

## Water and Sanitation Program

An international partnership to help the poor gain sustained access to improved water supply and sanitation services

## Introduction



To expand coverages of basic sanitation services in Bolivia, a range of organizations have undertaken latrine building projects in recent decades utilizing a variety of intervention strategies, methodological approaches, and construction techniques. However, evaluations have shown that in most cases the actual use of these latrines by participating families is under 50% of the latrines built.

The need to understand the factors leading to these results prompted a joint initiative by the World Bank's Water and Sanitation Program, UNDP, UNICEF, and Bolivia's Rural Basic Sanitation Program<sup>3</sup> PROSABAR<sup>4</sup> to undertake **An Anthropological Study of Sanitation in Rural Bolivia**.

The study was conducted between 1998 and 1999 by a research team largely made up of anthropologists who studied 14 representative communities comprising four distinct ethnic groups - Aymara, Quechua, Moxo and Guarani. One or more of each ethnic group inhabits all three of the country's geographical areas, i.e. the high lands or high plateau, the valleys, and the

lowlands or plains. A qualitative methodology was used to take into account the viewpoints of members of each group, thus capturing their individual opinions, positions, and attitudes.

This paper provides a summary of the study's main results and present findings about the relations between the cultural patterns identified among the communities in Bolivia's three regions and their use of sanitation facilities.

Given Bolivia's wide ethnic and geographical diversity, representative communities were chosen determined by ecological niche and ethnic group criteria. Below are presented their main characteristics.

### 1.1. High Plateau Communities

Ethnic groups in this ecological niche are mainly Aymara and Quechua who live in dispersed, semi-dispersed, and concentrated settlements. Young men and women alike migrate temporarily to the cities. Generally, however, they are engaged primarily in farming and herding for household consumption. Their social organization is strong and their communities are governed by decisions made within Community Assemblies, their

maximum authority and the pivot of their community life. The earth or *Pachamama* is considered to be sacred and honored as the main life resource for humans, animals, and plants, all of which are seen as parts of a structured and interrelated whole.

The Aymara and Quechua world is split into a "here" world, or the visible and tangible world where men plant, harvest and which they share with other people and animals, and the world "underneath" or the world of darkness, or the residence of dead people's souls, the sacred guardians, and other beings and spirits. Mutual respect, balance, and reciprocity characterize the relations between the two worlds.

For these ethnic groups, disease is the consequence of a dysfunctional relationship between man and nature, and the community and their ancestors.

People of the High Plateau show a range of **habits for disposing of their excreta** and do so in different places depending on their work, and season. They may use places near their homes but will not defecate along roads, in other people's property, or where they may be seen.

## 1.2. Valley Communities

Valley communities are also mainly of Aymara and Quechua ethnic origin, and like their High Plateau equivalents, they also migrate periodically to the cities. However, farming in valley communities around the country is more intensely linked with towns and cities. The land or *Pachamama* (Mother Earth, in Quechua language) is seen as the origin of life and axis of their social and symbolic organization. There is strong cultural stratification. Aymara *laris* (unskilled labor in the Aymara language) are at the bottom of the social ladder and live in the higher lands. Quechuas occupy the middle social layer and live in dispersed or semi-dispersed settlements. The third, upper layer is also filled by Quechua who live in the low valleys in larger communities.

The Community Assembly wields the highest authority. Like their High Plateau counterparts, the people of the valleys or *vallunos*, recognize two worlds, the “here” and the “nether” worlds. The relation between the two is governed by the principles of respect, balance, and reciproc-

ity. Despite the presence of Western health care personnel, valley people share with their High Plateau counterparts a similar vision of the universe, and trust their health care to medicine men. It's the fundamental task of mothers to preserve their families' health.

**Excreta disposal habits:** Also as in the High Andean Plateau, people in the valleys dispose of their excreta in different places, according to their work and time of the year. Children use areas near their homes while grown up men and women will go further. Residents avoid using roads, private properties, or exposed places for disposing of excreta or relieving themselves.

