



Survey Results:

**Language accessibility,
communication in emergencies,
and disaster preparedness
within the Aymara and Tacana
communities in Bolivia**

Introduction

CLEAR Global and Practical Action Bolivia conducted a survey with 69 people between February and March 2025 to assess language accessibility, communication in emergencies, and disaster preparedness within five Aymara and Tacana communities in the La Paz department in Bolivia. This assessment aimed to enhance understanding of how these communities receive, interpret, and trust disaster-related information, ensuring more inclusive and effective communication strategies.

The survey had two fundamental objectives:

1. To complement the linguistic diversity map at the municipal level in Bolivia by integrating data from the 2012 Census with new field-collected information. This enriched map will support disaster risk planning and inform decision-making for various organizations.
2. To contribute to qualitative research and data collection that will inform the development of a tool designed to improve communication and preparedness strategies for these communities.

We collected feedback from people who live in Aymara and Tacana communities with a round of quantitative surveys across five communities in Bolivia in the department of La Paz. A total of 69 respondents participated. The distribution of respondents was balanced among the municipality Jesus de Machaca with 31 responses (Communities: Corpa 18, Jesus de Machaca 13) and 38 in San Buenaventura (Communities: Bella Altura 16, Tumupasa 15 and Tres Hermanos 7 (this number did not reach the quota)). The data collection included 2 Municipalities mentioned previously and 5 communities, so there was diverse representation of the population across this region.

Due to the small sample size, this analysis sample is considered indicative only and the sample design was a quota sampling with the categories sex and age (over 18 years old).

Key Findings:

- While 70% of males have no difficulty reading, a significant proportion of females face literacy challenges—only 69% read easily, **with 9% unable to read at all**, revealing a clear gender-based disparity.
- **Language learning is primarily influenced by family and community (78%)**, followed by cultural identity (46%). Formal education (15%) and digital use (4%) play minimal roles, especially for Aymara and Tacana.
- **Indigenous languages are predominantly spoken as a main language by older generations**, with youth primarily using Spanish as their main language. In some areas, such

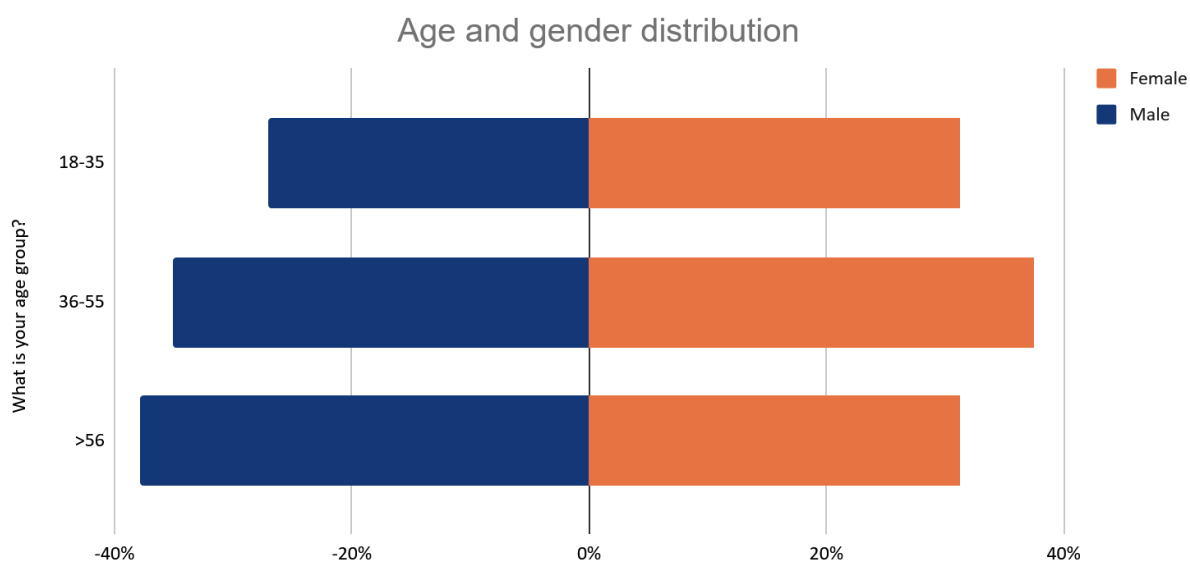
as Tres Hermanos the respondents mention that they do not use the indigenous language as much anymore however, the majority of respondents (72%) report being able to speak more than one language.

- **Most information is shared through community leaders** (30%) and a big percentage reported not having received information at all (26%). Government involvement is minimal (1%), while NGOs (10%) and social media (19%) play a secondary role.
- **Communities rely heavily on traditional practices**, such as interpreting natural signs (80.95%), medicinal knowledge (48%), and rituals (36%), passed on through family, elders, and oral storytelling.
- Aymara-speaking individuals, especially the elderly, **face major communication challenges with government officials** due to poor translations and officials' limited language skills, hindering effective interaction.

Overall Results:

Demographic profile of the respondents

This graph shows a slightly older respondent base, with more than 70% being over 35. There was a small skew towards male participation: 53.62% of respondents were male, while 46.38% were female.



52.17% of respondents were responsible for children in their households. Among the 36 individuals responsible for children, most had either 2 or 3 children (63.8%), while 19% had only one, and 16% had more than 4 children.

