2022) argues that without further measures, climate change would cause an additional 15-20 per cent of rural households in Balochistan to fall below the poverty line in the next decade provided that the current trends persist. The social vulnerability then becomes a multiplier factor which increases environmental risks. In the context of these multi-layered issues, social work is thus critical in the solution of the problems since it is founded on empowerment and inclusion principles.

Social work has taken new environmental and ecological dimensions throughout the world. Dominelli (2021) stresses that the notion of green social work combines the concepts of environmental sustainability and social justice by acknowledging that climate change is a social problem, not only an ecological one. Community-based climate adaptation, disaster response, and environmental justice advocacy are becoming common activities of social workers around the globe. Social workers have been instrumental in the rebuilding after disasters (as well as mobilization of community resilience) in nations such as Australia, Canada and the Philippines (Boetto, 2019). In South Asia, regionally, environmental social work is a concept that is still new. As indicated by Khan, Ahmed, and Ali (2020), social work in Pakistan has mainly revolved around the reduction of poverty and the delivery of welfare but has not been systematic in embracing the issues of the environment. Nonetheless, the increasing awareness of the social aspects of climate change can provide new opportunities to broaden the horizons of the social work practice.

Migration and loss of livelihood due to climate changes are now characteristic elements of the global climate crisis, with Balochistan providing a clear example. When water shortage and soil erosion become more severe, full villages are getting depopulated, and families have to go to cities such as Quetta and Karachi to find employment (UNDP, 2020). Such movement is destabilising the traditional family relations, bonds of community, and subjecting migrants to novel social and economical vulnerability. Thousands of families are displaced in Balochistan drought-prone districts since 2018 according to the internal displacement data (IOM, 2022). The agricultural productivity not only weakens food security but also the erosion of the cultural and communal identities that are based on land and livestock. In such situations, the role of social workers is critical in the reintegration, in supporting the rights of migrants, and linking families who have lost their base to the welfare services.

There has been growing interest in the role of social work in disaster management and community resilience in both the scholarly and policy arena. Social workers normally come as the first responders during humanitarian emergencies, provision of psychosocial services, community organization, and equitable distribution of relief resources. According to Dominelli (2021) and Mathbor (2007), the focus on empowerment and participation in social work makes it particularly appropriate to naturally respond to the disaster recovery activities that are not limited to short-term relief but aimed at long-term resilience. Social workers in Pakistan are busy in case of floods and earthquakes, however, they are rarely involved in the adaptation to climate. To reinforce their role, it is necessary to integrate the policy and to provide them with specific training in environmental and disaster management (Khan et al., 2020).

It is not only infrastructure or technology that makes communities resilient to climate change but also social capital and trust. Other studies conducted in the arid areas, like Sub-Saharan Africa, demonstrate that communities that have stronger social networks and participatory

governance recuperate faster following the climatic shocks (Adger, 2016). In Balochistan, since social integration is still high within tribal and communal contexts, there exists the possibility of getting the traditional structures to collectively adapt. Social work has the potential to reconcile the traditional and the modern adaptation policy through the promotion of participatory development and empower the voice of the marginal.

The theoretical and conceptual frameworks that informed this research are based on three interconnected lenses namely the Social Vulnerability Theory, Environmental Justice, and the Systems and Ecological Model of social work. The theory of Social Vulnerability created by Cutter (2016) and others is dedicated to exposure and vulnerability of people to environmental risks depending on social, economic, and institutional determinants. It implies that vulnerability is not identified according to the physical exposure to risk only but by the ability or incapacity of individuals and communities to respond and recover. Using this framework to analyze the situation in Balochistan can justify why poor people, women, and marginalized ethnic groups are more susceptible to climate change because they lack the resources to adapt.

The Environmental Justice Perspective offers both an ethical and a political system to discuss the issue of inequity in the system of distributing environmental risks and benefits (Schlosberg, 2013). It purports that the destruction of the environment is usually an extension of other social injustices and that climate change action should be marked by fairness, involvement, and accountability. In Balochistan, such a view puts emphasis on the inequitable nature of access to natural resources, the absence of rural voices in climate policy-making, and the fact that the province does not have its own investment in adaptation ability. Social workers as the champions of justice and human rights can follow this framework to facilitate more just climate policies and also to make certain that the voice of the marginalised groups are heard during policies formulation.