## 1.3. Lowland Guarani and Moxo Communities

Settlements are dispersed. Groups of homes or *tenta* are organized around a kinship pattern and make up an extended family nucleus comprising anywhere from 15 to 60 families, with 4 to 8 members each and headed by a Captain. In turn,

these households are members of an Indian Town Council (*Cabildo Indígena*). Only a small fraction of these people migrate seasonally to urban areas. Their main economic activity is subsistence agriculture. Land for these communities evokes a broader concept than in the valleys or highlands. They distinguish the *yvy* territory from *koo* agricultural land and *tenta*, or the place for dwellings. As in the Andean vision of the world, nature is sacred. Human society, the forces of nature, and the spirit all share the same level of existence. For these communities, each element of nature has an owner or *iya* while no being is inert or neutral. Men as well as nature are deposits of good and evil, and disease appears when the existing social and cosmic harmony is disrupted.

**Excreta disposal habits:** These communities establish a clear distinction among spaces they consider suitable for living, animals, farming, and for disposing of waste they see as dirty, i.e. human and animal excreta.

# 2. Sanitation considerations in the three regions

## 2.1. Houses and their surroundings

Research findings concerning people's homes and their surroundings pointed to shared patterns in the three regions. Houses are seen as sacred and they comprise two well-defined areas: one inside for the people and another outside area for animals. Nonetheless, “clean” animals are kept closer to the home, and domestic animals may even wander freely around the house yard while “dirty” animals, like pigs, are kept in a sty near the house.

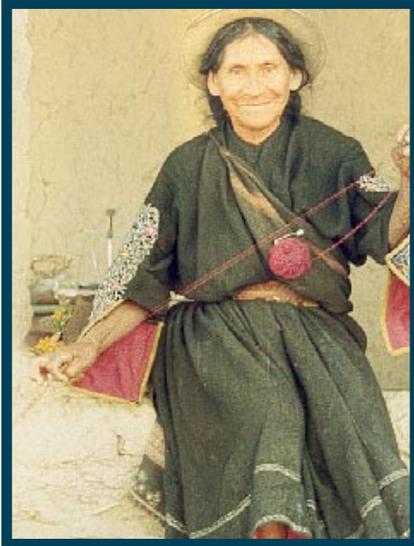
## 2.2. Excreta disposal sites and cleaning systems

Social and cultural regulations govern the disposal of excreta in all the communities of the study. Two types of spaces are generally available for these functions.

1. *Near the house, in the backyard or behind the house walls, where smaller children relieve their bowels.*
2. *Grownups prefer open fields, streams, and hills (in lowland communities) in 71% of the cases.*

**Disposing of excreta:** Most of those interviewed mentioned that domestic animals including dogs and pigs contribute in eliminating the excreta near the houses. Likewise, most people mentioned that nature itself helps in cleaning the excreta. Once they dry up in the sun, they are carried away by wind and rain, or eaten by wild animals.

People are aware of the relation between human contact with excreta and diseases like diarrhea and trichinosis (cysticercosis).



### 2.3. Latrines in the communities

Latrines—whether dry-pit with or without ventilation, or alternatively provided with a water seal, windows and ventilation—are found in many schools and communities. Guarani communities build their latrines by digging a hole in the ground and covering it with a board with a hole. No outhouse is built around them and they are usually hidden in nearby groves.

Generally, these latrines were built without technical assistance. Most are part of water projects, comprehensive health projects (such as cholera prevention programs), and home improvement initiatives. There is no accurate data about frequency of use because talking about excreta is taboo in most communities. Researchers identified men as the most frequent latrine (57%) users. For

fear of darkness, latrines are always used in the daytime and never at night. None are properly maintained and frequently, they are used for storage.

### 2.4. Why aren't latrines used?

A number of reasons may be cited:

#### 2.4.1. Cultural and social considerations

Residents in the three regions use clearly-defined areas for excreta disposal, and letting nature take care of cleaning is practical and effective. Moreover, they are not aware of the latrine's function as a barrier to the spread of disease.

For Andean people, latrines break their logic because the earth or *Pachamama* is sacred and holes must not be dug to deposit excreta in them. Additionally, a latrine is a "small house" where defecating is inconceivable, since houses are sacred. Fear of darkness is another important deterrent as well as fear of "holes" among women and the presence of flies and other animals related to death and evil beings. Modesty is very important to many individuals who are embarrassed to be seen going towards or into the latrine.