Among the 69 respondents, of those who are part of a specific population: women heads of households were the most common (9%), followed by individuals with chronic illnesses (5.79%), then persons with disabilities (4%), and pregnant women, lactating women, and speakers of minority languages were the least represented (3% each). Additionally, the only respondent to the disability question reported difficulty seeing, even when using glasses. 75% did not identify with any of the specific population groups, while 25% belonged to at least one group.

Literacy and Languages

Overall, education levels indicate that a majority (67%) have at least some secondary education or higher, 29% have only completed primary school and around 4% have no formal education.

The data reveals that the majority of respondents have no difficulty reading (70%) or writing (75%) short sentences in Spanish but notable literacy challenges persist. When analyzed by sex, males reported fewer cases of severe difficulty compared to females. Among males, 70% had no difficulty reading, while 24% experienced some difficulty and 5.41% had a lot of difficulty reading; however, no males reported being unable to read at all. In contrast, 69% of females had no difficulty, but 16% experienced some difficulty, 6% had a lot of difficulty, and 9.38% could not read at all, highlighting a greater literacy gap among women.

For writing, 76% of males had no difficulty, 18.9% faced some difficulty and 5% faced a lot of difficulty, while among females 75% had no difficulty, but 13% had some difficulty, 3% had a lot of difficulty, and 9% could not write at all. These results show that while writing proficiency is slightly higher than reading proficiency, females still display more severe challenges in literacy.

When we observe this percentage we can see that some individuals develop or have writing skills even if their reading ability is limited.

Main Language Spoken at Home

The data shows a strong presence of Spanish as the dominant main language spoken at home (81%), while 17% speak mainly Aymara and 1% speak Tacana. In terms of language skills of the main language selected, speaking skills are the strongest, with 74% reporting either advanced or fluent levels. However, reading skills are significantly weaker: only 48% have advanced or fluent literacy skills, and the gap is widest for writing, with only 36% reaching this level, while 12% remain at beginner level. This disparity suggests that while oral fluency is maintained, literacy support may be needed, particularly for Aymara speakers who have stronger oral skills but face challenges in reading and writing Aymara, which affects their access to education and information.

The majority of respondents (72%) speak more than one language, while 28% are monolingual. Aymara is the most common additional language (40%), followed by Tacana (32%), Quechua and English (each 2%). Notably, 26% listed Spanish as an "other" language, likely because they speak other languages such as Aymara or Tacana at home as their main language.

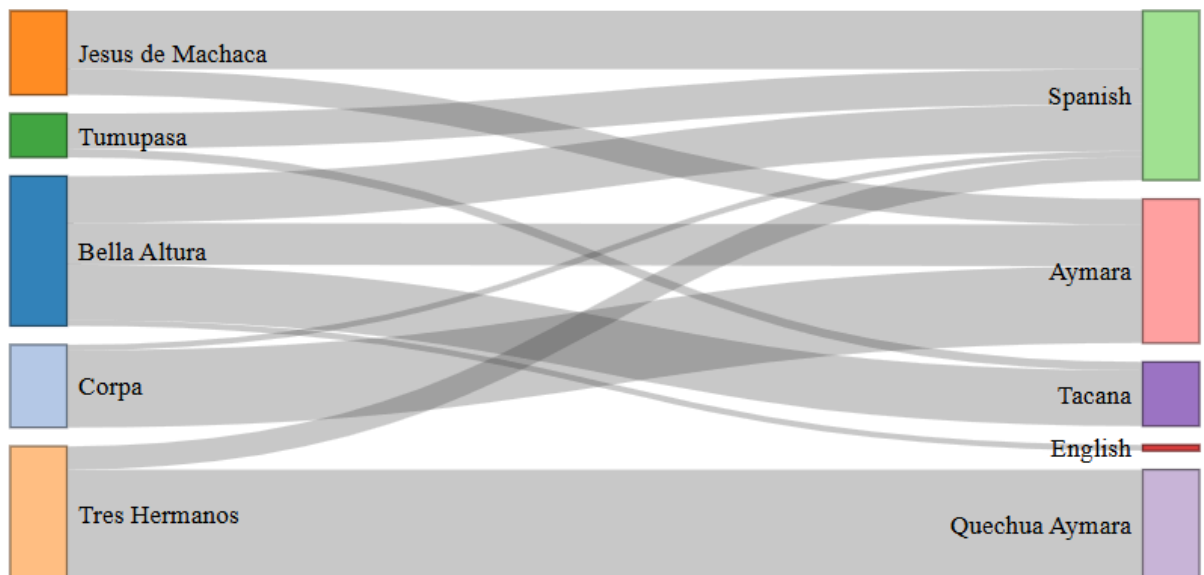
Disaggregation by Community:

The data reveals distinct linguistic patterns in each community:

- **Corpa:** Spanish and Aymara have equal percentages (50% each) as the main language spoken at home. Where 94% of residents speak at least one other language, of those who speak other languages 53% speak Spanish as an additional language and 47% speak Aymara. This shows that most of the residents speak both Spanish and Aymara but they use them in different situations.
- **Jesús de Machaca:** Spanish is more dominant (77%), but a significant portion of the population (23%) speaks Aymara at home. 100% of the surveyed population speaks at least one other language. Aymara is the dominant secondary language (77%), while Spanish is spoken by only 23% as an additional language. As in Corpa, all the respondents speak both languages.