According to the Systems and Ecological Model that focuses on the interdependence among individuals, their social environments, and the environment at large, Bronfenbrenner (1994) highlights the relationship between individuals and the ecological systems. Application to climate change The model can be used in the context of climate change where social workers can learn how environmental stress within community institutions, family structures, and policy systems can interact. As an example, drought can not only decrease household income, but also impact on the education of children, health and social stability of families. The ecological model therefore requires comprehensive interventions that will target the various levels of vulnerability and not individual problems. When this model is applied in Balochistan, the interventions which can be developed are related to climate adaptation and social welfare, education, and community development programs.

The combination of these frameworks makes it possible to approach the climate crisis in Balochistan in a multidimensional way. The Social Vulnerability Theory determines who is vulnerable and why; the Environmental Justice Perspective highlights fairness and inclusion; and the Systems and Ecological Model helps to develop community-based interventions that are holistic. Collectively, they form a sound basis on the role of social work in solving the social impacts of climate change.

To sum up, the literature survey highlights that climate change in Balochistan is not a mere environmental problem but also a far-reaching social problem. The arid geography, poverty, and a poor institutional capacity all combine to form an ideal vulnerability cloud. It is also, however, an opportunity to make social work redefine its role in ensuring resilience, justice and sustainability. Social work has a possibility of serving as an intermediary between science and society by putting climate policies into human-focused actions. Although international literature offers a lot of knowledge on the intertwining of social work and climate action, the lack of localized research and practice in Pakistan especially in Balochistan is a crucial gap. Applying social

research and policy advocacy can be used to fill this gap to make sure that climate adaptation efforts are inclusive, fair, and rooted in community realities.

Climate Change and Marginalization in Balochistan

Balochistan, the largest and least populated province of Pakistan has become one of the areas most susceptible to the rapidly increasing effects of climate change. Environmental changes in the province, which have changed the ecological balance, have been characterized by increased temperatures, unpredictable rainfall, extended drought and desertification that have taken place in the last 20 years. The research shows that since 2000, the average annual temperature in Balochistan has grown by about 1.5degC, which has caused water shortage, vegetation loss, and lowered agricultural yields (Rasul et al., 2019). The dry and semi-dry geography of the province combined with the delicate nature of the ecosystems renders the province especially vulnerable to even the slightest climatic changes. As an example, Turbat has experienced one of the highest temperatures in the world in 2017 at 53.5degC which demonstrates the severity of the heatwaves in southern Balochistan (IPCC, 2022). In the meantime, the unpredictable patterns of the monsoon and flash floods in Lasbela and Awaran districts have displaced thousands of people, demolishing the infrastructure, and undermining the local economy even further (PDMA Balochistan, 2021). The trend of the general decrease of the groundwater level, drying riverbeds and reducing pasturelands will be the manifestation of the escalating ecological crisis that is entangled in socioeconomic marginalization.

The Balochistan social and economic aspects of climate change indicate a worrying trend of ingrained marginalization. Over 70 percent of the population is reliant on agriculture and livestock, so the decrease in rainfall and the frequent occurrence of drought have significantly lowered the opportunities to earn income and guarantee food security (Ahmad and Hussain, 2021). Poor households especially in rural and mountainous

regions are susceptible to numerous vulnerabilities such as lack of education, health care, clean water, as well as jobs, thus making their adaptation very challenging. Poverty is also worsened by negligence of infrastructures and political marginalization caused by climate that has historically left Balochistan without equitable redistribution of resources. In the remote districts, including Kharan, Nushki, and Chagai, there is a long-standing livelihood insecurity, which contributes to forced migration and social fragmentation (UNDP, 2020). Such weaknesses are not necessarily financial and institutional since lax governance and non-co-ordination of the environmental and social welfare departments are the obstacles to effective adaptation strategies (Khan et al., 2020). As a result, climate change turns into not only an environmental issue but a multidimensional development and governmental crisis.