#### 2.4.2. Technical and maintenance considerations

Unpleasant odor is a frequent deterrent of latrine use. Lack of appropriate ventilation and clogging caused by poor construction and maintenance are reasons for the no use of latrines. Many

women think that cleaning is not enough to remove unpleasant odors. Moreover, latrines are uncomfortable: they make people feel "imprisoned" (as the Guarani mentioned), or the stepping boards are too far from the hole, making the latrines difficult for women and children to use. The study also encountered latrines of poor quality and inappropriate location, for example some were constructed near riverbanks and were destroyed during the rainy season. Others were built far from houses in order to prevent flies from infesting the people's homes.

#### 2.4.3. Institutional considerations: Policy and strategy deficiencies

Most latrine building initiatives lacked technical assistance, and people were never trained in hygiene and environmental health issues. Little information and dissemination was provided concerning the latrines' benefits. For instance, some people said they did not use the latrines because they found toilet paper too expensive and were not aware of other natural products for personal hygiene (a response from valley community residents). In some communities mass latrine building was part of a comprehensive health effort that regarded people as project beneficiaries rather than agents. Elsewhere, the residents contributed their work to build the latrines in exchange for food, or as a condition for building water supply and other projects.

## 3. Conclusions

 The research team concluded that sector experts' limited understanding of the cultural values and world vision of indigenous communities re-

sults in inappropriate technical designs. Additionally, given the intervention strategies applied in these projects, latrine construction and use is perceived

as an imposition by external agents on the communities.

Although the study revealed that for a variety of reasons latrines are more

frequently used in some areas than in others, including as *status symbols* or as a way to denote assimilation to urban ways, other considerations including their unpleasant smell, location, discomfort, and size are effective constraints to their more frequent use and hamper increased demand for latrines. Regardless of the type of community, latrine acceptance directly related to the institutions' intervention strategy. In the Tapacará region an NGO

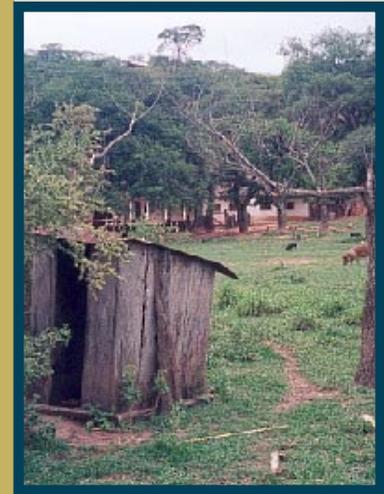
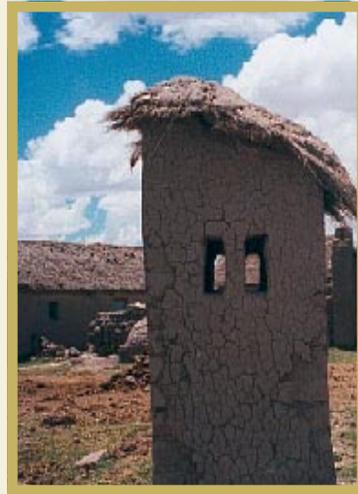
focused its work on generating sanitation awareness and first aid skills, and only then launched a debate within the community about latrines.

Construction tasks, organizations' and families' contributions in labor and materials  $\frac{3}{4}$  were all identified. Along the way, the community could count on the organization's support and guidance, which led to community acceptance and use of the latrines.

## 4. Final Remarks

 Professionals involved in planning and executing development projects should seek to identify and take into account indigenous people's vision of the world and cultural elements in projects design, as well as in the development of training contents, methods, and materials. It is likewise critical to launch a process to create informed demand for improving community sanitation, involving traditional and administrative authorities, grassroots organization representatives, men, women,

boys, and girls. It is also of utmost importance to improve latrine design and examine technical alternatives that will provide the best way to meet the people's expectations, with due consideration for gender and age differences. Lastly, all interventions must include a period during which male and female community members become familiar with the latrine's technical features and social implications, so that they can recognize its importance in improving living conditions and protecting health.



### Water and Sanitation Program Andean Region

World Bank Office, Lima  
Álvarez Calderón 185, 9th floor  
San Isidro, Lima-Perú  
Phone: (511) 215-0685  
Fax: (511) 215-0689  
E-mail: [wspandean@worldbank.org](mailto:wspandean@worldbank.org)  
Website <http://www.wsp.org>