- Tres Hermanos & Bella Altura:** Both communities exclusively reported Spanish as their main language. In Tres Hermanos 57% of respondents mention that they speak other languages other than Spanish. Of those 67% speak Tacana, 33% speak Quechua and Aymara is also spoken by 33%. In Bella Altura 50% of respondents speak other languages, while the rest speak only Spanish. Of those who speak other languages 75% speak Tacana as an additional language, 13% speak Aymara or English, suggesting some exposure to both indigenous and foreign languages.
- Tumupasa:** Spanish is the most dominant language in the household with 93% and 6% of the households speaking Tacana as the main language. In this community 60% of respondents said that they speak another language. 89% of the respondents mention Tacana as the secondary language and 11% mention Spanish.

Graph: Main Language Spoken at home by community



The data shows that language acquisition and use are deeply rooted in family, community and cultural identity. Family and community influence (78%) is the main reason for speaking additional languages. Cultural identity (45.6%) also supports that there is a wish to maintain the language and

it also highlights the emotional and social ties associated with language use. While formal education (15%) contributes, it plays a secondary role compared to informal, community-based learning.

This strong family and community influence is reflected in the way languages are used - mainly in social interactions such as markets, meetings and gatherings (67%). Home and work environments are also important places for language use (36% and 30% respectively) and religious and cultural events (28%) to be able to keep with traditional language practices. However, the presence of the language in formal education (15%) and digital spaces (4%) is lower, which makes sense since languages such as Aymara and Tacana are not very common languages for exchanging information or in new technologies.

Most people (86.9%) learn their language from family, making it the strongest way of passing it on. Community learning was found to be 24%, which further emphasises language transmission, and formal education (19%) complement this process, finally cultural/religious practices (4%) and self-learning (7%) were found to be less significant factors. This dynamic suggests that while language remains central to cultural identity, its survival relies heavily on informal transmission rather than institutional support.

Main Language and other languages in the community

In the overall results of the department of “La Paz” we can see that there is a slightly higher percentage of Aymara as the main language spoken in the *community* (29%) compared with the results for Aymara as the main language spoken in the *household* (18%), and a lower percentage for Spanish (71%) in comparison with the results of the household (81%); this means that people who speak Spanish at home are more likely to speak Aymara in the community. When asked about other languages used in the communities, people responded that Tacana (56%), Spanish (27%), and Aymara (17%) are the most spoken languages in the communities. The data indicates that other languages in the community are primarily used in traditional ceremonies and gatherings (71%), followed by daily conversations (38%), religious/cultural events (35%) and work (32%). This suggests that language use is deeply tied to cultural and social traditions rather than formal institutions.

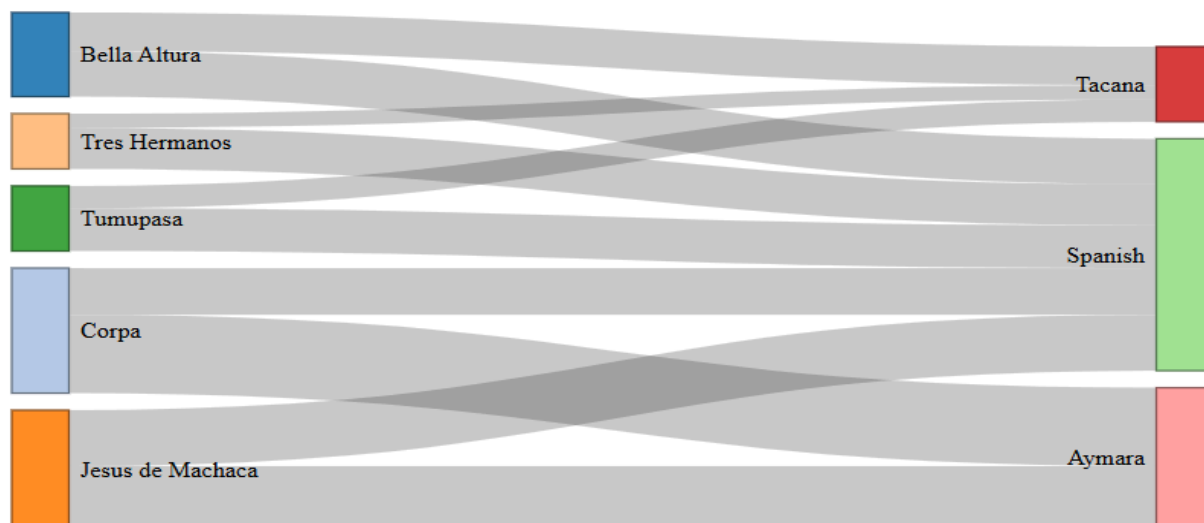
Educational settings and markets/public spaces (18% each) show moderate multilingual presence, while online/social media (9%) remains a less significant platform for these languages. Additionally, respondents mention that other moments when they use the language are when external people come to visit the community, or when speaking with elderly people. Someone also flagged that: Younger people no longer want to speak Aymara so we always speak Spanish.

Disaggregation by Community:

Main Language Spoken in the Community

- **Corpa:** respondents say that Aymara is the dominant language (72%), with some respondents (28%.) saying that Spanish is the main language spoken in this community. 72% of respondents report speaking Spanish as a secondary language in their community.
- **Jesús de Machaca:** 54% respondents mention Aymara as the main language in the community against the 46% that say that is Spanish. Of the ones that selected that Aymara is the main language, 40% report Spanish as a second language in the community.
- **Tres Hermanos:** Spanish is the only reported primary language as well in **Bella Altura and Tumupasa**. In both communities, Tacana is reported as a secondary language by 100% of respondents.