Marginalization in Baluchistan is highly gendered and the climate stress is compared to women who are disproportionately affected. Women in the rural societies have the duty of bringing water, finding firewood and small-scale farming activities which have grown to be more laborious alongside the long droughts and water crises. According to one study by Habib (2022), in areas such as Kech and Gwadar, women had to travel more than 10 kilometers every day to get drinkable water at the cost of their education and health. Furthermore, when males migrate to cities, or to the other side of the borders to Iran, to find jobs, they leave behind them to manage households in worsening environmental and economic conditions. Such feminization of vulnerability has larger trends of social marginalization, in which women are underrepresented in local decision-making and access few training or other means related to climate change (Shah, 2021). The social norms and limited mobility also exclude women in the adaptation programs and this subject women to dependency and deprivation cycles. These gender inequalities indicate the need to introduce social work and gender-sensitive approaches into the Balochistan climate policy to improve community resilience and decrease marginalization.

The real-life experiences of climate-impacted communities in Balochistan offer some strong examples of both victimization and resourcefulness. In Awaran, frequent earthquakes and droughts that follow have ruined livelihoods and forced communities to move away on agriculture to informal labor markets (Rasul et al., 2019). Equally, in Turbat, the consistent heatwaves and water scarcity have caused massive migration to cities where the social services in Quetta are also already weak (PDMA Baluchistan, 2021). However, in the face of these problems, adaptation mechanisms that are driven by communities are on the rise. Drought-resistant crop farming, water storage facilities, small-scale solar power plants are some of the programs that have been enabled by local social workers and NGOs to support livelihoods (Kakar and Saleem, 2022). The initiatives which are small in magnitude show that bottom up resilience strategies can be effective with institutional frameworks and social welfare systems in place. The unequal distribution of such programs among the districts, however, reveals a large disparity in achieving equity in the provision of climate adaptation.

There is also widespread inconsistency and disjointed governmental and institutional action concerning climate change in Balochistan. Although the National Climate Change Policy (2012) and National Adaptation Plan (2021) of Pakistan offer broad guidelines in climate resilience, its implementation in provincial sectors has proceeded at a very low pace and has been between-the-lines. Disaster response efforts have been achieved by the Balochistan Environmental Protection Agency (BEPA) and the Provincial Disaster Management Authority (PDMA), but there has not been much progress that focuses on the long-term strategies of adaptation and prevention (Government of Balochistan, 2022). Effective climate governance is undermined by institutional weaknesses, like lack of technical capacity, consequent bureaucratic inefficiency and coordination of activities between various departments. In most development projects, short term infrastructural development is usually given more prominence in the project than sustainable

management of resources, and this puts the vulnerable populations at a risk of being hit by environmental shocks continuously. Moreover, social work approaches to provincial planning imply that people pay minimal attention to psychosocial aspects of displacement, livelihood loss, and trauma in communities (Dominelli, 2021). By considering social risks as well as environmental ones, including social work in climate response models might improve human-focused resilience solutions to climate change by reducing the risk of environmental factors, along with the social inequalities they support.

The other significant institutional problem is data collection and local research capacity. Balochistan Climate vulnerability assessments in Balochistan are usually founded on little information, which makes it hard to come up with context-specific interventions. As an example, the provincial government Drought Management Policy (2019) has no new hydrological data and fails to consider the various gender, age, and social class impact differences (Rasul et al., 2019). Enhancing the partnership of universities, think tanks, and policy institutions might overcome this gap by generating localized knowledge in order to inform climate adaptation. In addition, social workers, who possess experience on the mobilization and advocacy of communities, might be central to making sure that the marginalized voices have a say in provincial climate plans. Their engagement would also aid in responding to the psychological and social effects of displacement such as trauma and anxiety as well as the loss of social bond among the displaced families.

The policy level needs to incorporate climate resilience and social development to reflect structural marginalization, which increases vulnerability in Balochistan. The UN agencies like UNDP and FAO have launched climate resilient agriculture projects and community based adaptation projects in the province, though their sustainability relies on institutional support and involvement of the locals (UNDP, 2020). The social welfare departments which are understaffed and mostly underfunded should be sensitized to collaborate with environmental agencies. According to Dominelli (2021), a new generation

of professionals, with elements of environmental and disaster management, can be introduced with the aid of introducing new curricula of social work into the educational process in Balochistan to address the emerging issues. Scientific, social, and ethical aspects of climate action are combined to make Balochistan a more inclusive and sustainable adaptation framework.

