

Policy Dialogue:

A Roadmap to Address Climate Change Challenges in Jaffarabad - An Action Plan



Commencing a Policy Dialogue to Confront Climate Change Challenges in District Jaffarabad - An Action Plan

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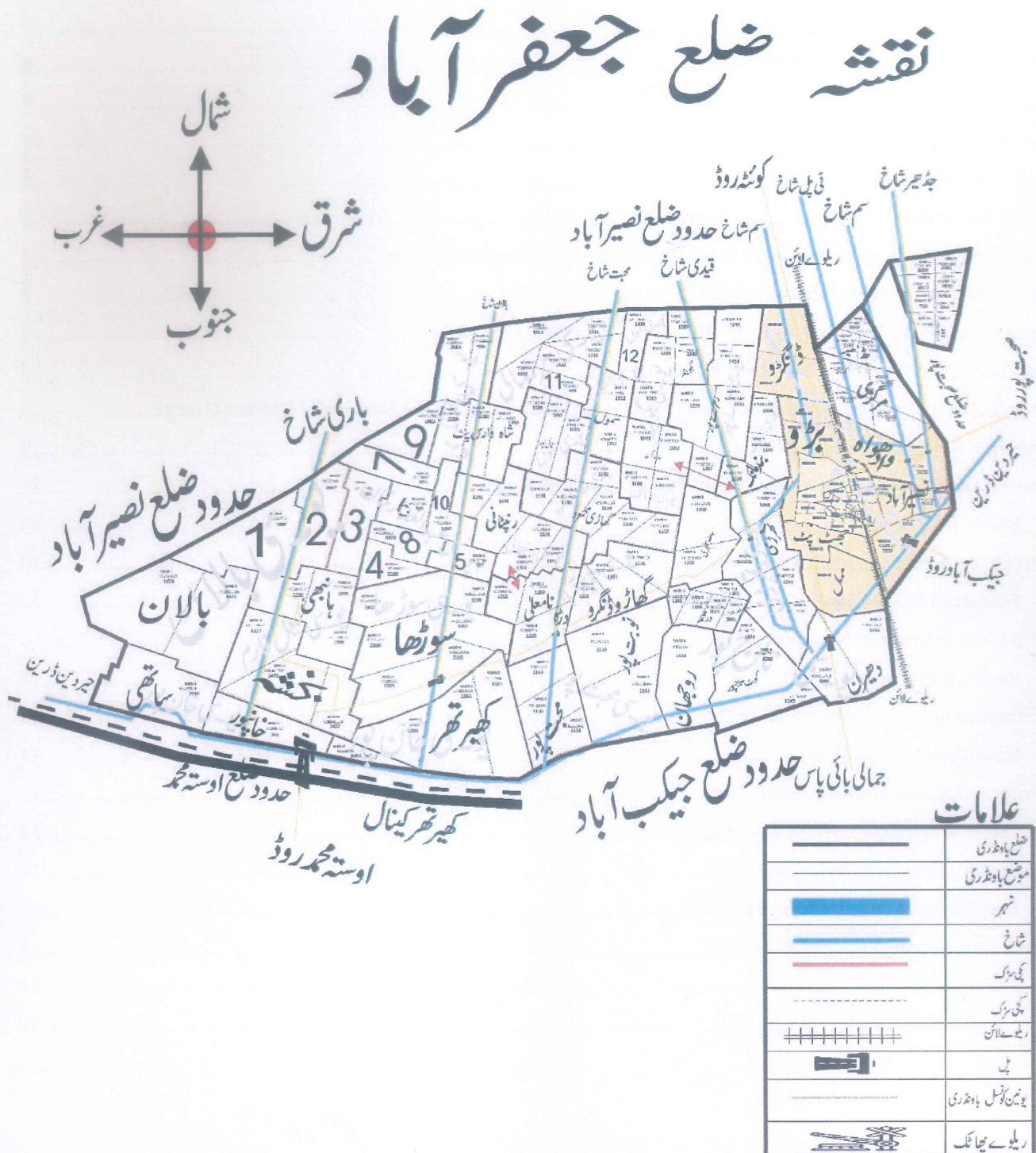
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District Jaffarabad Map



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Executive Summary

Jaffarabad District, situated in southeastern Balochistan, Pakistan, officially attained district status in 1987 and was named after Mir Jaffar Khan Jamali, a prominent figure in the Independence movement. Renowned for its expansive agricultural plains and diverse population, Jaffarabad spans an area of 690 square kilometers, comprising two tehsils: Jhatpat and MC Dera Allahyar. The district, housing a population of 291,720, confronts substantial climatic challenges.