Main language spoken in the community by communities



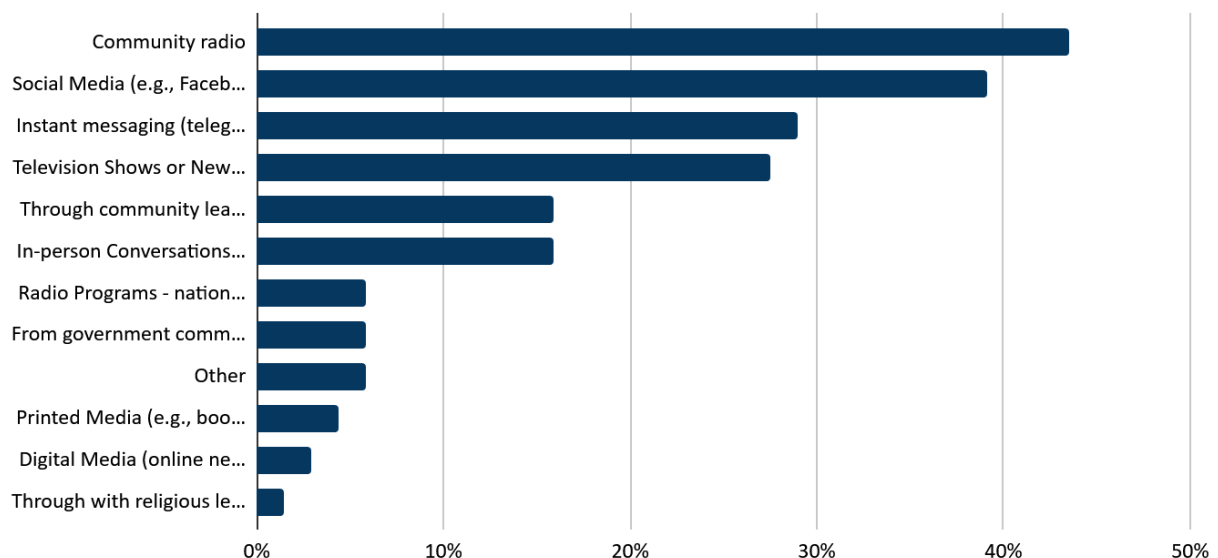
Communication and Information

The most common source of disaster and emergency information is news media (33%), followed by community leaders (30%). However, a significant portion of respondents (26%) reported not receiving any information at all. Government agencies (1%) play a minimal role in disseminating information, while NGOs/humanitarian organizations (10%) and social media (19%) contribute to a lesser extent. Family and friends (10%) are also a minor source of information.

Among those who did not receive information, the primary barrier was not knowing where to find it (71%), highlighting a major gap in awareness and accessibility. Other barriers include lack of mobile network, no access to devices and not receiving information in the area they live in (18% each) and language barriers (6%), suggesting that communication may not be effectively reaching all community members. Most respondents (80%) find disaster information clear, but 20% struggle with comprehension due to lack of trust, complexity, or absence of practical steps. Around 23% of respondents either do not trust (2%) or only somewhat trust (22%) the information they receive, while 76% consider it reliable.

Preferred channels

How do you prefer to receive information about disaster risks?



Note: The percentages do not add up to 100% as respondents were allowed to choose more than one option.

Community radio and social media are the most trusted sources for disaster risk information, with instant messaging and television also playing significant roles. While community leaders and in-person meetings contribute to information sharing, official government channels and national radio have less influence. Traditional formats like printed media and religious leaders are the least preferred, indicating a shift toward digital and community-based communication.

The data reveals that during emergencies such as flooding or drought, the most preferred communication channels are mobile phone calls (52%) and word-of-mouth communication (33%), indicating a strong reliance on direct, personal contact. Community-based channels such as information from community leaders (16%) and in-person conversations (12%) are also important. Other popular options include SMS/text messages (9%), radio programs (20%), and instant messaging platforms like WhatsApp and Telegram (12%), showing a mix of traditional and digital communication preferences, but communication through social media platforms were very rarely mentioned, only 3% selecting it. Additionally, when considering more formal or public communication methods, base radio, emergency systems (alarms, clocks), and loudspeaker announcements collectively make up a fraction of preferences (10.14%),

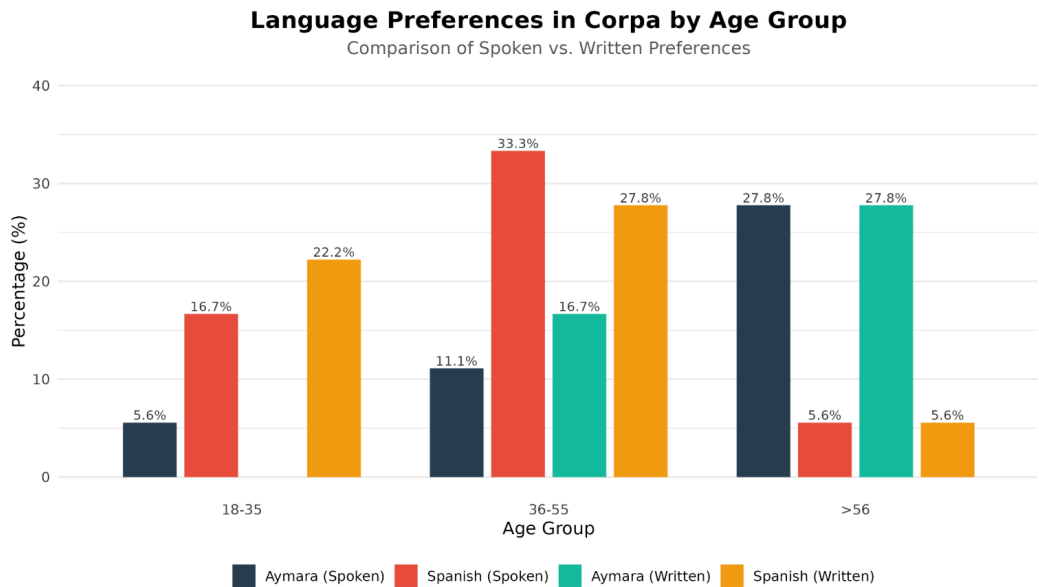
When we asked about preferred communication channels we also asked about their accessibility. The results show that the majority (55%) of respondents find disaster risk communication channels very accessible, a significant portion (43%) consider them only somewhat accessible, with a small percentage (1.49%) reporting them as not accessible. The primary barriers to accessibility are poor or unstable mobile network coverage, particularly during bad weather, and a lack of sufficient infrastructure such as radio bases. Additionally, there is limited access to mobile devices and a lack of familiarity with how to use these channels.

