



## Landmines and livelihoods: A study of Khour border area in Jammu province of Jammu and Kashmir

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### Abstract

Landmines, initially developed as anti-tank measures, have evolved into devices triggering upon human or vehicle presence. The present paper highlights the pervasive presence of landmines and their profound impact on human lives and livelihoods in the context of Khour border region in Jammu and Kashmir.

The historical context of the Jammu and Kashmir region is crucial to understanding the landmine issue. The region's conflict dates back to the pre-1947 era, with the state initially being ruled by Maharaja Hari Singh. After independence, Pakistan's incursions and territorial claims led to multiple wars, resulting in the deployment of landmines along the borders by both India and Pakistan. The conflict has left a lasting socio-economic impact on communities residing in proximity to the border areas, rendering agricultural land unusable and hindering overall development. The study focuses on Pallanwala, a border village located in Khour block near the Line of Control with Pakistan highlighting the challenges faced by its population due to landmines.

**Keywords:** Landmines, Jammu and Kashmir, conflict, landmines, human security, livelihoods

### Introduction

Emerging in the 18th century, landmines served initially as anti-tank measures against advancing warfare technology. They originated from the need to counter armoured vehicles and evolved into anti-personnel mines to thwart infantry infiltration among anti-tank minefields.

As defined by International Mine Action Standards (IMAS), a landmine is a munition meant to be placed beneath, on, or near the ground, triggered by the presence of a person or vehicle. These devices can be categorized as either 'anti-personnel' or 'anti-tank.' Anti-personnel (AP) mines activate upon contact with individuals, while anti-tank (AT) mines target armoured vehicles. Numerous types of AP mines exist, but around 50 are prevalent in mine-affected regions worldwide. Manufactured with ease, landmines featured diverse compositions including metal, plastic, ceramic, and even innovative wooden designs to avoid detection. Their delayed explosive mechanism allowed them to remain inactive until triggered, adding an element of unpredictability.

Landmines proliferated in conflict scenarios, blocking access to large areas and causing indiscriminate harm. Despite efforts to address the crisis, these devices persist, leading to displacement, economic stagnation, and psychosocial burdens. Landmines disrupt not only rural areas but also hinder urban reintegration following periods of political instability. Their impact spans various dimensions of human security, affecting livelihoods, dignity, and economic stability.

In a broader context, the presence of landmines casts a shadow over essential aspects such as food, health, and environmental security, perpetuating cycles of dependence and hindering development. This complex issue demands global attention to ensure a safer and more prosperous future, as the world grapples with the intricate challenges posed by landmine contamination.

### History of Jammu and Kashmir between India and Pakistan

Jammu and Kashmir is the northern-most region of India. J&K has an international boundary with Pakistan. The erstwhile undivided state of Jammu and Kashmir covered an area of 2, 22,236 sq. km out of which 78,114 sq.km area is controlled by Pakistan. It has 198 km International Border (IB), extending from Kathua to Akhnoor which is recognized as an international border. The 778 km Line of Control starting from Akhnoor is a de-facto border.

Before 1947 J&K was an independent state ruled by the Dogra ruler Maharaja Hari Singh. As India and Pakistan became independent countries, Maharaja Hari Singh decided not to join either of them but later he offered India and Pakistan standstill agreement which was signed by both the countries but after the Maharaja signed Instrument of Accession with India, Pakistan started invading his territory through tribal forces which was a threat for the security of the state. During that time, Pakistan annexed the districts of Diamer, Baltistan, Gilgit, Muzaffarabad, Kotli, Mirpur, Poonch and Bagh. As J&K became an Indian state, Pakistan started war against India and claimed that Kashmir was their territory resulting which both the countries fought wars in 1965, 1971 & 1999. Due to this conflict, both India and Pakistan have deployed anti-tank mines and anti-personal landmines on their borders for their security reasons.

However, this has left a deep impact on the socio-economic condition of population living near on the border areas. The affected lands become virtually unusable for agriculture, transportation and socio-economic development.

