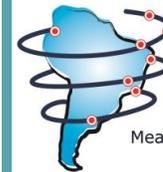


GRAFFITI PROMOTING WASTE RECYCLING, RECIFE, BRAZIL

DESAFIO Newsletter

Issue 6



DESAFIO

Democratisation of Water
and Sanitation Governance by
Means of Socio-Technical Innovation

January 2015

IN THIS ISSUE

Our newsletter circulates quarterly and provides updates about the progress of our project activities, findings, and other relevant information.

Fieldwork highlights

We provide updated information about the work done in recent months by our research teams in Argentina, Brazil, and Colombia. Read more....

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Article: The SISAR model for rural sanitation management in the state of Ceará, Brazil

In this article, we feature Helder Cortez, Manager of the Rural Sanitation Management Unit (GESAR) at Ceará's Water and Sanitation Company (CAGECE), one of DESAFIO's partners in Brazil. Read more...

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Engagement and Dissemination

Our team is very active in engaging communities, governments and other relevant actors and disseminating research findings. We also participated in several international events highlighting the preliminary results of our project work. Find more....

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Figure 1. "A town without water is a town without future", mural painting, Mondomo community, Santander de Quilichao, Colombia

Fieldwork highlights

During this period, our team completed the bulk of the fieldwork for our ten [case studies](#), and produced the final versions of the case study reports. We were also held local meetings with the communities involved in our research, to share our results, get feedback, and plan activities to fill gaps in our research during the final stage of the project.

The Integrated Rural Sanitation System (SISAR) in Ceará, Brazil

We designed three of our ten case studies to cover different angles of the SISAR model of rural sanitation implemented in Ceará, Brazil. Partners UFMG and SISAR-CAGECE are responsible for these cases. The field research activities for the [historical case](#) on the political-institutional assessment of SISAR, the [ethnographic assessment case](#) of the SISAR model and the [intervention case](#) were concluded in the second semester of 2014. During this time, the teams at UFMG and SISAR-CAGECE, focused on analysing the qualitative and quantitative data collected, writing up the research results and producing the cases' reports.



Figure 2. Construction materials in the intervention case study, Cristais, Ceará



Figure 3. Bathroom under construction, Cristais, Ceará.

These activities were complemented with visits to feedback the research results to the communities.



Figure 5. Bárbara Passos, from the UFMG team, discussing research results with community members, Cristais, Ceará.



Figure 4. Bathroom built in the Itapeim site of the intervention case study, Ceará.

In December, our partner CAGECE officially inaugurated the water supply system constructed in the community of Cristais as part of the [intervention case study](#) (see also [Engagement and Dissemination](#)). The system now provides drinking water to all 345 households in Cristais. In addition, 290 households are being fitted with toilets and showers. This case represents a significant progress for SISAR, as the system so far was centred on providing water but did not engage in providing household sanitation facilities or sewerage services. This is one of the main contributions of the intervention case.



Figure 8. Ana Lúcia Britto and Antonella Maiello, from the UFRJ team, in an interview with Mr Borguello, community leader, Bairro Jardim da Fonte, Queimados.

Community-led water provision in Queimados, Baixada Fluminense, Rio de Janeiro, Brazil

Our team at the Federal University of Rio de Janeiro (UFRJ) is responsible for this [historical case study](#). The study addresses the community-led organization of a water supply system using water springs (*minas de água* in the local jargon) in the municipality of Queimados, in the absence of adequate water and sanitation services.

The research activities for this period centred on conducting interviews with relevant actors including the State's Water and Sanitation Company (CEDAE), representatives from the National Health Foundation (FUNASA); members of civil society organisations working in Queimados such as the Guandu River Basin Committee and the community association of Jardim da Fonte, and some of the community's "water guardians" (individuals in charge of overseeing the use of the water springs).