Disaggregation by Community:

- **Corpa:**

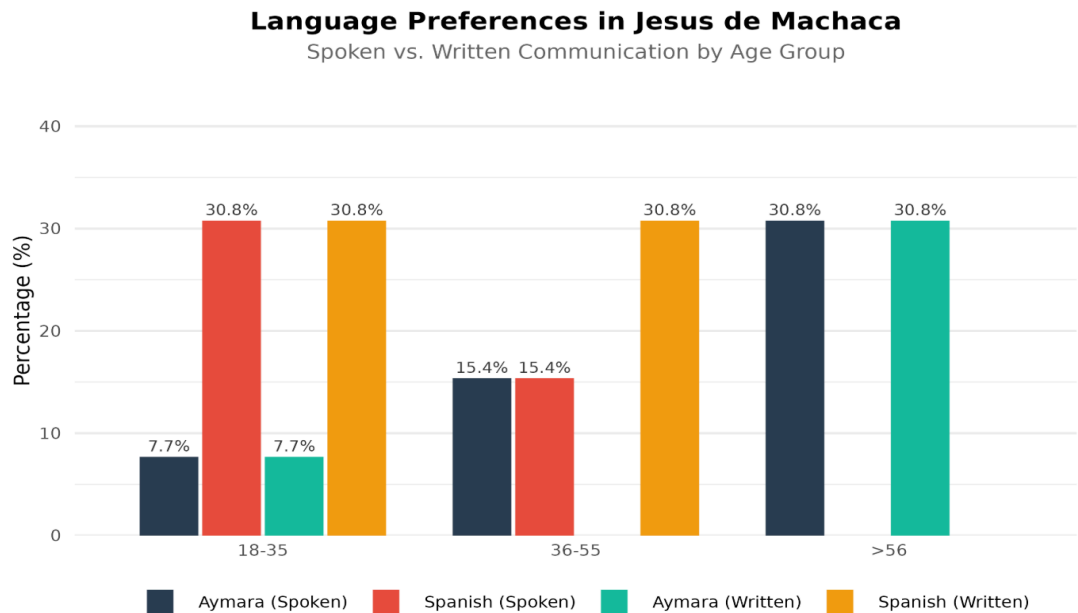
In Corpa, individuals display a relatively balanced preference for both written and spoken information. For written information, 44% of respondents prefer Aymara, while 57% prefer Spanish.

The same percentage is observed for spoken information. This indicates a dual-language preference, with both Aymara and Spanish playing important roles in communication within the community.



