

2021
OUTSTANDING PROJECT



Figure 1. Construction of the sanitary facility. Source: Selavip.org



Figure 2. Finished sanitary facility. Source: Hábitat para la Humanidad Bolivia, Facebook 2021.

Figure 3. Sanitary facility inauguration. Source: Hábitat para la Humanidad Bolivia, Facebook 2021.



Bathrooms or latrines

Women building sustainable communities

Building of 60 sanitary facilities with recycled materials, containing a sink, toilet, and shower, that function through a graywater recycling system. The project is mainly focused on women from the 8th and 9th south districts of Cochabamba, Bolivia, that are the head of their households and whose families are in a social vulnerability position.

Location	Cochabamba and Viacha (El Alto), Bolivia
Duration	9 months
Year of execution	2021
Benefited Families	60 families

Construction methodology

Walls material

Masonry and recycled PET bottles

Foundations and flooring materials

Concrete slab covered with ceramic tiles

Windows material

Rubber tire frame and wire net

Roofing material

Timber trusses covered with recycled rubber tires

Doors materials

Steel frame reinforced with PET bottles

Qualitative characteristics

Reuse

Reuse of graywater and waste materials like PET bottles and rubber tires

Innovation

Development of technical construction skills for women. Improved water pumping for the water storage tank, through a pedal powered water pump.

Awareness

Use of didactic games to teach about: water use and reuse, bathroom hygiene, solid waste management and environment protection.

Project financial summary

Construction of 60 sanitary facilities

SELAVIP Contribution	28,000 USD
Other contributions	82,000 USD
Total cost	110,000 USD

Unit cost per family	1,833 USD
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SUSTAINABLE DEVELOPMENT GOALS

The 2030 Agenda for Sustainable Development, considers 17 objectives with the aim of peace and prosperity for all. Their main focuses are: economic growth, education, health, social protection, job prospectives, climate change and environment protection.

Following, please find the objectives that this project contributes for the sustainable development of it's community.

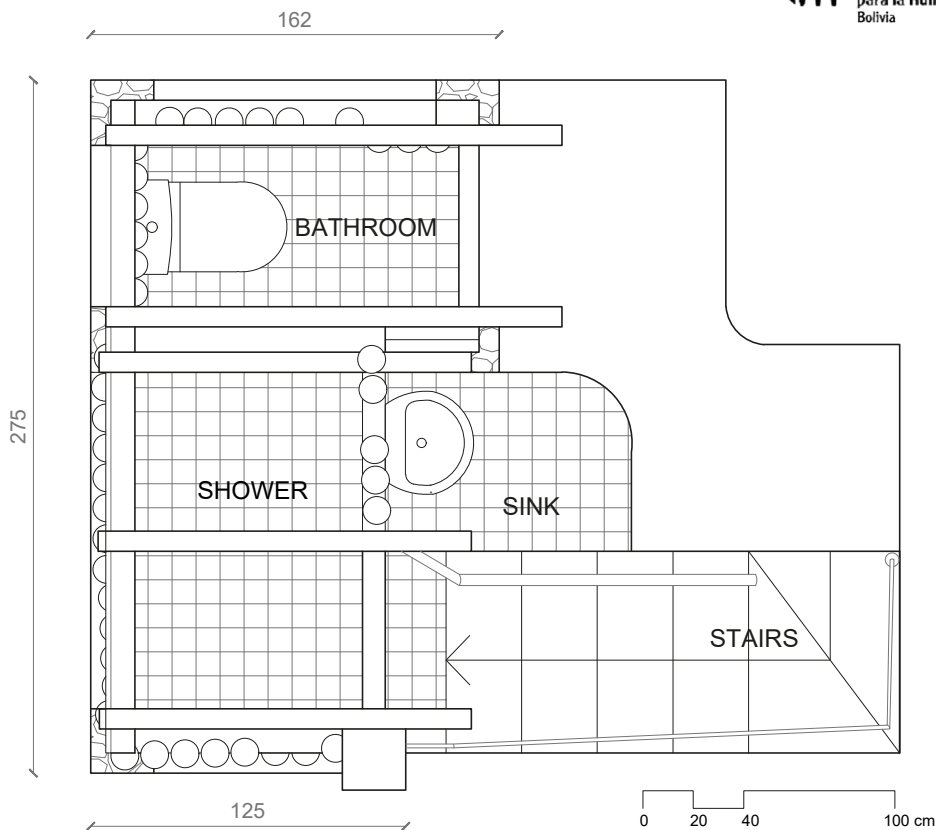


Figure 2. Sanitary facility layout. Source: Hábitat para la humanidad Bolivia, 2021. ESC graphic.



Figure 3. Awareness process with a didactic game. Source: Hábitat para la Humanidad Bolivia, 2021.



Figure 4. Bottles and tires gathering. Source: Hábitat para la Humanidad Bolivia, 2021



Figure 5. Pedal powered pump prototype. Source: Hábitat para la Humanidad Bolivia, 2021.

Contribution to the achievement of Sustainable Development Goals



1 No poverty

The project result in a yearly cost saving of USD 250 on average, reduces the exposure to vulnerability instances and promotes local autonomy and economy of the participants.