For instance, the representative from CEDAE talked mainly about the difficulties they face in managing the municipality's water resources, given the lack of enough water to serve all the neighbourhoods, which is resulting in water

rationing. He also talked about the company's increasing reliance on subcontracting for performing its activities, which is curtailing their ability to monitor water losses and irregular connections and to provide a better service to the community. The representative from FUNASA also emphasised that the municipality only has enough water to serve 80,000 of its 137,000 residents, which leaves over 40% of the population unserved. He also expressed his preoccupation with the quality of the water that the residents obtain from water springs that are the focus of the study in this case.

Meanwhile, the community's water guardian emphasised the prolonged drought affecting the community and the misuse of some of the *minas de água* by members of the community, which has led to the closure of some *minas* (see picture below).



Figure 7. Broken *mina de água* currently out of use, Queimados



Figure 6. CEDAE's office in Queimados



Figure 12. Popular mobilization for basic sanitation, Mustardinha, Recife, September 1991. Archive of Mustardinha Community Association.

The Condominial Sanitation System in Zones of Special Social Interest (ZEIS) in Recife, Brazil

Our [historical case study WP2.2](#) focuses on the implementation of the Condominial Sanitation (CS) system in Mustardinha community, Recife, Brazil, during the period 1993-2001. Partner UFPE is in charge of this case.

During this period, we completed a range of research tasks, such as the examination of materials from archives generously provided to us by members of Mustardinha Community Association. These included reports, photographic records, and other items.



Figure 9. Popular mobilization for basic sanitation, Mustardinha, Recife, September 1991. Archive of Mustardinha Community Association.

Brazil has just emerged from the long years of military dictatorship (1964-1985) and a new Constitution passed in 1988 promoted a more proactive role for local governments in the provision of essential services.

“The city of Recife has the record of diseases caused by lack of sanitation. The people and the municipality together will get the sewage into the pipe”



Figure 10. Leaflet produced by Recife Municipality to promote CS as a participative socio-technical intervention, circa 1993.

The historical materials helped us to acquire a better understanding of the context where the CS emerged as a truly innovative socio-technical intervention in the 1990s. The community was actively participating in mobilizations to demand housing and basic services, with the support of organizations ranging from progressive sectors of the Catholic Church to the Brazilian Communist Party (PCdoB).

“It is time to struggle for a place to live”



Figure 11. Leaflet produced by local social movements in Mustardinha during their campaigns for housing and basic sanitation, Recife, circa 1990.

Working together with community members in reviewing the historical process also allowed us to involve them more meaningfully in the research activities. We conducted interviews with community leaders and other members of the population.