### Landmines in Jammu and Kashmir

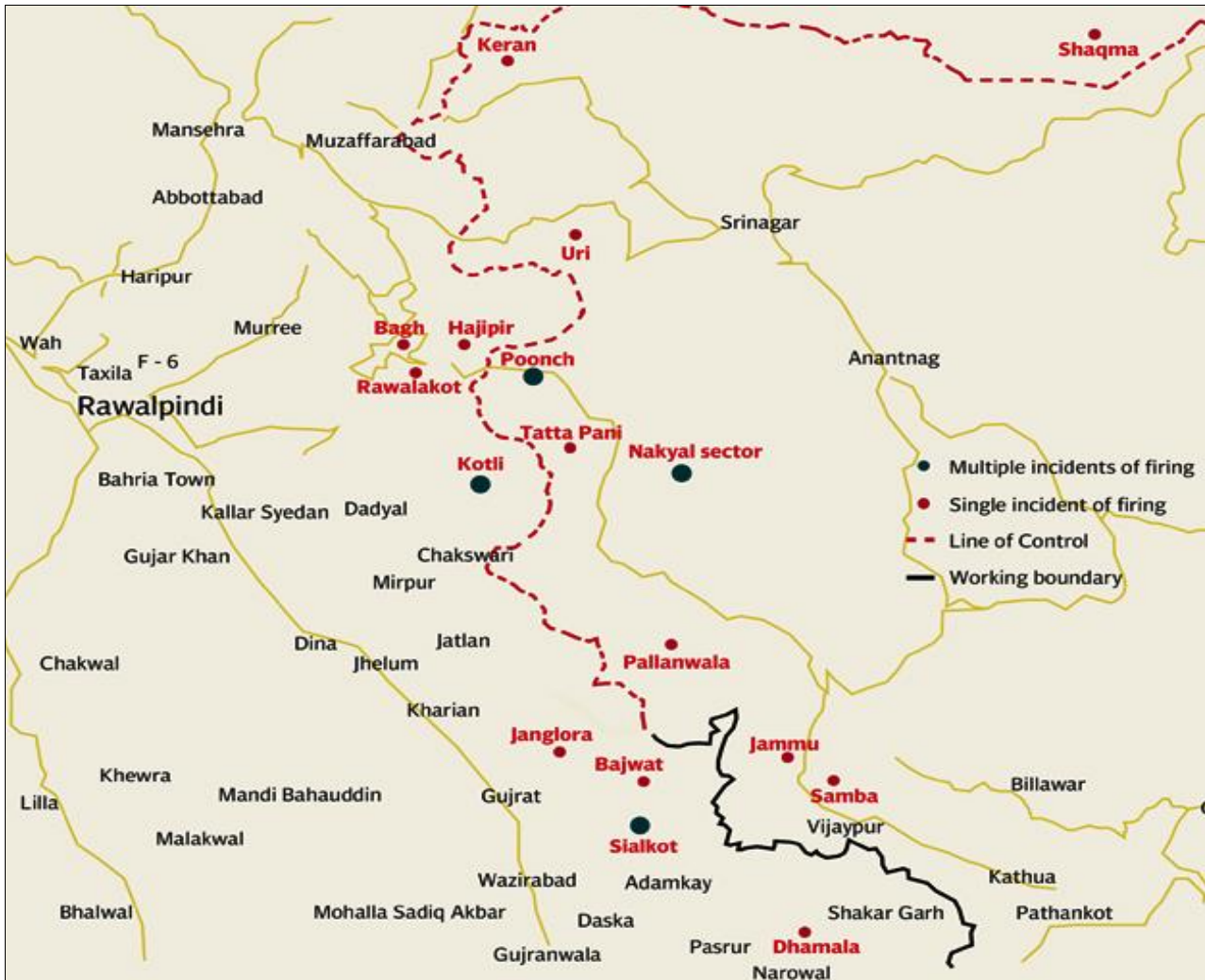
The issue of landmines in the region of Jammu and Kashmir has cast a long shadow over the lives of its inhabitants. The use of landmines in this contested area has deep historical roots, with reports dating back to past conflicts and border tensions. These concealed hazards, hidden beneath the

picturesque landscapes, represent a grave threat to civilian populations, security forces, and the environment alike. The unique topography of Jammu and Kashmir, marked by rugged terrain and difficult-to-reach areas, has made the clearance of landmines a daunting task. The presence of these hidden explosives hampers the free movement of people, disrupts daily life, and poses a substantial obstacle to much-needed development projects.

The impact of landmines in Jammu and Kashmir goes beyond physical casualties, extending into the psychological and socio-economic realms. Communities living in proximity to minefields are forced to navigate a constant state of fear, where stepping onto once-familiar pathways

could result in devastating consequences. The agricultural sector, which is a cornerstone of the region's economy, faces severe constraints due to restricted access to fertile land, leading to diminished crop yields and economic hardships. The threat of landmines also inhibits infrastructure development, making it challenging to establish schools, healthcare facilities, and other essential services in affected areas. This lethal legacy impedes efforts to build a secure and prosperous future for the people of Jammu and Kashmir, underscoring the urgent need for comprehensive mine clearance initiatives and international cooperation to mitigate the enduring impacts of landmines.