Jaffarabad experiences a predominantly hot climate, characterized by intense summers and pleasant winters. Over the past two decades, the region has witnessed notable climatic changes, influencing weather patterns and resulting in devastating floods. With over 80% of the population reliant on agriculture, the district grapples with water scarcity intensified by climate change, inefficient irrigation practices, and pollution. Key drivers of climatic changes in Jaffarabad encompass deforestation, alterations in land use, greenhouse gas emissions, the absence of new tree plantations, and the excessive use of construction materials. These factors contribute to elevated temperatures, modified precipitation patterns, and environmental instability. The lack of awareness and entrenched habits pose substantial barriers to addressing these pressing issues.

Aiming Change for Tomorrow (ACT) International has initiated discussions with relevant government departments to formulate a comprehensive Policy Dialogue on Climate Change mitigation strategies, addressing the district's climate change challenges. The objectives encompass raising awareness, enhancing resilience in agriculture, optimizing water resource management, promoting environmentally sustainable practices, and reducing the carbon footprint. The active involvement and consultation with pertinent government line departments has been made to shape this initiative. Given the district's distinctive environmental challenges, the significance of this undertaking cannot be overstated. The action plan, crafted through strategic interventions and collaborative efforts, aspires to safeguard vulnerable ecosystems, promote climate-resilient practices, and mitigate the adverse impacts of climate change through comprehensive public education.

The concerned departments have well-defined responsibilities, ensuring a synchronized and efficient approach. The Municipal Committee is tasked with solid waste management and awareness campaigns. The Education Department is entrusted with incorporating environmental education into morning assemblies, emphasizing eco-friendly practices. The Health Department is mandated with addressing public health concerns related to the environment. Livestock Management is charged with educating the community on the use of organic fertilizer, while the traffic police is tasked with issuing warnings or challans to unfit vehicles. The Agriculture Department is responsible for promoting climate-smart agricultural techniques, and the Forest and Range Management Department is assigned to provide plants to school and college students for tree plantation in their institutes and suburbs, fostering an eco-friendly culture. This collective effort underscores a dedicated commitment to fostering a climate-resilient future for the residents of District Jaffarabad, emphasizing the harmonious coexistence of communities and nature.

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Historical Background

Jaffarabad district lies in southeast of the Pakistani province of Balochistan. Jaffarabad's headquarter is at Dera Allahyar, also known as Jhatpat among locals. Sohbatpur tehsil was a part of Jaffarabad district but was upgraded to a district level in 2013. Recently in 2022 part of it was split off to form the new district of Usta Muhammad.

Jaffarabad officially attained district status in 1987, named after Mir Jaffar Khan Jamali, a close confidant of Quaid-e-Azam and a notable figure in the Independence movement. The district was merged into Naseerabad in 2001 but was subsequently reinstated in 2002.

Renowned for its expansive agricultural plains locally referred to as 'Pat,' Jaffarabad is a diverse amalgamation of Baloch and Sindhi populations, with the prominent presence of Jamali and Khosa tribes. Other notable tribes include Gola, Jamote, and Brahvi.

The district of Jaffarabad spans 690 kilometers and is consist of two tehsils, Jhatpat and MC Dera Allahyar. Jhatpat is composed of 20 union councils, while MC Dera Allahyar comprises 4 Municipal Committees. The total population of Jaffarabad is currently 291,720, with MC Dera Allahyar contributing 89,432 to this count.

S. No	Name of Tehsil	No of Union Council	Population 2017 Census	Current Population
1	Jhatpat	20	253720	291720
2	MC Dera Allah Yar	-	75278	89432
G. Total			253720	291720

The linguistic landscape of Jaffarabad is characterized by the prevalence of Sindhi, Balochi, Seraiki, Brahvi, and other languages. The district's history and demographics reflect a rich tapestry of cultural influences and historical significance, contributing to the unique identity of Jaffarabad in the larger context of Balochistan.¹

Geographical Location and Boundaries

Jaffarabad is located between longitude of 67 degree 39' in the West and 69 degree 12' in the East. In altitude, it is 27 degree 55' and 28 degree 40'.The District serves as geographic boundary between the provinces of Balochistan and Sindh.

District Jaffarabad is geographically placed in a very important region as it serves as a gateway to historical Upper Sind Frontier region (Jacobabad).To its North lies District Naseerabad while to its South is District Jacobabad. To its East in the newly formed District Suhbatpur District while Usta Muhammad District lies to its West. To the South- West of Jaffarabad lies District Kambar-Shahdad Kot district of Sindh. (Ref: <https://nasirabad.balochistan.gov.pk/district-jaffarabad/>)

¹ <https://nasirabad.balochistan.gov.pk/district-jaffarabad/>

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The Major Economic Activities in the Region