Figure 14. Interview with Eufrásio Elias de Oliveira, community leader

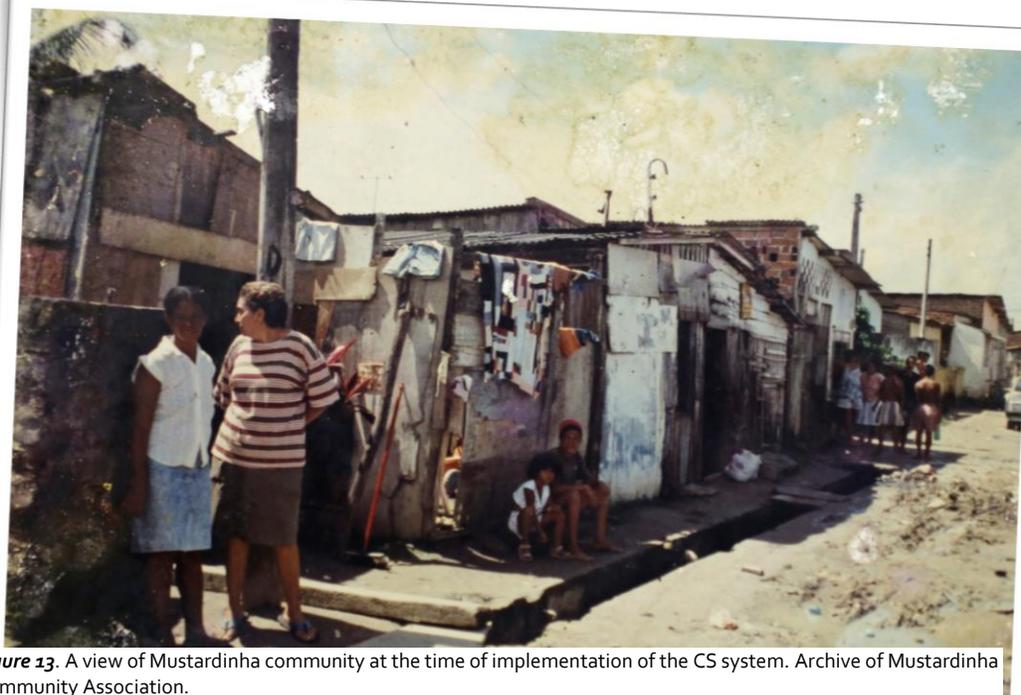


Figure 13. A view of Mustardinha community at the time of implementation of the CS system. Archive of Mustardinha Community Association.



Figure 15. Interview with Helena Josefa de Mendonça, community leader

We also interviewed officers from Recife Municipality that were in charge of the implementation of the CS system in the 1990s.



Figure 16. Interview with Maria do Socorro Cavalcanti de Souza, former Co-ordinator of the Implementation of the Condominial Sanitation System (1993-2000), Recife's Urbanization Company (URB), Municipality of Recife.

Most of these interviews are available for viewing in our [Youtube channel](#)

The Integrated Sanitation System in Recife, Brazil

Our [case study WP3.2](#) examines the socio-technical dimensions of the Integrated Sanitation (IS) system also implemented in Mustardinha community, Recife, Brazil, since 2001.

During this project period, we focused on completing the collection of primary data, particularly in-depth interviews with community members and municipality officers that were in charge of implementing the IS and the application of a questionnaire. We actively engaged community leaders in the application of the questionnaire, which proved to be a very rich experience.



Figure 17. Our research team working jointly with community leaders in the application of the questionnaire.



Figure 18. Community leaders collaborating with our research team in the application of the questionnaire.



Figure 19. Interviews with community members



Mustardinha Community Association allowed our team to use their facilities to organize several tasks of our fieldwork. We carried out many of our interviews and organized the application of the questionnaire from their office.

Most of these interviews are available for viewing in our [Youtube channel](#)

We also organized a special workshop that brought together members of the team that was in charge of the social aspects during the implementation of the IS system. Several of them participated actively in our fieldwork tasks, particularly in the application of the questionnaire.



Figure 21. Interview with Eng. Natanael Pereira Ramalho Filho, who was in charge of the implementation of the CS in the 1990s and worked as a consultant for the Municipality for the implementation of the IS system (2001-2005).



Figure 20. Special workshop with members of the team in charge of the social aspects of the implementation of the IS system.



Figure 22. Special workshop with members of the team in charge of the social aspects of the implementation of the IS system.



Figure 24. Interview with Manoel Ramos da Silva, community leader.



Figure 23. A group picture during the application of the questionnaire in Mustardinha community

Most interviews are available for viewing in our [Youtube channel](#)

Tackling extreme vulnerability in a rural community in Brazil's semi-arid region

Our [case study WP4.1](#) studies the implementation of a water treatment system in the rural community of Lagedo, in northern Minas Gerais. Partner UFMG is in charge of this case, in partnership with Brazil's National Health Foundation (FUNASA).