### Area of study



The study has been conducted in Khour block of Jammu province. Specifically, Pallanwala area of block Khour, tehsil Khour, Jammu district located on the Line of Control in Jammu province of Jammu and Kashmir has been chosen for the study for its very close proximity with the border. Various villages falling under Pallanwala area include Panjtoot, Plattan, Channi Dwano, Channi platan, Dhar khour, Dhar, Samwan etc. Pallanwala is located 65 km west from district headquarter Jammu bordering with Pakistan. Dogri is the local language which is mostly spoken by the people of Jammu region whereas some other languages are also there such as Kashmiri, Punjabi, English, Pahari, Gojri, etc.

Pallanwala, as per the official records, is a large village located in Jammu district with a total of 1373 families residing in this place. The village has a population of 7222, out of which 4365 are male while 2857 are female (Census 2011). Average Sex Ratio of Pallanwala is 655 which is lower than the Jammu and Kashmir average i.e. 889. Pallanwala has higher literacy rate (87.36 %) as compared to Jammu and Kashmir (67.16%).

### Objectives of the study

- To study the impact of landmines on the livelihoods of people in Khour
- To study the socio-economic conditions of villagers impacted by landmines

### Research methodology

Random sampling technique was used to select the areas for the study and the respondents were selected randomly for collecting information. Qualitative method of data collection was used. The sample size for the present study was 48 respondents. Self-constructed questionnaire and Interview schedule was used as a tool of data collection. The data was collected from the selected areas of Pallanwala.

### Result and discussions

#### Origin of conflict and the history of landmines in Pallanwala

With the creation of two countries due to partition of Indian sub-continent in 1947, both the countries became bitter enemies of each other. Since 1947, both the countries have fought several wars over the issue of Kashmir. As a result of tribal invasion by Pakistan immediately after the partition which was backed by its army, India lost Dewa region ahead of Pallanwala region located very close to Chamb region. Both Chamb and Batala were part of Indian Territory. However, the Indo-Pak war in 1971 resulted in India losing its both the territories of Chamb and Batala to Pakistan. That time, Pakistan army had even marched till Akhnoor town but was pushed back by the Indian army.

The elders of Pallanwala who were interviewed during this field research told the researchers that from 1947 till 1971, even though borders had been redrawn but the people from both the sides would move across in the dusk or night. Small robberies were also common on newly drawn borders. Balwant Singh, 84, a resident of Plattan, one of the villages of Pallanwala region, who is an ex-army man too, recalled that there were absolutely no landmines deployed on the Line of Control till 1971. People would move across for smaller things as there was no Line of Control or proper designated borders and no fencing was there between the two nations. Only few forces were deployed for guarding the territory. Chamb was one of the town areas which had all the basic amenities and facilities available besides good infrastructure including primary schools, high schools, Primary Health Centre, Office of the Tehsildar, Naib Tehsildar, Mandi, etc where the farmers from far off used to come to sell their crops. Markets were important and the people used to even cross Manawar Tawi River to reach Chamb to avail facilities available there. Chamb territory located at the right bank of Manawar Tawi (south west of Jammu region) had the main bus stand of the area also. Singh recalls that after 1971 war when India lost both Batala and Chamb sectors to Pakistan due to which most of the people migrated from that area to this side, Line of Control came into existence as a result of Shimla Accord of 1971 between Indira Gandhi and Zulfikar Ali Bhutto.

For the first time since border came into existence, landmines were deployed in 1971 in the border areas of Pallanwala by Indian side. Singh remembers vividly that in 1975, one of his buffalo was killed due to a landmine blast (for which he did not get any compensation). During the Kargil war, more landmines were deployed in the borders of Jammu and Kashmir including Pallanwala. Further security was beefed up on the border in 2001 Parliament Attack and with the erection of border fencing in the beginning of 2000, the borders were completely sealed with fencing and landmines.

Pallanwala area suffered badly during the Kargil war as there was heavy shelling from across the border due to

which the entire population had to face lot of burnt. Many people got injured, some of them their cattle's due to landmines. More landmines were deployed after this war and the Line of Control was fenced on the left bank of Manawar River.