District Jaffarabad is known for its diverse economic activities, several key sectors contribute significantly to the local income and livelihoods. At the heart of the region's prosperity lies agriculture, with its fertile lands supporting the cultivation of various crops, notably rice and wheat. Another linchpin of Jaffarabad's economic vitality is the livestock sector, providing not only a substantial income source for many residents but also contributing synergistically to the broader agricultural ecosystem. Additionally, the entrepreneurial spirit thrives through the establishment of restaurants and shops, meeting the needs of both the local populace and visitors, thus fostering economic dynamism. Communities in Jaffarabad are actively engaged in empowering their residents, whether through traditional crafts or modern professions. This multifaceted approach to economic sustenance ensures not only a resilient local economy but also a community enriched by diverse sources of income and expertise. List of major crops, fruits and vegetables are given in the below table. (Ref: <https://nasirabad.balochistan.gov.pk/district-jaffarabad/>)

Main Crops	Wheat, barley, rapeseed/mustard, masoor, chickpeas, gram, rice, jowar, bajra, maize, sesanum, moong, maash, moath, sugarcane, guar seed, cotton, and canola
Major Fruits	Mangoes, citrus, guava, dates, watermelon, musk melon, ber, and mulberry
Major Vegetables	Onion, potato, tomatoes, okra, tinda, radish, spinach, turnips, carrots, bitter gourd, bottle gourd, pumpkin, cauliflower, peas, brinjal, cucumber, chilies, and coriander

Climate in Jaffarabad

The district experiences a predominantly hot climate, situated at the confluence of Sibbi and Jacobabad. Summers are characterized by intense heat and humidity, extending from mid-March through the end of October, with peak harshness in May, June, July, August, September, and October. April sees a milder heat onset.

Winters offer a pleasant respite, lasting from December to January. The months of April, November, and February provide particularly agreeable weather. High humidity levels prevail during summer, especially in proximity to the Pat Feeder canal, where rice cultivation occurs.

Dust storms, once common in hot weather, have become less frequent due to increased vegetation. Typically originating from the West and North, these storms are accompanied by substantial dust columns and occasionally followed by rainfall. The district experiences limited rainfall in both winter and summer, with July and August being exceptions due to monsoon rains. According to the Agricultural Department's classification based on altitude from sea level, the district falls within the range of up to 635 meters (1500 feet) above sea level, placing it in one of Balochistan's five ecological zones. (Ref: <https://nasirabad.balochistan.gov.pk/district-jaffarabad/>)

Climate Change

Climate change, a complex and multifaceted phenomenon, is fundamentally driven by a confluence of natural and anthropogenic factors that alter the Earth's climate system. Over the years, human activities have significantly contributed to the acceleration of climate change, primarily through the release of greenhouse gases and other pollutants into the atmosphere. These alterations disrupt the delicate balance of the planet's ecosystems, leading to a myriad of consequences such as rising global temperatures, changing weather patterns, and the intensification of extreme events.

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Navigating Nature's Fury: Jaffarabad's Ongoing Struggle with Climatic Changes

Jaffarabad, like many regions, has witnessed significant climatic changes over the past two decades. The district has experienced pronounced shifts in its weather patterns, with the monsoon rains proving particularly relentless, often resulting in devastating floods. Thousands of residents have endured the harsh consequences, losing their homes and being compelled to displace in the face of these natural calamities.

Over 80% of the populace in Jaffarabad relies on agriculture as their primary source of livelihood, rendering them highly susceptible to the adverse effects of climate change. The region grapples with a pronounced water scarcity issue, compounded by brackish groundwater in numerous areas. The strain on water resources is exacerbated by burgeoning population growth, climate change-induced challenges, inefficient irrigation practices, and pollution. This scarcity has far-reaching implications, negatively impacting agriculture, food security, and the overall well-being of the local community. Vulnerable and low-income groups experience considerable psychological stress and anxiety attributed to altered precipitation patterns and the untimely availability of water for crop irrigation. The elderly and children, particularly vulnerable to heat waves, suffer diminished performance in their daily endeavors.

The primary hurdle lies in the entrenched habits and behaviors of the local community, presenting a formidable barrier to progress. Effecting a positive transformation necessitates a methodical and logical approach to education, fostering an understanding that will, in turn, play a pivotal role in bolstering efforts toward both climate change mitigation and adaptation.

Causes of Climatic Changes in Jaffarabad

The causes of climate change are multifaceted, stemming from various factors that collectively contribute to the far-reaching and devastating impacts on our planet. One primary driver is the heightened concentration of greenhouse gases in the Earth's atmosphere, largely attributed to human activities such as the burning of fossil fuels, deforestation, and industrial processes. These activities release significant amounts of carbon dioxide, methane, and other greenhouse gases, trapping heat and leading to a gradual warming of the Earth's surface. Additionally, changes in land use, such as urbanization and agricultural practices, play a role in altering the reflective properties of the Earth's surface.