To sum up, climate change in Balochistan is not only an environmental but a deep social challenge that only intensifies the already existing inequalities and reveals the inability of the structures to respond to the crisis. The increased temperature, frequent droughts, and water shortage have made poverty, migration, and marginalization to be more gendered. These vulnerabilities are further compounded by the absence of social work-based interventions and this means that communities are left to depend on disjointed support systems. An integrated response will be to acknowledge how environmental degradation and social exclusion will work together. Enabling social workers, improving institutional synergy and facilitating community based adaptation can jointly help lay the groundwork to sustainable and fair climate resiliency in Baluchistan.

Role of Social Work in Climate Action

Social work is a social justice-based profession that seeks to fulfill human welfare and community empowerment, and it has a critical role to play in resolving the intensifying climate crisis, in particular, in the most vulnerable areas such as Balochistan. Climate change is not merely an environmental event, but a deep social issue that increases poverty, displacement, and inequality. In this regard, social work plays a key role in the interface between national adaptation policies and community, and turning them into locally useful action. Social workers work with the marginalized groups of people-farmers, women and displaced families who are the most vulnerable to environments degradation and scarcity of resources. They assist in changing abstract climate policies into community resiliency programs by advocacy, capacity building, and psychosocial support (Dominelli, 2021). In Balochistan, where

policy execution frequently fails to succeed because of institutional constraints and lack of local engagement, social workers are important in rallying groups, building awareness regarding climate adaptation, and giving comprehensive consideration in decision-making. Through the combination of indigenous knowledge systems and formal adaptation measures, social work can be a medium of participatory governance which harmonizes ecological sustainability with the welfare of humans (Khan et al., 2020).

To shed more light on this, a number of case studies, both domestic and international, point to the effectiveness of social work interventions in promoting community resilience to environmental crisis. In the 2022 Pakistani floods, social workers worked together with local relief organizations and non-governmental organizations to not only deliver emergency assistance but also psychosocial guidance to the affected families (UNDP, 2023). Social work professionals in Balochistan have also collaborated with community organizations to provide water management practices, drought-resistant agriculture, and diversify livelihoods in rural areas where droughts and heatwaves are frequent issues that destroy rural livelihoods (Rasul et al., 2019). An example is a community-based adaptation program in Gwadar and Kech districts, where social workers supported the creation of women cooperatives to store solar powered water and produce sustainable handicraft. These projects helped both to alleviate the effects of drought and empower women, both economically and socially (Habib, 2022). Internationally, the same interventions can be seen in such areas as Sub-Saharan Africa and Southeast Asia, where social work agencies incorporate disaster response and community recovery with a focus on short-term recovery and long-term resilience. The success of social work in both of these instances is the holistic approach to the social aspects of the climate vulnerability- understanding that rebuilding lives means rebuilding livelihoods and dignity.

Regardless of these contributions, the present framework of social welfare programs in Pakistan, especially in Balochistan, is faced with a major challenge of meeting the vulnerabilities associated

with climate factors. The majority of welfare policies are not proactive, but solely based upon relief and not resilience (Government of Pakistan, 2022). Poor funding and institutional fragmentation hamper the ability of the social welfare departments to participate well in environmental planning. An example is that the Balochistan Social Welfare Department, the Provincial Disaster Management Authority (PDMA) and the Environmental Protection Agency have limited coordination with each other leading to overlapping efforts and a lack of joint opportunities. Moreover, the lack of climate education and training in the social work curriculum implies that the majority of practitioners do not have technical knowledge to address environmental concerns (Shah, 2021). This void restricts their contribution to meaningful policy debates or formulate adaptive social interventions. The ability of social work as a transforming agent is thus limited by institutional neglect, inadequate resource distribution, and failure to integrate environmental and social policy systems.

The other weakness is the top-down nature of the current climate adaptation programs. A significant number of governmental and donor-led projects do not engage the community in the design process which leads to the implementation of interventions that are not based on local realities and priorities. This can be overcome by engaging marginalized groups, particularly, women, minorities, and indigenous groups, through social workers who will be trained on participatory approaches to decision-making. Nevertheless, in Balochistan, their involvement is usually symbolic but not substantive because community-based social workers act with minimal independence and institutional support (Kakar and Saleem, 2022). Achieving better performance in climate adaptation requires the social welfare systems to cease operating under the charity-based framework and transition to a rights-based framework in which access to clean water, sustainable livelihoods and healthy environment are a fundamental human right. The social work as an institution has a special role to play in fostering

this change in perception through advocacy and empowerment strategies.