During this period, the research activities included a series of field visits to the community of Lagedo, meetings with community members and the design and testing of the new water treatment system for the community. As part of these activities, we invited Professor Ramon Lucas Dalsasso, a water expert from the Federal University of Santa Catarina (UFSC), to make a preliminary assessment of the potential use of bank filtration (a type of filtration that works by passing water to be purified for use as drinking water through the banks of a river) and to explain the technique to the residents of the community. We then held separate meetings with the residents of Lagedo and Riacho, with the aim to understand and adapt the water supply system to the needs of each area of the community. We also presented and discussed with the community four techniques for water treatment: bank filtration, slow filtration, coagulation and sedimentation.

Figure 25. Presentation and discussion of different water filtration systems at Lagedo Community Association



Figure 26. Moradores da comunidade votam para a escolha da técnica de tratamento a ser utilizada na comunidade

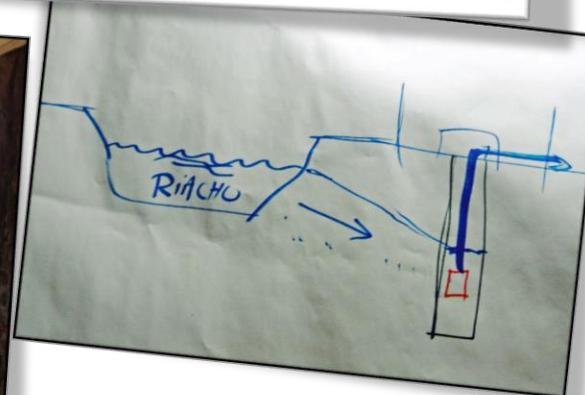


Figure 28. Schematic design used to explain the filtration techniques to the community

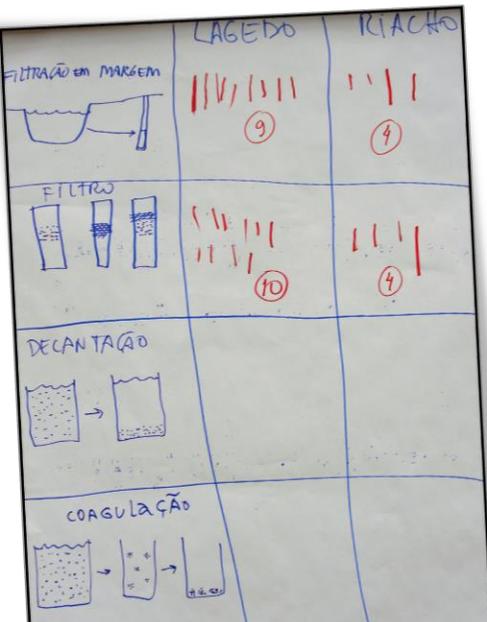


Figure 27. Residents of Lagedo and Riacho voted using this simple method to choose the water treatment technique to be employed in the community.

After a prolonged debate, the residents chose the method of bank filtration, which they considered the most suitable method given the physical and socio-cultural conditions of the community. We also conducted door-to-door visits to understand the community's knowledge of clay water filters and their potential use as an additional method for water filtration for household consumption.

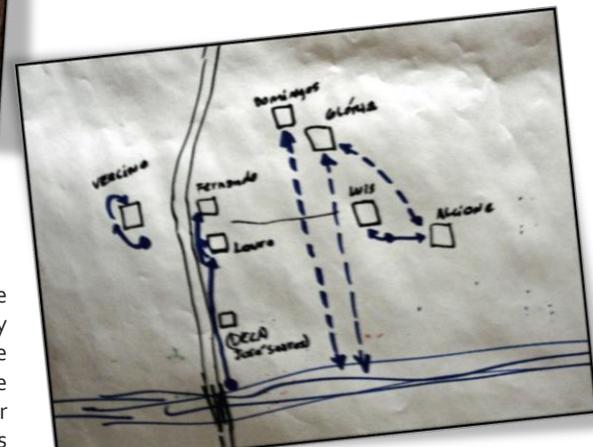


Figure 29. Participatory mapping to locate the households currently served by the community water supply system in Riacho

Near the end of 2014, we conducted the first general meeting to assess the progress of the water supply system being implemented. The meeting had the participation of the residents of Lagedo and Riacho, the Community Association of the Quilombo Jardim da Prata and some of the study's partner institutions from the civil society such as the [Centre for Documentation Eloy Ferreira da Silva \(CEDEFES\)](#) and the [Federation of Quilombola Communities of Minas Gerais \(N'Golo\)](#). The assessment employed participatory techniques such as an "evaluation matrix" for the assessment of both the technical and social aspects of the project, including the community's participation throughout the process.