In the context of Jaffarabad, the causes of climate change mirror those mentioned earlier, with each factor playing a distinctive role in adversely impacting the district. Specific details of these contributing factors in the context of Jaffarabad are outlined below:

- **Deforestation:** Jaffarabad has experienced a marked reduction in its forest cover due to deforestation driven by agricultural expansion and urban development. The diminishing tree canopy not only hampers the region's ability to sequester carbon but also disrupts local ecosystems, intensifying the impacts of climate change.
- **Land Use Changes:** Rapid urbanization and alterations in land use patterns, including changes in agricultural practices, has contributed to modifications in the district's microclimate. These shifts have influenced the temperature, precipitation patterns, and overall environmental stability.
- **Greenhouse Gas Emissions:** The district has witnessed a notable surge in greenhouse gas emissions, primarily stemming from small scale industrial processes, energy production, and vehicular activities. These emissions, particularly carbon dioxide, contribute significantly to the warming of the local climate.
- **Lack of New Tree Plantation:** In Jaffarabad, the absence of tree plantation initiatives exacerbates the causes of climate change. The lack of new tree plantations means that the region is missing out on a crucial mechanism for

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absorbing carbon dioxide and maintaining ecological balance. This deficit not only contributes to increased greenhouse gas concentrations but also diminishes the local capacity to mitigate the impacts of climate change.

- **Lack of Awareness on the Importance of Trees:** A dearth of awareness about the significance of trees compounds the issue. Without a comprehensive understanding of the vital role trees play in carbon sequestration, soil conservation, and maintaining biodiversity, the community may not prioritize or actively participate in tree conservation efforts. Raising awareness about the importance of trees is crucial for fostering a sense of environmental stewardship and collective responsibility.
- **Excessive use of Constructional Material:** The excessive use of constructional materials in Jaffarabad exacerbates climate change by contributing to increased carbon emissions. The construction sector's reliance on materials with high carbon footprints intensifies the district's overall environmental impact. Sustainable construction practices and the incorporation of eco-friendly materials can help mitigate these adverse effects and promote climate-resilient development.
- **Lack of expansion in canal system:** The limited expansion of the canal system in Jaffarabad exacerbates climate challenges. A constrained canal network hampers efficient water management, leading to issues such as water scarcity and inadequate irrigation. This, in turn, affects agriculture and contributes to environmental stress, compounding the district's vulnerability to climate change impacts.
- **Deforestation for Fuel, Housing, and Construction Materials:** Lastly, the indiscriminate cutting down of trees for various purposes, including fuel, huts, and construction materials, significantly contributes to deforestation in Jaffarabad. This practice not only diminishes the green cover but also accelerates soil erosion and disrupts local ecosystems. Implementing sustainable practices and alternative sources for these needs can help alleviate the pressure on the region's forest resources, promoting a more climate-resilient environment.

Catalysts for Change: The Need for Strategic Policy Dialogues

In the face of imminent climate challenges in Jaffarabad, the present moment calls for decisive action. It is crucial for all relevant departments to collaborate through comprehensive policy dialogues, collectively identifying sustainable pathways to prioritize the resilience of Jaffarabad's communities. By leveraging diverse expertise, these discussions aim to formulate targeted policies focusing on adaptive measures, sustainable resource management, community awareness, and infrastructural development tailored to the specific needs of the district.

This collaborative effort not only addresses current climate impacts but also lays a resilient foundation for the future. The success of these endeavors relies on each department's commitment to contributing expertise and resources toward a shared goal. Fostering a culture of cooperation and open communication is paramount to ensure the implementation of impactful policies that safeguard the environment, enhance community well-being, and fortify the district against evolving climate challenges.

Aiming Change for Tomorrow (ACT-International)

Aiming Change for Tomorrow (ACT) empowers marginalized communities to achieve self-development while working together with government institutions and civil society. Established in March 2012, ACT is an ends-oriented, knowledge-based organization that strives to create a new relationship between citizens (especially children, youth, and women) and the state, based on shared rights and responsibilities. Its core program agenda focuses on social protection, women's empowerment, youth engagement, and advocacy at policy and implementation levels. **ACT's vision is "a tomorrow where everyone has opportunities to prosper."**

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ACT-International: Facilitating Strategies (Policy Dialogue) for Mitigating the Hazards of Climate Change

In the current Jaffarabad context, ACT-International seeks to facilitate this collaboration by initiating discussions with relevant line departments, encouraging their active participation to formulate effective strategies for climate mitigation. The goal is to transcend organizational boundaries, harness collective wisdom, and create a well-rounded approach to address the multifaceted impacts of climate change. Through inclusive dialogues, these efforts aim to establish a roadmap aligned with government priorities, integrating diverse perspectives for a holistic and effective response to climate challenges. Together, let us forge a path towards a more sustainable future, where the combined efforts of government departments play a pivotal role in safeguarding the environment and building climate resilience for current and future generations.