#### Human cost of landmines

In all the villages falling under general area of Pallanwala, many people were injured due to landmines in the past few decades. Some even lost their lives to landmines while few lost their limbs to this deadly war-weapon. Puran Singh, 64, a resident of Pallanwala village under the general area of Pallanwala was injured in 1976 due to the explosion of landmines when he was working in his agricultural fields. He also lost one of his buffalos due to landmines for which he got no compensation from the govt. He says that six acres of his land is under landmines which is agricultural land. He got little compensation from the govt. but it has been stopped since past few years. After Kargil war in 1999, his accessibility to his own lands which is across the line of control has been stopped for the security reasons due to which he not able to do his agriculture. This, he says, has impacted his social as well his economic life. He also said that most of the people in his area have their lands under the mines. He also informed that few landmines were removed from the some areas of Pantoot in Plattan in 2004-5.

Bhano Devi, 56, another villager residing in Channi Plattan village lost her eyes in 1976 due to landmine blast while her brother Ajit Raj died, died on the spot in the same year in landmine blast. Both brother and sister (Bhano and Ajit) were young siblings who were playing in their field while they came across a round shaped object and assumed that it was something they could play with, little did they know it was landmine. They fiddled with this round object which got exploded resulting in the instant death of Ajit in 1976. Bhano who lives in her house in Channi Plattan village, informed that she was 10 years old at that time. Her medical treatment cost was approx. Rs 25000 but her eyesight did not recover despite her treatment in the hospital. Due to the local MLA at that time who had come to her house after the blast, she got a pension started by him. The landmine blast resulted in her quitting her study; she could not marry and became dependent on her family for her whole life. Her mother Amro Devi also died of this shock.

#### Loss of agriculture land

Most of the land in the general area of Pallanwala came under the landmines after the war of 1971. As Batala and Chamb were occupied by Pakistan in 1971, the population living in that area left their homes and agricultural lands and settles in the Pallanwala area. The land which they left was arable land (land suitable for growing crops). In that territory, landmines were deployed after 1971 but the people were allowed to continue their agricultural activities in some areas across the border but not in the area where landmines were deployed.

In 1999, during the time of Kargil war there was shelling across the border in Pallanwala due to which most of the population suffered a lot; some of them got injured, some of them lost their cattle due to landmines and after the war of 1999, many more landmines were deployed and the Line of Control was fenced on the left bank of Manawar Tawi river. After 1999, the local people were not allowed to go for the agriculture and thus their big loss was their agricultural

lands. As land is the major source of income to the local population, these people had to face huge socio-economic crisis. Their lands were lost, they lost their livelihoods and this aggravated their poverty conditions.

### Loss of livestock due to landmines

During the 1971 and 1999 wars and incessant shelling on the borders of Jammu in 2016, there was a lot of loss of livestock as people had to vacate their houses for safer locations, they untied their cattle and left them in their respective areas only which were heavily shelled upon. In this heavy shelling where people had left their cattle open in the border areas and they themselves shifted to safer locations, the cattle who were untied, strayed into those areas which were laden with landmines. Thus many cattle were injured and many died due to the landmines whenever they tried to cross the Line of Control.

Jeet Raj, 56, a resident of Samwan, Pallanwalla had a huge economic loss as his buffalo was injured in the year 2014; another buffalo belonging to Garu Ram, 71 of village Samwan was also killed in 2012 due to landmine blast. Kamal Raj, 56, of village Plattan also lost his two buffaloes due to the land mines. These people as also the other villagers never get any compensation for the loss of their cattle thus rendering them without any livelihood. Such villagers who totally depend upon the milk of their cattle for the livelihoods, find it extremely difficult to make their both the ends meet. Their source of income was lost with the killing of their livestock due to landmines and at many occasions, they had to sell their domestic goods to sustain themselves and their families.

**Table 1:** Deployment & location of anti-personal landmines in the Pallanwala villages

Total Respondent (48)	Responses	Percentage (%)
Yes	47	97.91
No	1	2.09

The above table shows that 97.91% of the people know about the deployment and location of landmines while 2.09% of the people do not know about it. Thus, majority of the people know about the landmines. The respondents informed that after 1947, they were allowed to do cultivate their agricultural lands but in the war of 1971, as India lost Chamb and Batala and most of the population migrated to Pallanwala, they go to know about the landmines for the first time from the army personnel when they were not allowed to visit their lands for the agricultural activity and when they were denied to bring their cattle to the pastures. After 1999, they were totally stopped from visiting the areas near the LoC.