Figure 30. Discussion of participatory techniques during a project evaluation meeting with the community



Figure 31. DESAFIO's team member collecting household water samples



Figure 33. DESAFIO's team member reading the "Lagedo Community Journal" to one of its residents



Figure 32. Training of community members on basic technical concepts to enhance their participation in the meetings

These activities were complemented with the production of the "Lagedo Community Journal", which contains information about the activities related to this study such as the results of the water analyses conducted each month; the correct use of clay filters; the disinfection methods applicable to the reality of the community and all issues related to the management of the community's water supply.

See the [Lagedo Community Journal](#) in our project's website

Capacity building to monitor water quality in the province of Santa Fe, Argentina

Our research team at the National University of Rosario (UNR), in Santa Fe, Argentina is responsible for this [intervention case study](#). The activities for this case during this period have included a series of meetings and joint activities with school administrators, teachers and students in the communities of San Francisco and La Chispa in the Lower Carcarañá River. We also conducted some interviews with local institutional actors and a number of fieldtrips to the Carcarañá River and surrounding areas to collect water samples.

Some of the meetings with the schools had the participation of Dr Olga Ravella, member of DESAFIO's [Strategic Advisory Committee](#), and Dr Carolina Kaufmann, member of our local [Case Study Advisory Committee](#). The discussions in these meetings centred on discussing the preliminary results of the research.



Figure 34. Local Project meeting with the participation of Dr Olga Ravella, member of DESAFIO's [Strategic Advisory Committee](#), and Dr Carolina Kaufmann, member of our local [Case Study Advisory Committee](#) for this case.

In these meetings, we also addressed the implications of three types of water-related diseases under study in our case: cholera, hepatitis A, and giardiasis, their definition, symptoms, and causes. We also discussed how DESAFIO's work might contribute to the prevention campaigns being conducted in Argentina.💧



Figure 35. Dr Martin Romagnoli, from the UNR team, working with members of the participating schools during fieldwork

Article

The SISAR model for rural sanitation management in the state of Ceará, Brazil

By Helder Cortez *

The establishment of the SISAR management model and the importance of CAGECE for rural sanitation in the state of Ceará

Between 1991 and 1995, the Government of the State of Ceará, with the support of the German State Bank KfW, decided to bring treated water and sewage collection services to the rural communities located in the northern part of the state. This was done through the rural sanitation programme Ceará I, also known as KfW I. Ceará's Water and Sanitation Company (CAGECE) acted as the executing agency and, KfW provided the funding to bring these services to 42 rural communities, in 20 municipalities of Ceará.

The communities participated in the entire process, from planning to the execution of the infrastructure works. The project, with the support of the municipalities and the Government of Ceará, provided the training needed for the communities to take control of the operation and maintenance of the systems. However, even in those cases where the users were organized through legally constituted community associations, it was not possible to ensure the successful self-management of these systems by the communities. Faced with these difficulties, it became clear that there was a need to create an organization that could share with the local associations the responsibility for the management, operation and maintenance of the systems. Thus, a working group was created to develop a management model for Rural Sanitation to be implemented in the state. The group was composed by specialist consultants, technicians from various areas of CAGECE, from the German Bank KfW, and from the state and municipal governments, with the participation of the residents of the rural communities that would become beneficiaries of the services. This is how, on 27 January 1996, the first Integrated Rural Sanitation System (SISAR), was created in the city of Sobral, Ceará.



