

Project Overview

DESAFIO literally means “challenge” in both Portuguese and Spanish, the working languages of our field research. This is because the guiding concept of our project is to contribute towards tackling what is arguably one of the major challenges facing Latin American countries in the twenty-first century: **eradicating structural social inequality** in the access to essential water and sanitation services (WSS).

We argue that the main challenges facing the international community in this area are not merely technical or environmental, but are rather **grounded on and conditioned by** economic, socio-political, cultural and policy-institutional processes.

Our main tenet is that achieving the development goals set by the international community in relation to the reduction of poverty levels and enhancing environmental sustainability, crucially depends on **harnessing existing and developing new appropriate and innovative socio-technical solutions** for the provision of safe WSS.

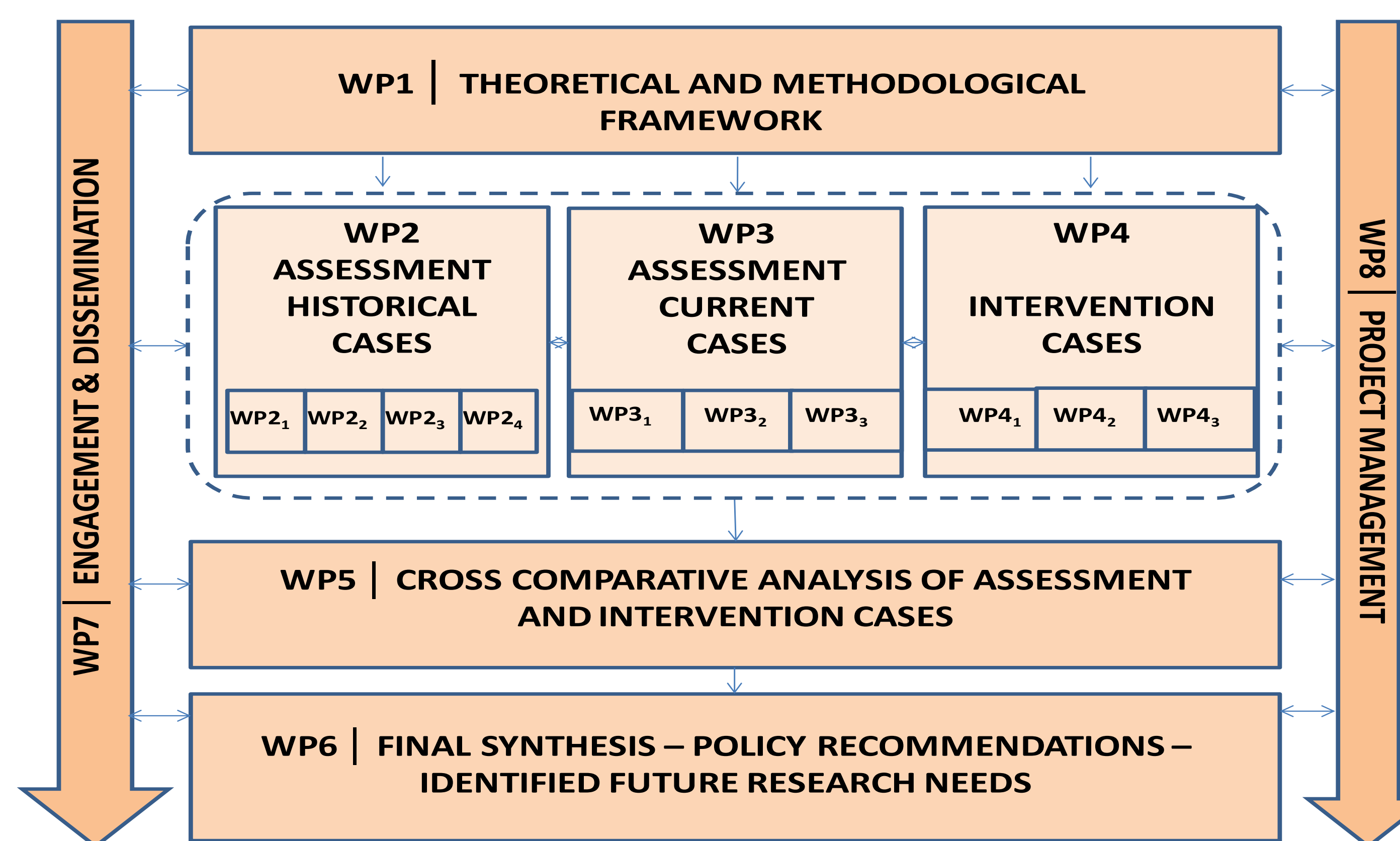
Research questions

DESAFIO aims to respond to the following questions:

- **How** can we harness existing and develop new socio-technical innovations in order to **change policies**, to **develop strategies and practical interventions**, and to **enhance policy learning** for tackling unacceptable inequalities and injustice in the access to essential WSS?
- What **conditions, factors and processes** facilitate the **emergence** of socio-technical innovations in this sector?
- What are the **critical requirements** to make successful socio-technical innovations **sustainable and replicable**?
- What are the **obstacles** to their sustainability and replication?