Goal 1.4 To grant access to basic services by 2030. **Goal 1.5** Promote resilience of the people living under the line of poverty and of those people living in situations of vulnerability.



3 Good health and well - being

Sanitary modules reduce environmental factors that contribute to disease transmission, thereby improving the health and hygiene of their users.

Goal 3.3 End water transmitted diseases and other transmissible diseases. **Goal 3.9** Substantially reduce the number of deaths and diseases produced by water, air and soil pollution.



6 Clean water and sanitation

The project facilitates the access to clean water, sanitation and hygiene. Also, it teaches through games regarding the correct use of water and bathroom maintenance.

Goal 6.2 Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation. **Goal 6.3** enhance international cooperation for the increase of capacity in activities and programs related to water and sanitation. Efficient use of hydric resources and graywater treatment.



10 Reduced inequalities

The project allows to distribute hydric resources on a more efficient way, invest in the teaching on water management and protection, and focus on the development of construction capacities for women.

Goal 10.2 Promote and enhance social, economic and political inclusion of all people. **Goal 10.3** Grants equal opportunities and reduce inequalities related to achievements obtention.

List of required materials

1. Cement
2. Sand
3. Engineering brick
4. Square tubular steel
5. Rebars
6. Square strip
7. Stainless Steel Corrugated Sheet
8. Stones
9. Galvanized steel mesh
10. Millimetric mesh
11. Tires
12. PET bottles
13. Latex paint
14. 400-liter water tank

Construction of the sanitary facility



Figure 7. Construction of window frames made from tires.
Source: Hábitat para la Humanidad Bolivia, 2021



Figure 8. Wall assembly process.
Source: Selavip.org, 2021.



Figure 9. Finished sanitary facility.
Source: Hábitat para la Humanidad Bolivia, 2021

Images of required materials



Figure 10. Cement



Figure 13. Engineering bricks.



Figure 16. Square tubular steel



Figure 11. Square tubular steel 3/8"



Figure 14. Water tank



Figure 17. Stainless Steel Corrugated Sheet



Figure 12. Galvanized steel mesh



Figure 15. Tire



Figure 18. PET bottle

Water collection system

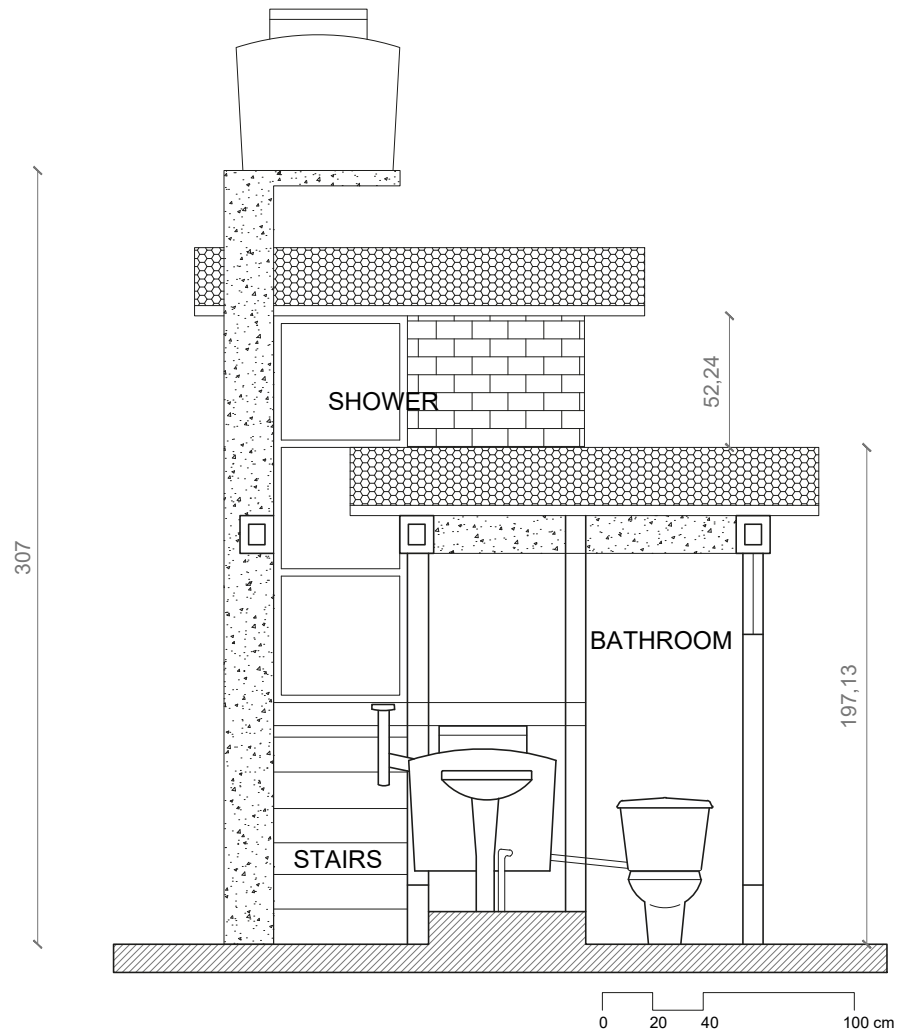


Figure 19. Section, water collection system. Source: Hábitat para la Humanidad Bolivia, 2021. ESC graphic.