



***Gender Mainstreaming and Water for Growth and Development:  
Diversity as an Agent of Change***

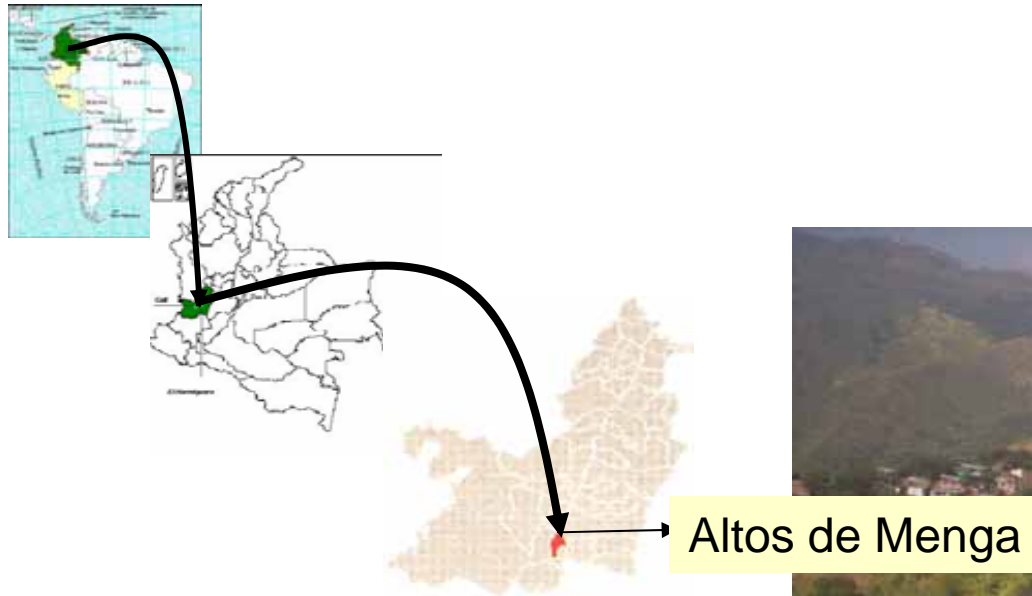
**THE ALTOS DE MENGA COMMUNITY EXPERIENCE IN  
ESTABLISHING SIMPLIFIED SEWERAGE SYSTEMS WITH A  
GENDER FOCUS IN URBAN PERIPHERY SECTORS IN  
SANTIAGO DE CALI, COLOMBIA**