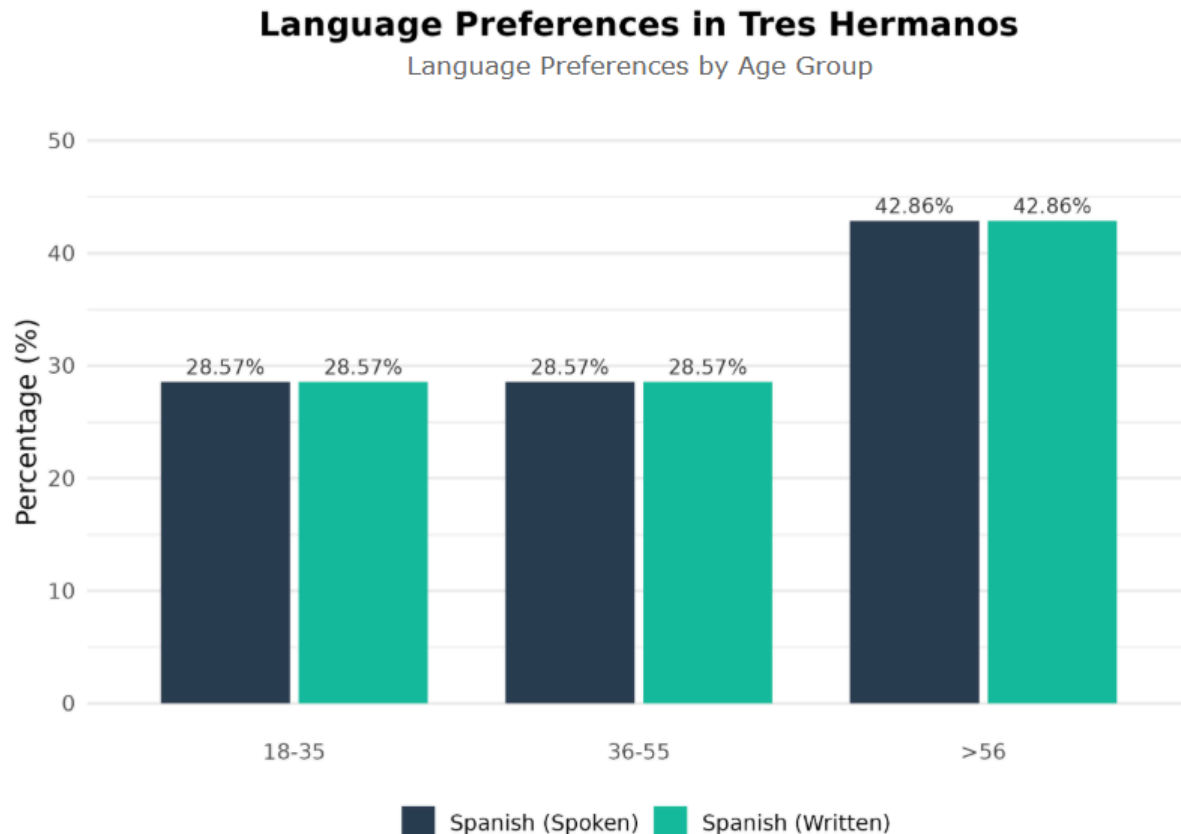
• **Jesus de Machaca:**

In Jesus de Machaca, the preference for both written and spoken information is overwhelmingly in favor of Spanish. For written information, 92% of respondents prefer Spanish, while only 8% choose Aymara. Similarly, for spoken information, 77% of respondents prefer Spanish, and 23% choose Aymara.



- **Tres Hermanos:**

In Tres Hermanos, all individuals selected that they prefer Spanish for both written and spoken information. This community shows a clear preference for Spanish across all forms of communication, indicating that Spanish is the dominant language in Tres Hermanos for both written and spoken contexts.

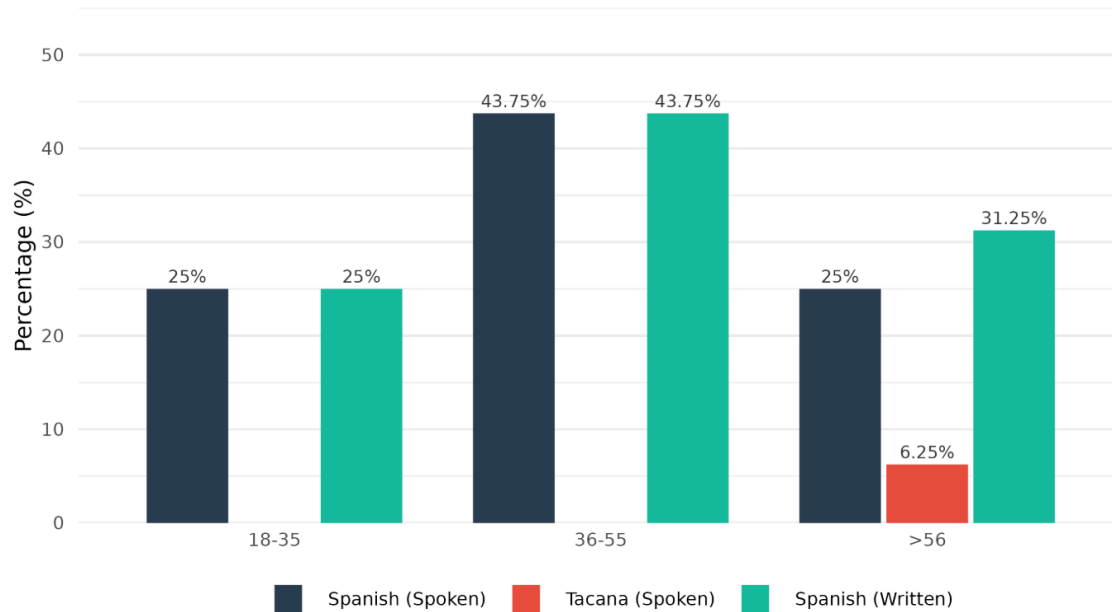


- **Bella Altura:**

In Bella Altura, Spanish is the preferred language for both written and spoken information, with all 15 individuals preferring Spanish for written communication. For spoken information, the preference is almost entirely for Spanish, with 93% of respondents choosing Spanish, and the remaining 7% opting for Tacana. This highlights Spanish as the primary language for written communication in Bella Altura, though there is a small preference for Tacana in spoken contexts.