**Table 2:** Villagers' awareness about landmines

Total Respondent (48)	Responses	Percentage (%)
Yes	9	8.75
No	39	81.25

The above table shows that 8.75% of the people have information about the landmines while 81.25% of the people don't know about it. So, majority of the people don't have information about the landmines. The respondents said that they just know that due to landmines blast they may get injured, die, their cattle may die/injured. But they did not get education related to the landmines that's why they do not have information about the landmines.

**Table 3:** Problems of villagers due to landmines

Total Respondent (48)	Responses	Percentage (%)
Yes	48	100
No	0	0

The above table shows that 100% of the people are having problem due to landmines while 0% of the people don't have problem. Most of the land of local population is under landmines and that land is arable, due to which they are not able to do the agriculture and they are not allowed to take their cattle's to that land for grazing; This shows that landmines have socio-economic on the local population.

Rattan Lal, 65, a farmer residing in Samwan is solely dependent on agriculture for his income. He has two acre of land out of which 0.5 acre of the land has come under the landmines and due to this, he is not able to carry on his agricultural activity. He informs that landmines were deployed in Panjtoot, Platan, Samwan, Kachreyal, Gujjar Mohalla and Platan Channi villages Like many villagers of Pallanwalla, Lal is also facing lot of problems due to the landmines including injury/death of animal and human lives. His buffalo was killed in 2012 in a landmine blast and he has also not received any compensation for it till now. Though few landmines were removed from the some areas of Samwan in 2004-2005, however there are many mines which have moved from their actual locations due to rains and soil erosion etc and have not yet been recovered. Due to this risk, he is still not able to go to his lands.

**Table 4:** Compensation for landmines from the government

Total Respondent (48)	Responses	Percentage (%)
Yes	1	2.09
No	47	97.81

The above table shows that 97.91% of the people said that they do not get compensation from the government while 2.09% of the people said that they got compensation. The villagers said they were getting compensation for the lands which were under the landmines but since past 2-3 years, they have not been receiving any compensation. During Kargil war, the people of this area were shifted to Devipur where Relief Camps were set up by the government but on other hand, their livestock remained in Pallanwalla only as they could not bring them to their makeshift tents. During 1999 war, many of their animals were injured and killed due to shelling and landmines. After the war was over, the villagers went back to their homes. Again, the Indian army deployed more land mines on the line of control and also fenced the line of control. These people were not allowed to go for the agricultural activity after 1999.

**Table 5:** Landmine victims' access to health/medical care

Total Respondent (48)	Responses	Percentage (%)
Yes	48	100
No	0	0

The above table shows that 100% of the landmines victims get medical care from the government health centres. They do get medical care but on the other hand they have to purchase medicines, medical equipments from private institution for which they have to spend their own money. The villagers said that they have spent money for medical care to the landmine victims.

**Table 6:** Clearance/demining of the landmines

Total Respondent (48)	Responses	Percentage (%)
Yes	43	89
No	5	11

The above table shows the 89% of the people said that there was demining/clearance of the landmines from some areas while 11% said that there is no clearance of the landmines. Since the majority said clearance of landmines took place. Therefore, the landmines had been cleared. In 1971 and 1999, the landmines were deployed in Panjtoot, Platan, Channi Dwano, Samwan, Milley Di Khuyi villages of Pallanwala area. After the wars of 1971 and 1999, these were deployed for the security reason in their region. In 2004-2005 landmines were removed from some areas such as Samwan, Panjtoot and Platan. Even after demining from these areas, the local population is not allowed to go in there but in Samwan area, the local population is allowed to go in to their land but the people are afraid to go there because they think that there may be some landmines present. Due to this they are unable to perform the agriculture activities and also not able to bring their cattle to the pastures. As most of the mines were planted decades ago, younger people who are not aware of the danger posed by landmines are especially at risk. Besides, the region is prone to floods and landslides, which dislodge mines and push them on to community land.

**Table 7:** Benefit of clearing landmines for the community

Total Respondent (48)	Responses	Percentage (%)
Yes	0	0
No	48	100

The above table shows the 100% of the people said that the clearance of the landmines did not benefit their community. They are still unable to perform the agriculture activities and also are not able to bring their animals to these pastures. This shows that most of the population does not have accessibility to their lands; this has led to the socio-economic impact on the life of the population of Pallanwala.