**María Lilly Marín de Jaramillo  
Community Leader**

Mexico City, 20<sup>th</sup> March 2006

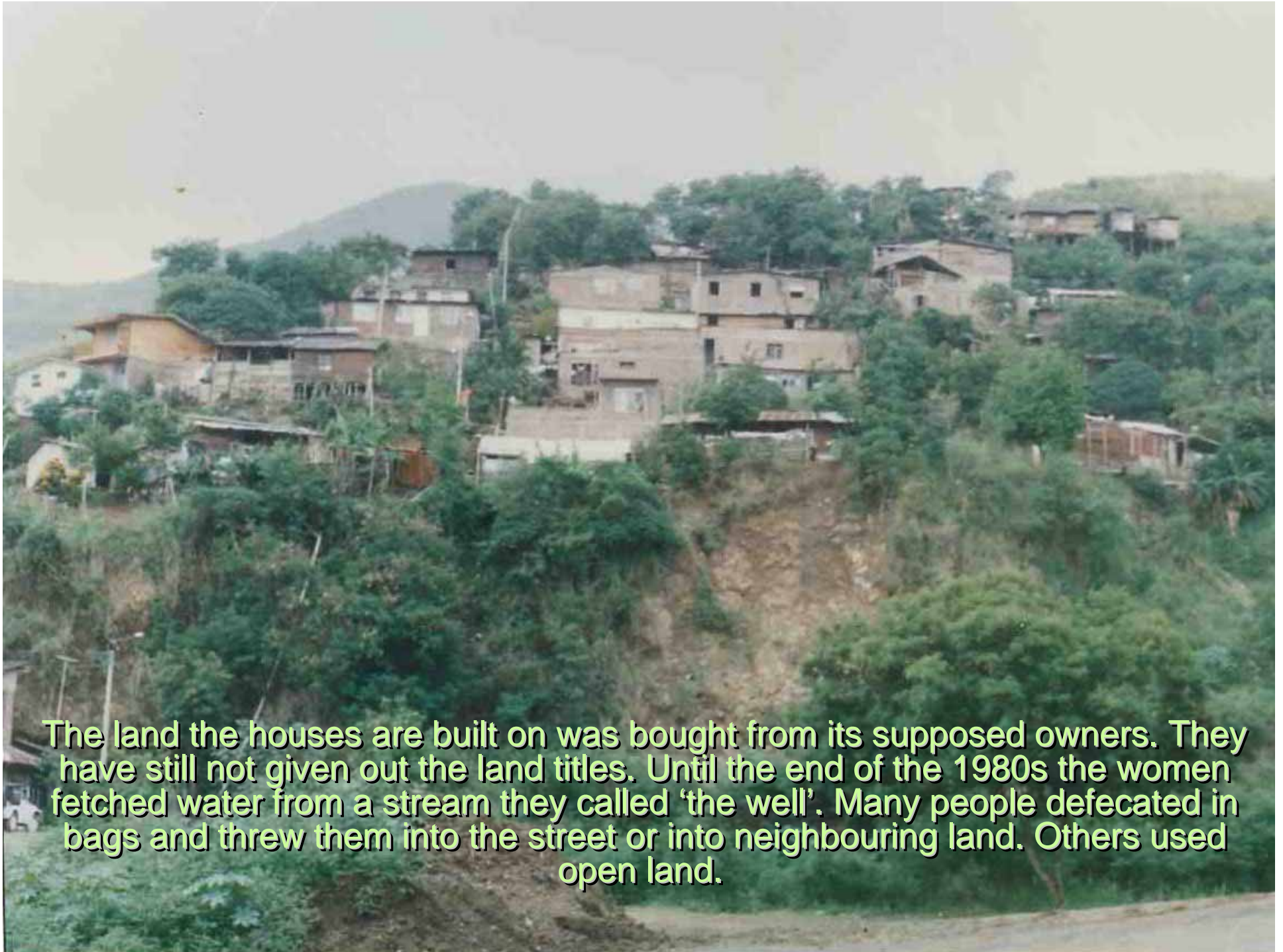


# Geographical Setting



Altos de Menga is located on the outskirts of Santiago de Cali (pop. 2,400,000), in a hillside zone to the northeast of the city. The area was settled in the 1970s and currently has around 3000 inhabitants.

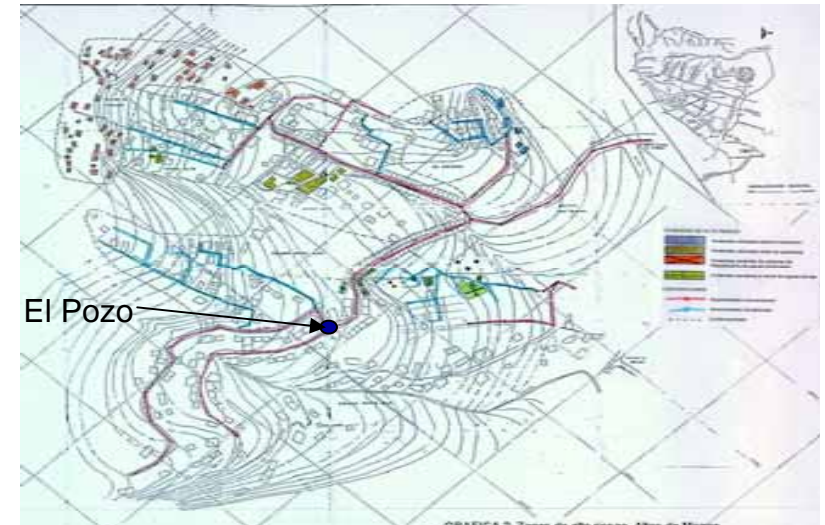




The land the houses are built on was bought from its supposed owners. They have still not given out the land titles. Until the end of the 1980s the women fetched water from a stream they called 'the well'. Many people defecated in bags and threw them into the street or into neighbouring land. Others used open land.