Project structure

DESAFIO has a duration of 30 months (February 2013 to July 2015). It is structured in 8 Work packages and has a comparative, interdisciplinary approach that brings together social and technical disciplines.



Main objectives

- Developing an inter- and transdisciplinary theoretical and methodological foundation for the study of socio-technical innovations in six analytical dimensions: socio-political and cultural, economic-financial, health, ecological-environmental, techno-infrastructure/operational, and policy-institutional.
- Assessing strategies for sustainable socio-technical innovations. Our case studies include the ‘condominial’ and ‘integrated sanitation’ systems designed and implemented in Brazil, rural sanitation systems in Brazil and Colombia, and strategies to enhance the monitoring of water quality by school children in Argentina.
- Actively engaging civil society (e.g. community organizations, citizen movements, NGOs), the state (e.g. national, regional, and local governments), and other relevant organisations.

The case studies

We examine 10 case studies of socio-technical innovation identified in Argentina, Brazil and Colombia. The cases include “historical” experiences (over 20 years), “current” developments, and new interventions just being designed. These are some examples:



The condominial system in Recife, Brazil (historical case)

•The condominial sanitation system was implemented in the city of Recife in the 1990s. Inspired by democratic ideals, this model sought to promote the universalization of access to water and sanitation services in low-income neighbourhoods with deficient infrastructure and lack of other public services. This case study will assess the political-institutional sustainability of this specific experience in the neighbourhood of Mutardinha. Particular attention will be paid to the effectiveness of this model's institutional framework, the efficiency of the social technology in involving the beneficiary communities and its impact in terms of the community dynamics that followed its implementation.
•Visit this case's web page for more information: <http://desafioglobal.org/historical-cases-2-2/>



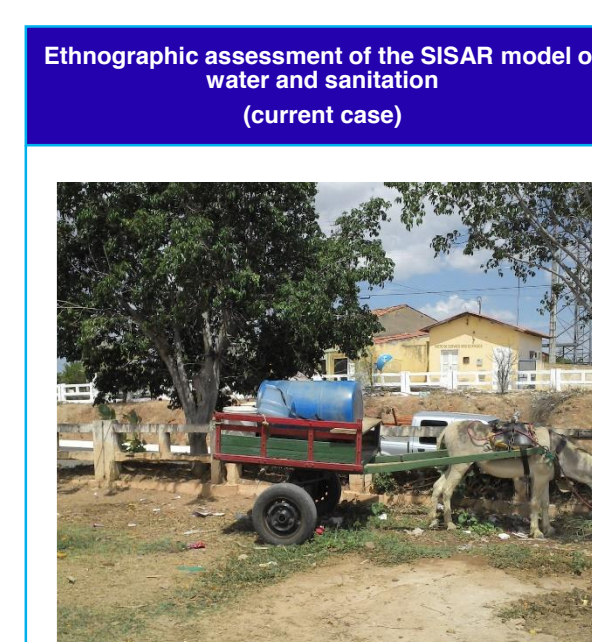
Local solutions for vulnerable communities in the Baía da Ilha, Rio de Janeiro (historical case)

•The municipality of Quilombos in the Baía da Ilha is characterized by striking social inequalities. Despite the many programs implemented, governments in the last two decades, most cities in the Baía da Ilha continue to suffer from precarious access to water and sanitation services. However, grassroots initiatives have produced low-cost solutions based on simple technologies to mitigate the problem. In the absence of formal public services or where these services are very poor, the local population has developed survival strategies that include community-controlled water supply facilities. This case study will examine these grassroots initiatives to assess the conditions, requirements and possibilities of people and low-cost solutions for the lack of safe WSS in vulnerable communities.
•Visit this case's web page for more information: <http://desafioglobal.org/historical-cases-2-3/>



Empowerment, resilience and sustainability: Evaluation of an integrated water and sanitation system in the rural community of La Vozgine, Colombia (historical case)

•La Vozgine is a small peri-urban community on the right bank of the river Panos, near Cali. Since 1997, the community, through the Association of Users of Water and Sanitation of La Vozgine (ASOVORAGINE), has been responsible for the operation and maintenance of its eco-friendly integrated water and sewage system. The construction of this system required the mobilisation (empowerment) of the community and the gathering of support from various local stakeholders such as the municipal water company and the environmental and health authorities. This case study will assess the sustainability of the system and the community's adaptive capacity in the face of external pressure from different interest groups in the region.
•Visit this case's web page for more information: <http://desafioglobal.org/historical-cases-2-4/>