ACT-International has proactively engaged in consultations with the relevant line departments, thoroughly discussing proposed policies. In a significant stride towards formalizing this collaboration, MOUs have been successfully executed. This milestone signifies a committed partnership and marks the commencement of a structured and purposeful policy dialogue process. The signed MOUs solidify the foundation for constructive discussions and joint efforts, ensuring a streamlined approach to addressing environmental challenges and climate-related issues in the region.

Objectives of Policy Dialogue:

The overarching objective of the policy dialogue is to formulate a robust Roadmap to Address Climate Challenges, encompassing a spectrum of policy measures essential for effectively addressing the challenges posed by climate change. Throughout the project, it was discerned that the community exhibits a deficiency in general knowledge concerning Climate Change, not to mention any information pertaining to strategies for enhancing resilience against climate change. As the project advanced, a similar pattern emerged in relation to awareness of climate-smart practices, water resource management, and environmentally sustainable practices.

- **Elevated Awareness and Educational Outreach:** Foster heightened awareness and educational initiatives to cultivate a comprehensive understanding of climate change and its implications.
- **Resilience Amplification in Agriculture:** Bolster the resilience of agricultural practices by implementing measures that mitigate climate-related risks and enhance adaptive capacity.
- **Optimized Water Resource Management:** Implement strategies aimed at optimizing water resource management, ensuring sustainable usage, and safeguarding against climate-induced fluctuations.
- **Promotion of Environmentally Sustainable Practices:** Advocate for the adoption of eco-friendly practices across various sectors, aligning with sustainable development goals and minimizing negative environmental impacts.
- **Reduction of Carbon Footprint:** Strategize and implement measures to actively reduce carbon footprint, promoting a transition towards a more carbon-neutral and environmentally responsible approach.

By addressing these goals, the policy dialogue aims to create a comprehensive and effective framework that aligns with the broader objectives of climate change adaptation and mitigation.

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Harnessing Expertise: Key Departments and Their Supportive Roles

1. Municipal Committee

The Municipal Committee plays a crucial role in spearheading efforts to address and mitigate environmental issues within its jurisdiction. As the local governing body, it serves as a linchpin in implementing sustainable practices and policies that contribute to environmental conservation. The committee is instrumental in waste management strategies, ensuring efficient collection, and disposal systems are in place. Moreover, it actively engages in urban planning initiatives that promote green spaces, tree planting, and sustainable development. Through the enforcement of environmental regulations and the promotion of eco-friendly practices, the Municipal Committee serves as a catalyst for raising awareness and fostering a sense of environmental responsibility among the local community. By taking on this leadership role, the committee plays a pivotal part in creating a more sustainable and environmentally conscious living environment for residents.

Proposed Action and adaptation Plan

- Raising Awareness within Targeted Communities Regarding the Significance of Integrated Solid Waste Management
Commence a quarterly Community-Led Cleanup Initiative Focused on aiming at Public Spaces.
- Initiate a quarterly awareness walk to educate the community about the adverse effects of plastic bags and promote the use of alternatives like paper and cotton tote bags, fostering a transformative shift in behavior.
- Conduct a clean and green campaign in the city to promote cleanliness at least once in three months
- Ensuring the protection of placed Waste Boxes, and timely evacuation of trash and proper decomposition of waste.
- Continuously monitor adherence to policies and practices implemented by the Municipal Corporation to mitigate solid waste/trash.
- Implement consistent monitoring practices to minimize the accumulation of uncollected solid waste and prevent potential health issues.

2. Education Department

The Education Department stands as a cornerstone in the collective effort to address and alleviate environmental issues through the cultivation of awareness, knowledge, and responsible practices. At the forefront, it plays a pivotal role in integrating environmental education into school curricula, ensuring that students gain a comprehensive understanding of ecological systems, sustainability, and the impact of human activities on the environment. By fostering a sense of environmental consciousness from an early age, the Education Department contributes to shaping environmentally responsible citizens. Additionally, the department can implement programs that promote energy conservation, waste reduction, and the importance of biodiversity. Through initiatives such as eco-clubs, tree-planting campaigns, and environmental awareness campaigns, the Education Department becomes a catalyst for instigating positive behavioral change among students and, by extension, the wider community. In essence, the Education Department serves as a cornerstone in the ongoing efforts to create a generation that is not only academically adept but also environmentally conscious and committed to sustainable practices.

Proposed Action and adaptation Plan

- Educate students on eco-friendly practices, including proper plastic disposal, avoiding plastic shoppers, and promoting the use of paper bags or alternatives for daily purchases.
- Inform the students about the importance of kitchen gardening, highlighting benefits like reducing surrounding temperatures, economic advantages, and contributions to societal sustainability in climate change.