# Context & Background

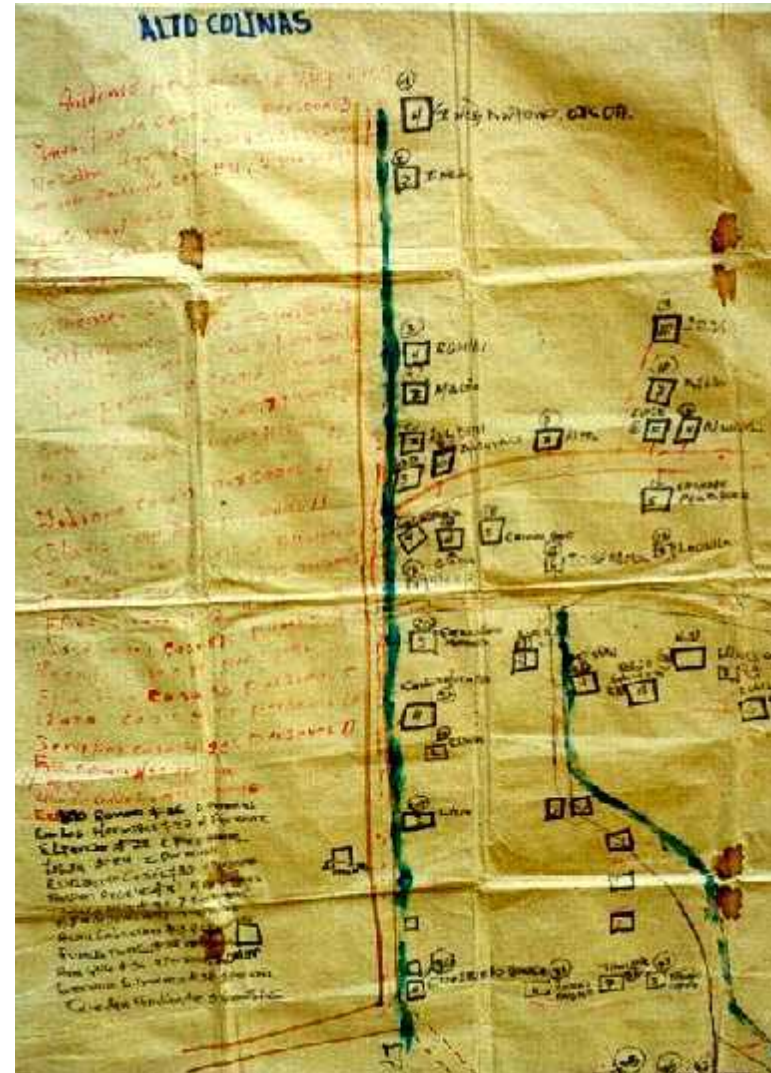
- At the end of the 1980s, Cali Municipal Enterprises (EMCALI) began to bring drinking water in water trucks and distributed it free of charge.
- In 1991 a tank was built, and water was pumped from the municipal network. Water was piped to homes for 2 hours a day (1 in the morning and 1 in the afternoon) This system covered around 85% of homes.
- When water became available in homes, ‘the well’ was abandoned. Wastewater was disposed of in the streets and paths, causing landslides due to the fragile land.
- The unhealthy environment caused skin disease, especially in children, as well as generating bad smells.
- In 1994, a conventional sewerage system was built to solve the problem. However, this system only covered the houses built on the main road, just 40 % of all the houses in the settlement.



# Tools & Process

This project was part of the 'Team Learning in Sanitation' programme, promoted by the Instituto Cinara at the Universidad del Valle, with the participation of:

- Cali Municipal Enterprises, EMCALI
- Urban development planning institutions
- The Colombian National Learning Service, SENA
- The NGO Plan International
- The community. Women in particular took leadership of the simplified sewerage network.



# Tools & Process



## Women:

- were most aware of the importance of finding a solution to the sanitation problem.
- made the first proposal for the network's design, processed all the legal permits, and oversaw building. Although the male builders did not accept this with grace, women made sure that the design was respected.
- learned to operate and maintain the system.



The network is made of PVC, with a diameter of 4 and 6 inches and shallow inspection boxes of 50 x 60 cm. The network has PVC pipes so that the cement does not deteriorate and damage the boxes. The boxes are located in the pipe direction changes and at domestic connections to the network.

Building this sewerage system for 143 houses cost US\$364 per house, or an average of US\$61 per person.



“It has been operating for 9 years with no problems because it was built well. The community really understood the designs, learned to operate and maintain the network and has made good use of it”



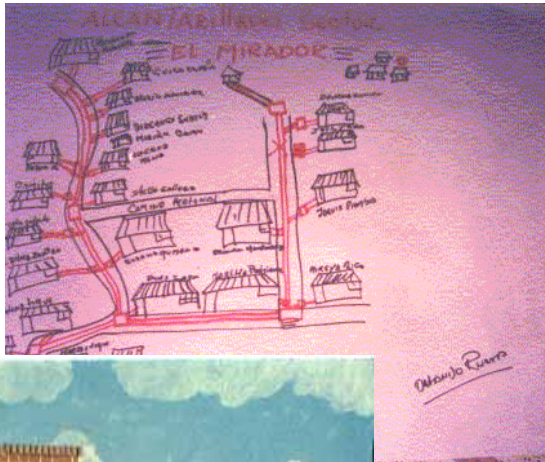
# Lessons Learned

- The network was built exclusively to transport wastewater. Sticks, stones, socks, toys or debris cannot be introduced into the system. The inspection boxes are very good as foreign bodies can be easily identified in them.
- This kind of project can be carried out anywhere where communities feel the need to live with dignity. Finding a solution to problems of wastewater and faeces goes a long way to improving the situation.





# Transferability of the Local Action



Simplified sewerage systems are an excellent alternative for solving environmental sanitation problems in poor sectors of cities or in the country. They reduce costs, are very easy to build and allow the community to participate. In addition, this kind of sewerage system can be easily maintained by anyone.

This project could be replicated anywhere, as long as the community has good advisers that value human beings, teach and listen to the community and value community knowledge.

# Conclusions

- The project proved that there are intelligent people in our communities who can make their dreams come true if they have the right support.
- More work should be done with governments because they have great problems in understanding the problems of people like us who live on hillsides above cities. They always make it difficult to carry out infrastructure work when they do not do it themselves.



“This project has shown that women can make a difference and after this experience, we feel like we can take anything on”.



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