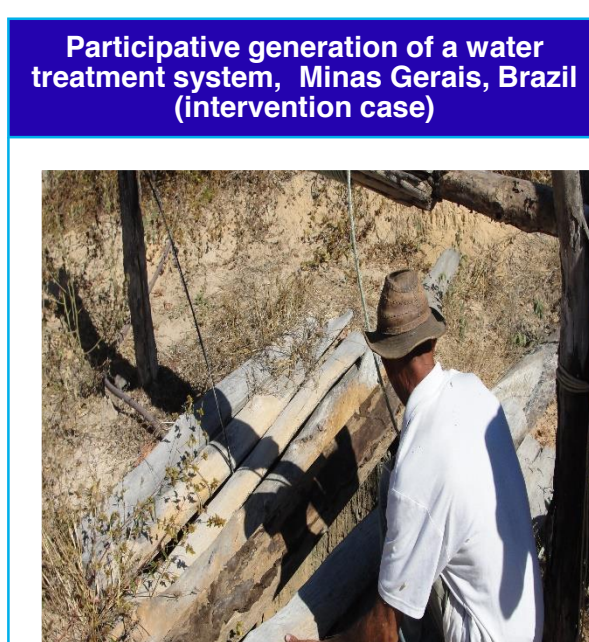
Ethnographic assessment of the SIBAR model of water and sanitation (current case)

This case study will develop an ethnographic assessment of the SIBAR model of community management of water and sanitation in a rural community in the state of Ceará, Brazil. We will analyse the socio-political, cultural and political-institutional factors and processes that shape the ways in which water resources and services are governed and managed in the replicability and long-term sustainability of the SIBAR model.
•Visit this case's web page for more information: <http://desafioglobal.org/current-cases-3-1/>



The integrated sanitation system in Recife, Brazil (current case)

•The ‘Integrated Water and Sanitation system’, implemented in Recife since 2001, seeks to promote inter-sector cooperation to foster effectiveness in the provision of basic services. This includes: infrastructural improvements in water and sanitation, including wastewater treatment, in rubbish collection, vector control, and more broadly urban planning, social housing, and environmental education. The system also seeks to enhance accountability and transparency, in addition to social participation. This case study will assess the performance of the system in the community of Mutardinha, looking at the level of appropriation of the process by the community, their role in the design, implementation and maintenance of the system, and the dynamics and interrelations between the different actors.
•Visit this case's web page for more information: <http://desafioglobal.org/current-cases-3-2/>



Participative generation of a water treatment system, Minas Gerais, Brazil (intervention case)

•Quilombola communities resulted from the legacy of slavery in Brazil and were originally created by slaves who escaped from their owners. There are thousands quilombos, and we chose the Lagoa community in Minas Gerais. This case study will use participatory and dialogic methodologies to engage the local community in the research process. We will carry out a diagnosis through action-research activities for the design, implementation, and management of a water treatment system. Given the specific socio-cultural characteristics of the population, the study will also assess whether the vulnerability of the community changes in proportion to their members' level of participation in the process. This case will be developed in collaboration with Brazil's National Health Foundation (FUNASA), and civil society organisations, such as the Federation of Quilombola Communities in Minas Gerais (FVQMG).

•Visit this case's web page for more information: <http://desafioglobal.org/intervention-cases-4-1/>



Community-oriented rural water and sanitation system in Ceará, Brazil (intervention case)

•This case study will design and build a water and sanitation system. The process will involve the active engagement of the community in the planning, design, evaluation, implementation and sustainable management of the system. It will be developed in close collaboration with Ceará's Water and Sanitation Company (CAGECE), which will build the infrastructure and provide technical support for the management, operation and maintenance of the system. The objective is to understand the obstacles and opportunities for ensuring the effectiveness of the system in improving access to these services. The study also seeks to understand how the innovation can deliver greater community participation and empowerment, higher levels of appropriation of the system by the users and have a beneficial impact on the living conditions of the community.
•Visit this case's web page for more information: <http://desafioglobal.org/intervention-cases-4-2/>



Capacity building for monitoring water quality in vulnerable communities, Santa Fe, Argentina (intervention case)

•In 2007, the environmental agency of the province of Santa Fe found that the water available for consumption in 85 of its 362 localities contains levels of naturally-occurring arsenic and fluoride that far exceed the recommended limits of the World Health Organisation. These are, for the most part, small localities that get their water supply from local authorities or cooperatives, which do not have enough resources to invest in the necessary technologies to mitigate the problem. This case study aims to build knowledge about the relationship between the exposure to high levels of toxics and the higher incidence of water-related diseases in three communities. This will be achieved through local community members and experts in the field and by encouraging the involvement of the educational system in the diagnosis and the subsequent control of the population's exposure to low-quality water.
•Visit this case's web page for more information: <http://desafioglobal.org/intervention-cases-4-3/>

Conclusion

Reports of DESAFIO's preliminary research results are freely available in different forms, including our Working Papers Series and other publications, via the project's website (www.desafioglobal.org).

You can also e-mail us to receive further information at desafio@ncl.ac.uk.

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