**Table 8:** Landmines' risk education

Total Respondent (48)	Responses	Percentage (%)
Yes	0	0
No	48	100

The above table shows the 100% of the people said that they do not get landmine risk education. The respondents said that the people of their locality did not get the education regarding the landmines by the administration. Nobody has come to them for this.

**Table 9:** Landmines pose threat to the survival

Total Respondent (48)	Responses	Percentage (%)
Yes	48	100
No	0	0

The above table shows the 100% of the people said that landmines are threat for them. A majority of them said that they are afraid to go into the landmine areas because they think if they would come into the contact of landmines, they may get injured or die even, they are also afraid of sending their cattle's to these areas fearing that something can happen to them.

**Table 10:** Villagers' migration due to landmines

Total Respondent (48)	Responses	Percentage (%)
Yes	0	0
No	48	100

The above table shows that 100% of the respondents said that they did not migrate due to the landmines and there was no recent migration. The respondents informed that during the war of 1971, Chamb, Dewa and Batala were annexed by Pakistan due to which population of that area was forced to migrate to Pallanwala.

**Table 11:** Involvement of the community in de-mining & environmental impact due to demining

Total Respondent (48)	Responses	Percentage (%)
Yes	0	0
No	48	100

The above table shows that 100% of the people said that they were not involved in demining the region. There is no involvement of the local community in demining the landmines. 100% of the people said that they did not know about the environment effect of demining. The population living in that area did not know about the environment impact of the landmines because they did not get any education regarding the environment effect of landmines, some people are illiterate that's why they did not know about its effects.

**Table 12:** Need for demining to reduce the impact on land resources

Total Respondent (48)	Responses	Percentage (%)
Yes	48	100
No	0	0

The above table shows that 100% of the respondents said that there should be demining in their areas. Demining would help the local population because they it can help them in accessing their lands which are under mines presently. Thus, they would be able to carry on with their agricultural activities, could take their cattle's to their lands for grassing, this would help them in updating their socio-economic status.

**Conclusions and recommendations**

Decades of conflict has left Jammu and Kashmir heavily polluted with landmines and explosives. The deployment of these hazardous devices has engulfed Pallanwala, denying locals access to fertile land for farming and grazing. Livelihoods are at stake as agriculture and livestock suffer, impacting the socio-economic fabric of the community. The repercussions of landmines extend to both human lives and the region's delicate balance, emphasizing the urgency of addressing this issue comprehensively.

Additionally, accidents result from flooding etc which dislodge mines and carry them to areas which were not previously contaminated, highlighting the need for heightened awareness about their recognition, dangers, warning signs, and high-risk areas.

**Raising Awareness on Landmines:** It is imperative to educate the local populace about the dangers posed by landmines, including health risks, environmental

degradation, and soil erosion. In the border region of Pallanwala, where awareness is crucial, villagers should undergo risk education sessions. Despite cordoning off contaminated areas with barbed wire, inadequate understanding of the risks persists among locals. A pressing need exists to rectify this gap and prevent accidents, especially since many children mistake landmines for toys.

**Compensation Mechanisms:** While a portion of the affected individuals receive compensation for landmine-related incidents, transparency in distribution remains an issue. The government should ensure equitable and transparent allocation of compensation to all affected parties. Regular and consistent compensation should be provided to those impacted by landmines, including compensation for livestock losses. A comprehensive medical support system needs to be established for landmine victims, including government-backed compensation during their treatment to prevent economic hardships.

**Landmine Clearance:** The longstanding conflict between India and Pakistan, spanning wars in 1947, 1965, 1971, and 1999, led to the deployment of landmines, particularly after the conflicts of 1971 and 1999. It is crucial for both nations to engage in diplomatic efforts to resolve their differences and jointly undertake the removal of landmines from border areas. Such clearance could pave the way for local development, benefiting the affected population.

**Rehabilitation Efforts:** Landmine clearance efforts are essential to enable local communities to utilize previously inaccessible land for agricultural purposes and grazing livestock. By restoring safe access to these areas, casualties can be prevented and agricultural activities can be sustained.

**Unlocking Agricultural Potential:** Much of the local land remains inaccessible due to landmines, hindering agricultural activities since 1999. Removing landmines from these areas would grant farmers access to their land, reviving agricultural practices and ensuring economic sustainability.

In conclusion, fostering awareness, just compensation, landmine removal, robust medical care, and strategic rehabilitation efforts are vital to mitigating the far-reaching impacts of landmines on local communities. Through collaborative actions, these initiatives can contribute to the well-being and prosperity of the affected region of Pallanwala.

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