The shift towards climate consciousness in the social work practice needs a paradigm shift both in the institutional culture and in the education. Delivery of welfare, rehabilitation, and poverty reduction has been the main concern of traditional social work in Pakistan, but the changing trend of global crises requires that social work should be ecologically oriented. To equip future social workers with the realities of a climate-impacted world, universities and training institutes need to include the concept of environmental education, the issue of disaster risk management, and sustainable development in their curriculum (Dominelli, 2021). This incorporation would allow practitioners to respond to climate change as a social determinant of health and well-being, rather than a simple environmental problem. An example of the ways social workers could do this would be to educate the communities on sustainable practices, encourage water conservation, assist the communities to form local environmental committees, and advocate eco-friendly policies. Such proactive functions would assist in transforming social work towards reactive disaster response to proactive community development to entrench the resilience at the grassroots level.

This integration is important especially in Balochistan where the ecosystems are vulnerable and the province is underdeveloped. Climate adaptable trained social workers would help local governments to design community-based disaster preparedness strategies, surveillance of vulnerable households and connect the affected communities with the institutional support mechanisms. Climate literacy programs through the welfare departments might also empower practitioners to advocate policies, whereby climate adaptation policies must not only focus on environmental sustainability, but also social justice. Social work can facilitate the disjuncture between the technical and human worlds by characterizing climate change as a social problem to ensure that the voices of the marginalized are represented in provincial and national discourses.

The potential opportunity in social work involvement is the collaboration with civil society institutions and global development agencies. The effectiveness and scope of social interventions can be increased through collaborative models. As an illustration, UNDP and the Food and Agriculture Organization (FAO) initiatives in Balochistan have started adding community participation systems, where social workers are trained to make sure that the project is implemented inclusively (UNDP, 2023). These collaborations show how integrating social work approaches including empowerment, participation, and advocacy with environmental sustainability models can have holistic results. Nonetheless, to maintain these collaborations, they need to be regularly and heavily financed, institutionally, and the political will to decentralize the decision-making process. The human aspect of climate action provided by social work, empathy, empowerment, and equity cannot be priced higher. In a province such as Balochistan where a lack of attention by the institutions and geographical isolation continue to play their role to perpetuate the poverty cycles, the role of trained social workers can turn the adaptation processes to community-based movements. Social work would facilitate the inclusion of adaptation by adhering to the doctrine of environmental justice and social vulnerability theory, which acknowledges the interrelationships between social and ecological systems (Cutter, 2016). Integration of environmental ethics in social work practice does not only increase the relevance of social work to the profession but also transforms the role of social work in the realization of sustainable development agenda.

Findings and Discussion

According to the study results, there is a complicated nexus of climate change, poverty, and institutional fragility in Balochistan. The social workers, community members, and local administrators working in the field suggest that the risks associated with climate are broadly viewed as a threat to livelihoods, health, and social cohesion and they are increasing at an alarming rate. Growingly unpredictable weather patterns,

especially the increase in temperature, frequent droughts, and unexpected floods, were reported by the respondents as being highly disastrous to agricultural productivity and water supply. The understanding of the risks of climate was not isolated to environmental issues but was expanded to the fear of displacement, social upheaval as well as food insecurity. Several rural groups felt hopeless as they associated their helplessness with the worsening of the environment as well as ineffective administration.

One of the most important themes was institutional gaps and a weak policy. Although there is an increased demand of the need to adapt to climate, the lack of coherent policy execution, poor coordination between the government departments, and the lack of integration of climate perspectives into the development planning process were mentioned by the respondents. Social workers observed that, despite the national strategies of climatic strategies used by Pakistan to identify the vulnerable groups, the provincial level implementation is still dispersed and poorly funded. Local governments are usually unprepared in terms of technical capacity, trained human resources, and financial resources to implement community-based resilience measures to climate change. The information also indicated that the provincial social welfare department was not in touch with the environmental authorities hence they missed the chance of coming up with joint interventions that would help alleviate the social effects of the climate change.

