

Bolivia



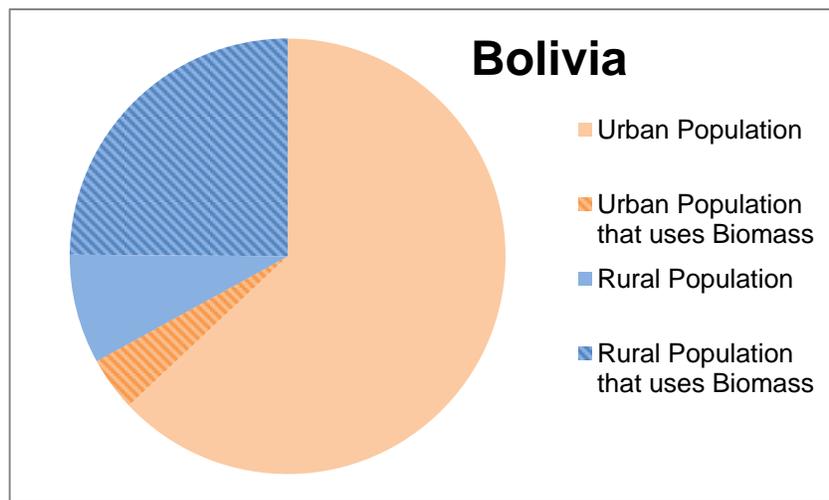
Total population*	10,671,000
Urban (%)	68
Rural (%)	32
% Population that uses biomass*	23
% rural**	75.4
% urban**	6
% Population with access to LPG and electricity**	69
Number of households that use biomass**	624,779
Number of annual deaths from HAP 2012*	3,303
Number of annual child deaths from HAP 2012*	572
Price of LPG (25 lb tank)***	3.28 USD
Price of electricity (Kw/h)***	0.09 USD
Price of Firewood***	70 USD/año

HAP: Household Air Pollution

*WHO observatory data base

**GACC (Global Alliance for Clean Cookstoves) web page

*** September 2015



History of Efficient Cookstoves

Number of efficient Cookstoves built so far	82,500
Type of technology distributed so far: Malena type stove with in situ construction	
Cost of technology	39.36 USD

Technology performance assessment	Type of cookstove	Malena
Where was this evaluated? Centro de Pruebas de Cocinas UMSA – GIZ https://cocinasmejoradasbolivia.files.wordpress.com/2012/01/tasas-de-emisic3b3n.pdf	PM concentration in kitchen	1,932¹
	CO concentration in kitchen	5.79 mg/m3 5.05 ppm

National Program²

The National Campaign "Cook stoves for a better life; 100,000 smoke-free households in Bolivia" (March 2007) aimed to inform authorities, opinion leaders, the media and the public in general about the damaging effects of Household Air Pollution (HAP) caused by traditional stoves. It was helpful to share information about this issue until then unknown by most of the population. The objective is being accomplished successfully in conjunction with the Campaign allies (NGOs, Ministries, companies, other donors, etc.), with EnDev as the main contributor.

They have disseminated Malena improved cook stoves to households and social institutions (schools and boarding schools) in rural communities. The cook stove design reduces the amount of firewood or dung used to prepare meals. The stoves are equipped with chimneys, which helps to reduce exposure to smoke and toxic gases produced while cooking. The project strategy comprises technology transfer to the communities, technical assistance, training for local stove builders, and follow-up and monitoring of the installations. Furthermore, the project supports the dissemination of solar stoves and is presently testing the introduction of other products (portable metallic stoves, stoves with ovens, etc.) which may be useful for rural communities.

Malena cook stove

The Malena stove is made of improved adobe (a mix of sand, chopped straw, clay, donkey or horse dung and water). It has two pot holes and a chimney to expel the smoke.

Approximately 82,000 families and more than 2,500 schools have been benefited. Moreover, more than 800 local stove builders have been trained, 25 of whom work exclusively in the construction of Malena stoves as their primary source of income. Thanks to the results obtained, strategic partnerships have been entered into with governmental institutions, private companies and NGOs that grant funds to purchase inputs or pay the stove builders.

¹ El Zamorano, 2009

² Source: GIZ web page <http://www.endev-bolivia.org>



Stove Testing Centre (CPC, Centro de Pruebas de Cocinas) <http://www.cpcbolyvia.org>

The Stove Testing Centre (CPC) conducts applied research, supports technology development and the implementation of international testing protocols (in the laboratory and in the field), in order to assess the operation of the improved cook stoves and certify their performance. In addition, the Centre provides technical assistance for projects and institutions at the national and international levels involved in the construction and/or dissemination of improved stoves. It is an independent centre that was strengthened by the Global Alliance for Clean Cookstoves (GACC) and it has become a regional point of reference. The tests are in accordance with the Bolivian Standard for Cook Stoves, No. 83001.

LPG distribution

Between 2001 and 2011, the population of users of LPG increased from 58% to 72%. Around 130,000 households benefited from the government's GLP program to give access to new users. This program is supported by high fuel subsidy (the price of LPG has remained the same since 2005 and corresponds to about 25 % of its international price³), which has contributed to the penetration of LPG in the fuel cooking market between poor urban and semi -urban population.

³ Source: OLADE 2012. *Políticas de Subsidio a los Combustibles en América Latina: El precio del GLP*. Organización Latinoamericana de Energía.



National campaign to promote LGP in Bolivia

Paper related to cookstoves in Bolivia

1. El CPC orienta nuestras acciones para la disseminación de cocinas mejoradas

http://www.endev-bolivia.org/images/stories/proyecto_endev/cocina/Descargas/REVISTA-CINER-CPC-COCINAS.pdf

2. Description Sheet. Malena Stove

http://www.endev-bolivia.org/images/stories/proyecto_endev/cocina/Descargas/stove%20sheet.pdf

3. Norma Boliviana de cocinas mejoradas

http://www.endev-bolivia.org/images/stories/proyecto_endev/cocina/Descargas/norma.pdf

4. Lo bueno y lo malo. Cocinas Malena de hogar

http://www.endev-bolivia.org/images/stories/proyecto_endev/cocina/gyb-endevbolivia-cocinasmalena.pdf