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- Motivate students to plant a tree once in three months and encourage them to share plantation pictures on social media fosters a culture of tree planting and environmental mindfulness.
- Integrate concise speeches promoting eco-friendly practices into daily morning assemblies. These talks aim to diminish individual carbon footprints, raise environmental awareness, and foster sustainable habits.

3. Health Department

The Health Department plays a pivotal role in addressing and mitigating environmental issues by safeguarding public health and promoting practices that contribute to a healthier environment. One of its key functions is to monitor and regulate environmental factors that impact public health, such as air and water quality, waste management, and the spread of vector-borne diseases. By enforcing regulations and guidelines, the Health Department helps prevent the adverse health effects of environmental pollutants. Moreover, it engages in public awareness campaigns to educate communities about the link between environmental conditions and health outcomes, encouraging behaviors that reduce environmental impact. The department also collaborates with other agencies to address issues like sanitation, safe drinking water, and proper waste disposal, contributing to overall environmental sustainability. Through its multifaceted approach, the Health Department serves as a crucial partner in fostering a healthier population and a more sustainable environment.

Proposed Action and adaptation Plan

- In hospitals, raise awareness of climate change issues and their mitigation through the use of Information, Education, and Communication (IEC) materials.
- Inculcate the vaccinators to spread awareness about climate change and the crucial role that trees can play in lessening its effects in the community.
- Instruct the polio workers to share the message about the impact of climatic changes and how tree plantation can mitigate their effects.

4. Livestock Management

The Livestock Department plays a critical role in mitigating environmental issues through strategic management practices that balance agricultural needs with environmental sustainability. One key aspect is the promotion of sustainable livestock farming methods that minimize environmental impact, such as rotational grazing and integrated pest management. By implementing and enforcing regulations related to waste management and emissions from livestock operations, the department helps reduce the ecological footprint of the agriculture sector. Additionally, initiatives aimed at improving animal husbandry practices contribute to the overall welfare of livestock and minimize stress on ecosystems. The department also plays a vital role in educating farmers about sustainable practices, encouraging responsible land use, and promoting the efficient use of resources. Through its efforts, the Livestock Department is instrumental in fostering an environmentally conscious approach within the agricultural sector, contributing to the broader goal of achieving a harmonious balance between food production and environmental preservation.

Proposed Action and Adaptation Plan

- Educate the community on utilizing animal dung for organic fertilizer instead of burning it promotes environmental benefits, reduces reliance on artificial fertilizers, and fosters an eco-friendly approach.
- Promote and educate the community on the use of artificial insemination practices to enhance both breeding and the productivity of meat and milk.

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- Educate the community on silage-making practices is crucial for storing feed in case of any shortage, whether during times of rain or flood situations.

5. Forest and Range Management Department

The Forest and Range Management Department plays a pivotal role in the proactive management of natural resources, contributing significantly to the reduction of environmental issues. Primarily tasked with overseeing forests and range lands, the department is instrumental in implementing sustainable forestry practices that promote biodiversity, carbon sequestration, and watershed protection. Through strategic planning, the department addresses deforestation concerns by regulating logging activities and promoting afforestation initiatives. Additionally, it plays a crucial role in wildfire prevention, early detection, and efficient response, mitigating the impact of uncontrolled fires on ecosystems. By enforcing regulations on land use and promoting sustainable grazing practices, the department contributes to maintaining the ecological balance of range lands. Through conservation efforts, public awareness campaigns, and collaborative projects, the Forest and Range Management Department serves as a guardian of natural habitats, fostering environmental resilience and sustainability for current and future generations.

Proposed Action and Adaptation Plan

- Provide plants to school and college students so that they can plant these trees in the school and its suburbs to promote a tree plantation culture.
- Educate communities on the importance of tree planting, especially in rural areas where trees are often cut for cooking feasts. The initiative encourages planting three trees for every one cut down to protect the environment and mitigate the impact of climate change.
- Conduct a coordination meeting with government and non-government institutions at least once in three months on the importance of planting trees and discouraging the cutting down of trees.
- Conduct quarterly tree plantation campaigns in the city to create a significant impact and shift community mindsets toward increased tree planting.
- Conducting coordination meetings with the National Highway Authority (NHA) and the Building and Roads (B&R) department to discuss to adapt linear plantation on the pathways of District Jaffarabad, promoting a green culture in the District.

6. Department of Agriculture Extension

The Department of Agriculture Extension plays a pivotal role in addressing and mitigating environmental issues through its multifaceted approach to agricultural practices. By disseminating cutting-edge knowledge and sustainable farming techniques to farmers, the department promotes eco-friendly and resource-efficient methods. This includes advocating for precision agriculture, organic farming, and water conservation practices that minimize environmental impact. Through educational programs and workshops, the department encourages the adoption of climate-smart agriculture, helping farmers adapt to changing environmental conditions. Additionally, by providing expertise on integrated pest management and soil health, the Agriculture Extension department contributes to reducing reliance on harmful pesticides and fertilizers, thereby safeguarding the environment. By serving as a bridge between research and farmers, the department facilitates the implementation of environmentally conscious farming practices, fostering a more sustainable and resilient agricultural sector.