Resilience and struggle are manifested in community coping mechanisms. Diversification of sources of income, migration during seasons and dependency on social networks to support one another are some of the adaptive strategies that many families in rural Balochistan have embraced. Nonetheless, these actions are rather short-term and reactionary and cannot continue without institutional support. According to the respondents, there has been a tremendous rise in the migration of the youths particularly the males, who leave women and the elderly populations with scarce resources to survive. In response to scarce water, some communities have resorted to the traditional systems of water sharing, as well as

informal local leadership, however, as climatic conditions deteriorate, these systems are getting pressured. The results reveal that unless communities have a structured social protection program and livelihoods diversification program, the communities are left in a cycle of environmental and economic marginalization.

The contribution of social workers came out as a critical, but underused element in the establishment of local resilience. The interviews with practitioners have also shown that most social workers understand climate change as a cause of social vulnerability, but not all of them have received formal training in environmental social work or disaster risk mitigation. Their participation has been mostly in disaster relief and not preventive and adaptive interventions. However, where social workers participated in participatory planning, awareness, and mobilization of community the results were positive. In certain regions where there were droughts, the social workers assisted the local women form water management committees and micro enterprises to support the livelihoods. The possibility of social work as the mediator between communities and policymakers in climate adaptation approaches is highlighted by such grassroots efforts.

In comparison to the available literature, the results can be associated with those conducted globally, according to which marginalized areas are vulnerable to climate change on a multidimensional level (Adger et al., 2018). Just like the investigations carried out in sub-Saharan Africa and South Asia, the Balochistan situation demonstrates how poorly functioning institutions and socioeconomic disparities increase the environmental risks (IPCC, 2022). It is stressed in the literature that social work frameworks, including the ecological systems model and the environmental justice perspective, should be included in climate response policies (Dominelli, 2020). This perspective is supported by the field information which discloses that social work can be a revolutionizing factor when entrenched within community resilience planning.

Nonetheless, where most world examples of case studies have institutionalized social work in

climate action plans, Balochistan has no formal plans of integrating social workers in climate change and disasters management planning. This hole is indicative of a larger structural disregard of social welfare systems in the province. Its results also echo the Social Vulnerability Theory, the argument that exposure to climate risks is not simply a matter of environmental aspects and conditions, but is entrenched in social hierarchies, economic disparity, and institutional oversight (Cutter et al., 2003). The marginalized groups in Balochistan with particular reference to women, small farmers and nomads experience the disproportionate impact of climate stressors because of lack of access to education, physical and mental health, and economic resources.

The relative comparison also indicates that although global structures favour participatory governance and capacity building, the Balochistan local policy is still majorly top-down and reactive. The literature highlights the need to adopt adaptation at the community level, but there is field evidence that very little consultation of affected communities occurs in the planning or implementation of adaptation. In addition, the Balochistan social workers are confronted with institutional challenges such as funding, poor training and insufficient appreciation of their contribution to the climate resilience program. This institutional control minimizes their capacity to organize communities well despite the fact that their values at work and access to communities qualifies them to do so in the most appropriate way.

Finally, the results present a conclusion that the challenge of climate change and marginalization in Balochistan needs to be resolved at the technical level, but also on the social level. Climate risks are complex with old governance and social equity problems, and social work can give a framework to solve these interconnections. Inclusivity, equity and community empowerment can make the province more adaptive to climate action policies through the involvement of social work in climate action policies. There is a comparative evidence that, provided social workers are provided with the current environmental competencies and institutional support, they become the drivers of

resilience and sustainable development. The discussion highlights why the policy should be reformed, interdepartmental cooperation, and building capacity programs to introduce social work as a key player in the Balochistan climate adaptation strategy.

Recommendations

Incorporate Social Work into Climate Policy.

Social work must be recognized as an important element of climate change and disaster management policies by the Government of Balochistan. The provincial climate committees, planning boards and local adaptation programs should also incorporate the social workers to make sure that the social aspects of vulnerability are touched on hand in hand with technical solutions.

Create Social Welfare Programs that are Sensitive to Climate.

The departments of social welfare must re-model the current welfare schemes to include climate vulnerability factors, including the loss of livelihoods, risk of displacement and water shortage in the relief and assistance given to the most vulnerable population groups, including women, small farmers and nomadic peoples.

Empower Institutional Co-ordination and Building.