Language Preferences in Bella Altura

Spoken vs. Written Communication by Age Group

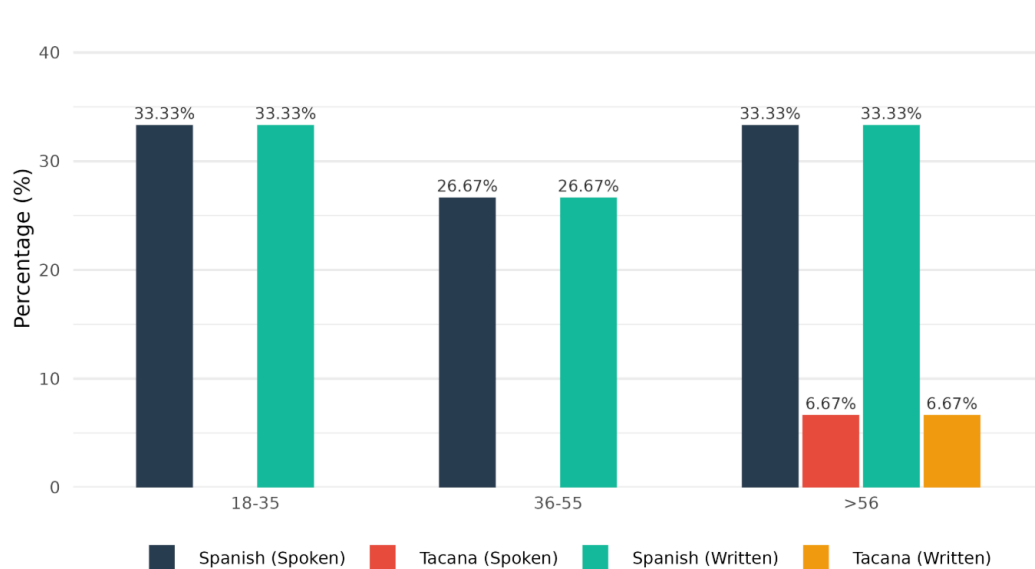


Tumupasa:

Spanish is the preferred language for both written and spoken information. For spoken information, the preference is almost entirely for Spanish, with 93% of respondents choosing Spanish, and the remaining 7% opting for Tacana.

Language Preferences in Tumupasa

Spoken vs. Written Communication by Age Group



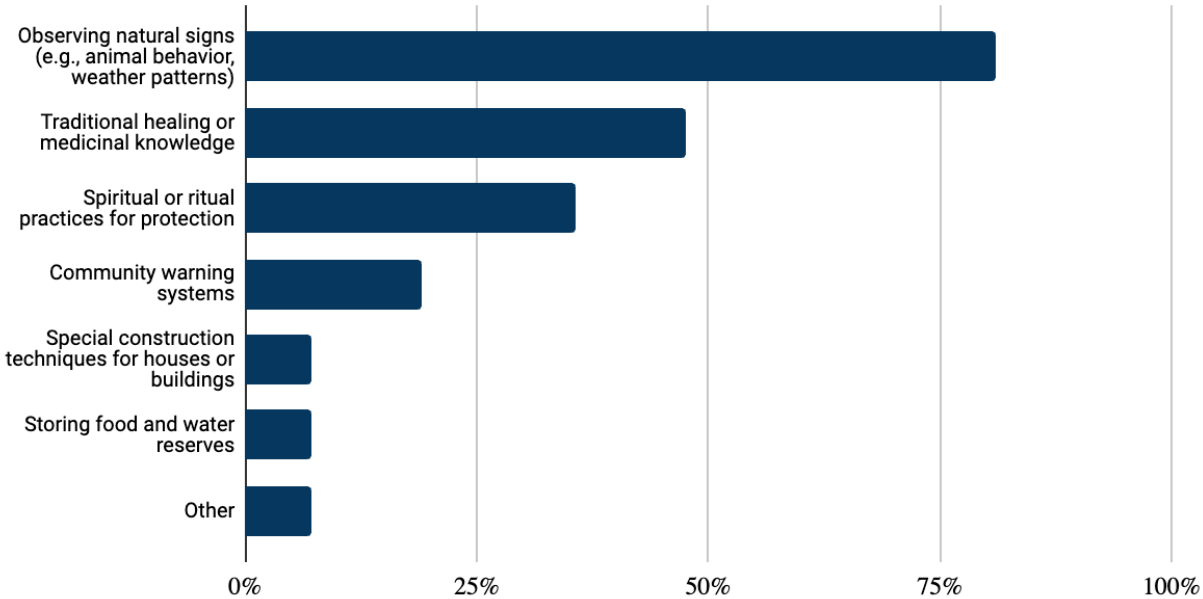
The survey shows that older people in these communities still speak indigenous languages like Tacana and Aymara, but younger people mostly use only Spanish. In most places, only about 6-30% of elders still use the local languages, and almost no one under 56 speaks them. In one community (Tres Hermanos) the respondents did not select any indigenous languages, so there is a big possibility that they do not use the local language anymore - it could be that everyone there now uses just Spanish, no matter their age.

This is worrying because when a language disappears, unique ways of thinking and cultural traditions disappear with it. The fact that young people aren't learning these languages means they could be gone forever in a generation or two. While some communities like Jesús de Machaca still use these indigenous languages, the overall trend shows Spanish replacing local languages everywhere.

Community Insights on Disaster Preparedness

The data shows that traditional practices for disaster preparedness and response are widely known in the community with 68.11% responding positively about these practices. The most common is observing natural signs (natural indicators), such as animal behavior or weather patterns, mentioned by 80.95% of respondents. Other practices include traditional healing or medicinal knowledge (47.61%) and spiritual or ritual practices for protection (36%), while community warning systems and special construction techniques are less common (19% and 7%, respectively). In terms of how they communicate these practices, they are through oral storytelling (43%), also learning from elders or leaders (53%) and family teachings (55%) and community meetings (25%) also play a key role. As mentioned in the previous topics, social media and radio have limited involvement (4%).

Survey Question: What specific traditional practices does your community use to prepare for or respond to disasters?



Sex and Age Disaggregation:

When analysing this information by sex and comparing results we see that females tend to engage more in observing natural signs (84%) and traditional healing (58%), while males show higher participation in community warning systems (21%), special construction techniques (13%) and storing food and water reserves (9%). Both genders report similar involvement in spiritual practices around 35% both.