Proposed Action and Adaptation Plan

- Empower the community with knowledge on the organic application of fertilizers, steering away from excessive dependence on chemical alternatives.

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- Inform the community about the significance of plantation near agrarian land for sustaining the ecosystem. This practice enhances biodiversity and provides environmental benefits like soil conservation, improved water quality, and the creation of wildlife corridors.
- Educating communities on improved scouting methods, mulching, and sustainable tillage practices to safeguard agrarian lands, prevent insect infestations, and foster a climate-friendly culture.
- Promote cover/inter/mix cropping and mulching to provide eco-friendly alternatives to burning sediments for seedbed preparation. These practices, involving diverse crops and organic soil cover, protect soil, enhance fertility, and support sustainable agriculture, minimizing ecological impact.
- Organize quarterly awareness raising sessions to disseminate knowledge to farmers, advocating for the adoption of no-tillage farming practices to preserve soil moisture, mitigate erosion, and enhance soil health by preserving its natural structure and organic content.
- Educate the community on drip irrigation for efficient water use, delivering water directly to plant roots. Implementing drip irrigation enhances vegetation, improving agricultural productivity, and promoting environmental sustainability.
- Educating the community on soil pH to help in selecting seeds aligned with land acidity, ensuring optimal plant growth, informed decision-making, maximized yields, and fostering sustainable farming practices.

7. Police Department

While the primary mandate of the Police Department revolves around law enforcement and public safety, its role in reducing environmental issues is also increasingly significant. The department plays a crucial role in enforcing environmental laws and regulations, addressing activities that pose a threat to the environment, such as illegal dumping and wildlife trafficking. Additionally, through community policing initiatives, the police department can raise awareness about environmental conservation and encourage responsible behavior, such as waste reduction and proper disposal. In cases of environmental crimes, the police department investigates and takes legal action, acting as a deterrent to potential offenders. Collaborating with environmental agencies and community groups, the Police Department contributes to the overall effort to create a safer and more sustainable environment. By integrating environmental concerns into its broader mission, the department enhances its role as a guardian of both public safety and environmental well-being.

Proposed Action and Adaptation Plan

- Display Information, Education, and Communication (IEC) material regarding the timely maintenance of vehicles to reduce excessive emissions.
- Establish warning or, if possible, a challan system for unfit vehicles emitting visible smoke.
- Planting trees at traffic police establishments, such as stations and check posts, to promote environmental sustainability.

Approved Action and Adaption Plan

This comprehensive Climate Change Action Plan for Jaffarabad amalgamates essential policy measures to holistically address environmental challenges. Individual consultations were conducted with pertinent departments to shape the activities outlined in the plan. Their valuable insights have been incorporated to augment the plan's feasibility and enhance the likelihood of successful implementation.

The resolute endorsement of this action plan by the district government serves as a crucial affirmation, ensuring its unwavering execution. The diligent oversight and scrutiny of these initiatives by the respective departments further underscore the commitment to forging a resilient and sustainable future for the district. Through active community

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engagement and the promotion of environment friendly practices, we aim to alleviate the adverse impacts of climate change, guaranteeing an improved quality of life for the residents of Jaffarabad.

Table of Policy Dialogue

	S.No	Actions	Responsibility
	1.1	Municipal Committee Jaffarabad	
	1.1.1	Raising Awareness Within Targeted Communities Regarding the Significance of Integrated Solid Waste Management	Municipal Committee
	1.1.2	Commence a quarterly Community-Led Cleanup Initiative Focused on aiming at Public Spaces.	Municipal Committee
	1.1.3	Initiate a quarterly awareness walk to educate the community about the adverse effects of plastic bags and promote the use of alternatives like paper and cotton tote bags, fostering a transformative shift in behavior.	Municipal Committee
1	1.1.4	Conduct a clean and green campaign in the city to promote cleanliness at least once in three months	Municipal Committee
	1.1.5	Ensuring the protection of placed Waste Boxes, and timely evacuation of trash and proper decomposition of waste.	Municipal Committee
	1.1.6	Continuously monitor adherence to policies and practices implemented by the Municipal Corporation to mitigate solid waste/trash.	Municipal Committee
	1.1.7	Implement consistent monitoring practices to minimize the accumulation of uncollected solid waste and prevent potential health issues.	Municipal Committee
	2.1	Education Department	
	2.1.1	Educate students on eco-friendly practices, including proper plastic disposal, avoiding plastic shoppers, and promoting the use of paper bags or alternatives for daily purchases.	Education Department
	2.1.2	Inform the students about the importance of kitchen gardening, highlighting benefits like reducing surrounding temperatures, economic advantages, and contributions to societal sustainability in climate change.	Education Department
2	2.1.3	Motivate students to plant a tree once in three months and encourage them to share plantation pictures on social media fosters a culture of tree planting and environmental mindfulness.	Education Department
	2.1.4	Integrate concise speeches promoting eco-friendly practices into daily morning assemblies. These talks aim to diminish individual carbon footprints, raise environmental awareness, and foster sustainable habits.	Education Department
	3.1	Health Department	
	3.1.1	In hospitals, raise awareness of climate change issues and their mitigation through the use of Information, Education, and Communication (IEC) materials.	Health Department
3	3.1.2	Inculcate the vaccinators to spread awareness about climate change and the crucial role that trees can play in lessening its effects in the community.	Health Department
	3.1.3	Instruct the polio workers to share the message about the impact of climatic changes and how tree plantation can mitigate their effects.	Health Department
4	4.1	Livestock Management	