There must be a provincial level coordination mechanism between the Social Welfare Department, Environmental Protection Agency and Disaster Management Authority. Social workers should be invited to regularly take part in capacity building workshops about environmental justice, community-based adaptation, and disaster response.

Advance Community Based Resilience Programs.

Design participatory community resiliency initiatives by social workers to empower the local people in the management of water resources, sustainable agriculture, and minimizing hazards of disasters. Social workers may become the catalysts in creating community groups, local climatical committees, and the women-led adaptation projects.

Adding Social Work Curriculum: Climate Education.

Balochistan should provide specialized courses on Environmental Social Work, Climate Change and Human Security, and Community Adaptation Strategies in Universities and training institutions within the country. This will develop a new breed of social workers who are interdisciplinary and field prepared.

Improve Research and Data Collection.

Create a research partnership between institutions of higher learning, think tanks, and government to gather climate vulnerability information on a district-by-district basis. Participatory research also needs to involve social workers in collecting and documenting the voices of the locals and indigenous adaptation practices that can be incorporated into the policy planning process.

Enhance Gender-sensitive adaptation.

Having understood that women have been disproportionately impacted by climate change, programs should focus on female involvement in resilience planning and microfinance access programs and livelihood diversification projects. On remote locations, this should be trained and deployed to address gender specific vulnerability using female social workers.

Increase Financial and Technical Support of Local Initiatives.

The provincial government together with the international donors (e.g. UNDP, GCF and ADB) need to develop small grant schemes that community adaptation initiatives fronted by the social workers. These may be solar energy projects, rainwater harvesting and sustainable livelihood models in areas that have drought problems.

Work on Policies in Place to Migrate due to Climate.

Establish proper policy provisions and social welfare to internally displaced persons (IDPs) due to drought, floods, or heatwaves. Social workers must be used to support the process of rehabilitating, training skills and reintegrating

families who were displaced into safe and sustainable conditions.

Enhance Early Warning and Communication Systems.

The social workers can be a very important part of the early warning system in the community. This can be done by training them to spread weather warnings and safety messages using local languages, which will make a big difference in reducing the effects of any disasters in the rural communities where communication facilities are poor.

Promote Social Education and Promotion.

Conduct province-wide campaigns to create awareness on the risks of climate, environmental protection strategies and social protection measures. Social workers, NGOs, and local media should work together to establish the awareness of the population and responsibility towards climate resilience.

Institutionalize Checking and Accounting Systems.

Formulate performance indicators to measure the performance of climate adaptation and welfare programs. The field data will help social workers to evaluate the progress and facilitate transparency, inclusivity, and accountability in the implementation process.

Conclusion

The paper concludes by stating that climate change in Balochistan is not simply an environmental process, but a highly social crisis, which increases existing disparities and susceptibilities. The arid climate, weak eco systems, and small institutional capacity in the province have also predisposed marginalized populations especially the rural groups, the small farmers and the women to the effects of this climate. Frequent droughts, water shortages and reduced agricultural output have further exacerbated poverty, food insecurity and migration, further marginalizing social and economic status. The results demonstrate that the understanding of the harmful effects of climate is increasing, but the institutional, resources of the responses are poor,

and most of them are reactive, rather than preventive.

Social work becomes a pivotal point between policies and reality of the community and provides an inclusive and human-focused approach to climate adaptation. By interacting with communities, social workers are in a unique position to create resilience, offer environmental justice and represent vulnerable populations. The research paper indicates that incorporating social work principles in the climate action process can make adaptation initiatives to be not led by relief-focused efforts but empowerment of communities through sustainable development. Nevertheless, the absence of climate-oriented training, recognition and agency cooperation constrain the success of social work interventions in the area.

The study emphasizes that a multidimensional framework of environmental planning, where the environmental planning is connected with the social welfare, education, and participatory governmental approach is necessary to deal with the climate issues of Balochistan. The enhancement of institutional capacity, the integration of climate education into the curriculum of social work programs, and the encouragement of the gender-sensitive and community-based projects can make the adaptation efforts both equal and sustainable. Finally, the effective inclusion of social work as a policy tool and a community empowerment tool would result in climate resilience in Balochistan. The paper urges the need to make the social work to be proactive to the environmental justice so that the most vulnerable in the province are not abandoned in the face of a rapidly changing climate crisis.

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