The results show noticeable differences in how various age groups use traditional practices to prepare for or respond to disasters. Older individuals (aged 56 and above) place the highest emphasis on observing natural signs, with 82% of respondents citing these practices. Additionally, this age group also highlights the importance of traditional healing or medicinal knowledge (41%) and spiritual or ritual practices for protection (29%). The 36-55 age group also values observing natural signs (86%) and community warning systems (20%), but their responses show a more balanced distribution across practices, with a notable approx. 50% citing spiritual or ritual practices for protection. Younger individuals (18-35) focus heavily on community warning systems (30%) and

observing natural signs (70%), though they show more than 60% reliance on traditional healing and spiritual practices.

10% of respondents indicated that differences in the language used by government officials and other decision-makers lead to misunderstandings within the community. When asked to explain more about the issues, some of the responses fall into these two main points that contribute to misunderstandings between government officials and the local community: language barriers and coordination challenges.

1. **Language barriers:** Aymara-speaking community members face difficulties when dealing with outsiders who do not speak their language. Specifically, government officials struggle to make themselves understood by the local population, especially when dealing with older individuals who may not comprehend the official language or due to poor translations. The issue also arises when Aymara speakers use their native language, leading to a lack of understanding from officials. Moreover, some officials fail to effectively express the objectives of their work in Aymara. Large proportions of respondents in older age groups report a preference for receiving written information in Aymara.
2. **Coordination issues:** Misunderstandings also stem from a lack of clear coordination, particularly when there are multiple managers or decision-makers are involved.

Community Feedback

Although a large proportion of respondents believed that their concerns and ideas were widely or sometimes shared with decision-makers, a much lower proportion felt that this led to change or action.

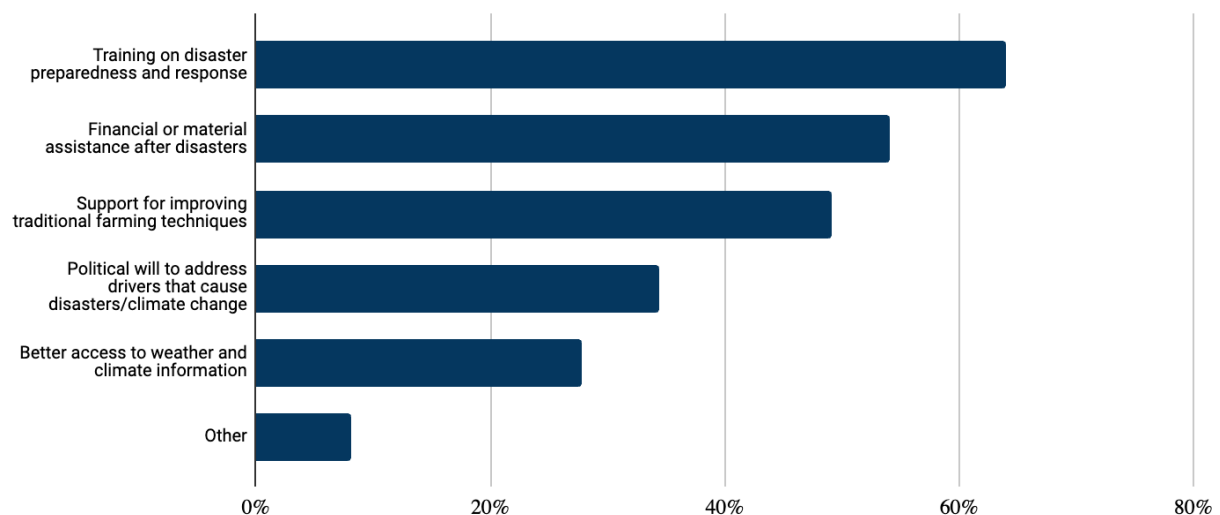
Do you think the concerns and ideas expressed by your community about disasters and challenges (e.g., drought, fires) are shared with decision-makers or the public?

- **More than half of the respondents (57%) believe that concerns are sometimes shared,** but not sufficiently, and 15% feel that concerns are only shared rarely or in specific cases
- **A notable 7% of respondents feel that the concerns are not shared at all,** suggesting a significant communication gap between the community and decision-makers.
- **Only 21% believe that their community's concerns are widely shared** and considered by decision-makers or the public, indicating that community input is not always valued or acted upon at the larger decision-making levels.

Have you ever seen your community's concerns lead to action or change?

- The data shows that community concerns rarely lead to substantial changes. **Around 34% believe there are only minor changes, and 13% feel that nothing changes despite raising concerns.**
- A larger portion (39%) feel that while concerns sometimes lead to change, it is not consistent or dependable.
- Only 13% of respondents have seen frequent or significant actions taken based on community concerns, which suggests that the impact of the community's voice is minimal or inconsistent.

Survey Question: What kind of support or knowledge would help your community better prepare for disasters?



The community has expressed a variety of concerns and suggestions regarding disaster preparedness and response. They emphasize the need for financial support to ensure aid reaches all affected individuals, particularly in health, and advocate for better communication channels, such as local media and WhatsApp groups, to spread disaster-related information. Many highlighted the importance of constant community training, especially in education and agriculture, as well as the need for improved coordination between communities. Comments collected from the survey suggest that there is a demand for strengthening community knowledge and capacity to deal more effectively with disasters; frequently mentioned were the need for training to support: Better communication of disasters, better preparations for prevention, better coordination between communities, better transmission of information to the communities and managing the effects of disasters.