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	4.1.1	Educate the community on utilizing animal dung for organic fertilizer instead of burning it promotes environmental benefits, reduces reliance on artificial fertilizers, and fosters an eco-friendly approach.	Livestock Management
	4.1.2	Promote and educate the community on the use of artificial insemination practices to enhance both breeding and the productivity of meat and milk.	Livestock Management
	4.1.3	Educate the community on silage-making practices is crucial for storing feed in case of any shortage, whether during times of rain or flood situations.	Livestock Management
5	5.1	Forest and Range Management Department	
	5.1.1	Provide plants to school and college students so that they can plant these trees in the school and its suburbs to promote a tree plantation culture.	Forest and Range Management Department
	5.1.2	Educate communities on the importance of tree planting, especially in rural areas where trees are often cut for cooking feasts. The initiative encourages planting three trees for every one cut down to protect the environment and mitigate the impact of climate change.	Forest and Range Management Department
	5.1.3	Conduct a coordination meeting with government and non-government institutions at least once in three month on the importance of planting trees and discouraging the cutting down of trees.	Forest and Range Management Department
	5.1.4	Conduct quarterly tree plantation campaigns in the city to create a significant impact and shift community mindsets toward increased tree planting.	Forest and Range Department
	5.1.5	Conducting coordination meetings with the National Highway Authority (NHA) and the Building and Roads (B&R) department to implement linear plantation on the pathways of District Jaffarabad, promoting a green culture in the District.	Forest and Range Department
6	6.1	Department of Agriculture Extension	
	6.1.1	Empower the community with knowledge on the organic application of fertilizers, steering away from excessive dependence on chemical alternatives.	Department of Agriculture Extension
	6.1.2	Inform the community about the significance of plantation near agrarian land for sustaining the ecosystem. This practice enhances biodiversity and provides environmental benefits like soil conservation, improved water quality, and the creation of wildlife corridors.	Department of Agriculture Extension
	6.1.3	Educating communities on improved scouting methods, mulching, and sustainable tillage practices to safeguard agrarian lands, prevent insect infestations, and foster a climate-friendly culture.	Department of Agriculture Extension
	6.1.4	Promote cover/inter/mix cropping and mulching to provide eco-friendly alternatives to burning sediments for seedbed preparation. These practices, involving diverse crops and organic soil cover, protect soil, enhance fertility, and support sustainable agriculture, minimizing ecological impact.	Department of Agriculture Extension
	6.1.6	Organize quarterly awareness raising sessions to disseminate knowledge to farmers, advocating for the adoption of no-tillage farming practices to preserve	Department of Agriculture Extension

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		soil moisture, mitigate erosion, and enhance soil health by preserving its natural structure and organic content.	
	6.1.5	Educate the community on drip irrigation for efficient water use, delivering water directly to plant roots. Implementing drip irrigation enhances vegetation, improving agricultural productivity, and promoting environmental sustainability.	Department of Agriculture Extension
	6.1.6	Educating the community on soil pH to help in selecting seeds aligned with land acidity, ensuring optimal plant growth, informed decision-making, maximized yields, and fostering sustainable farming practices.	Department of Agriculture Extension
	7.1	Police Department	
	7.1.1	Display Information, Education, and Communication (IEC) material regarding the timely maintenance of vehicles to reduce excessive emissions.	Police Department
7	7.1.2	Establish warning or, if possible, a challans system for unfit vehicles emitting visible smoke.	Police Department
	7.1.3	Planting trees at traffic police establishments, such as stations and check posts, to promote environmental sustainability.	Police Department



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Plot No. 238, Street No. 06, I-9/2, Islamabad
 +92-51-8312826
 +92-51 8312843
 info@act-international.org
 www.act-international.org