Although until then CAGECE's had primarily focused on providing water and sanitation to the urban areas of the municipalities and districts in the state, given the company's knowhow in the area of basic sanitation and in the decentralized operation and management of the state's watersheds, it created a Rural Sanitation Management Unit, GESAR. The role of this unit is to work directly with the beneficiary communities in the elaboration of projects, the execution of infrastructure works and the management of the water supply and sewage systems in rural areas through the SISAR management model. The ultimate goal is to support the state government to achieve the universalization of access to water and sanitation in the state of Ceará. Since the creation of GESAR, CAGECE has been able to replicate the SISAR management model for rural sanitation throughout the territory of the State of Ceará. By 2013, SISAR units provided service to 1002 rural communities in 130 municipalities by means of 670 installed systems, distributing treated water to more than 4,000,000 inhabitants. SISAR has become one of the leading examples in the area of rural sanitation in Brazil.

“THE ULTIMATE GOAL IS TO SUPPORT THE STATE GOVERNMENT TO ACHIEVE THE UNIVERSALIZATION OF ACCESS TO WATER AND SANITATION IN THE STATE OF CEARÁ.”

The SISAR management model for the sustainable and quality supply of water and sanitation services in rural areas

SISAR is an organization that brings together community associations that run their own water systems and are located in the same watershed or within neighbouring watershed. SISARs are legally constituted, private, non-for-profit, federations of community associations, owning their assets, with autonomous administration, and governed by the Brazilian Civil Code.



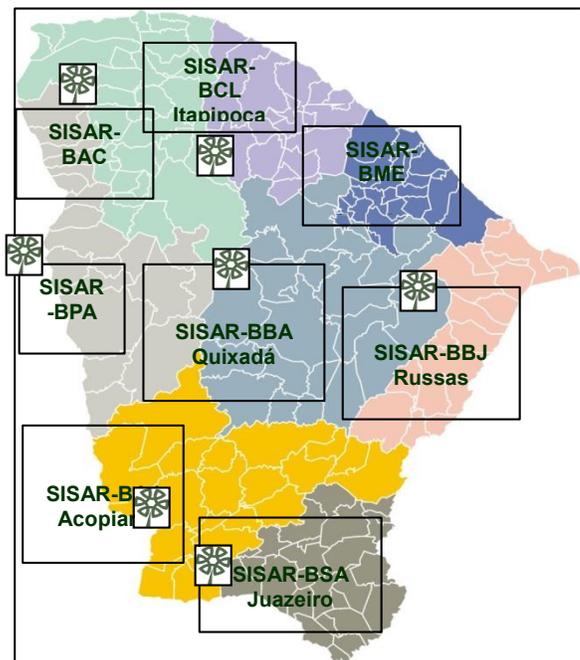
The main objective of SISAR is the shared management of water and sanitation systems jointly with community associations. The main objective is to ensure the sustainable, self-managed operation and maintenance of these systems and to help them to become self-sufficient. This model of management articulates the participation of the state, the municipality, the local association and SISAR. It is a model of shared management in which each participant plays a key role in ensuring access to treated water to the population in rural areas. This management model was created in order to accomplish what the communities find difficult to achieve on their own: the successful technical maintenance and management of the systems.

Once a SISAR is constituted, each affiliated association continues to have the responsibility for the local administration of their system, including the reading of water meters, the control and operation of the systems, the distribution of water bills, and the collection of payments and subsequent transfer of revenues to SISAR, among other activities. The innovation of this management model lies in the fact that users are simultaneously beneficiaries of the service, but are also responsible for the management of the system through the participation of the local association in the SISAR system. With this model, we move from a paternalistic, welfare-oriented, and deficit-prone situation to a simpler and workable solution. Thus, the state and the municipality can expand the provision of public water supply services in rural areas, promoting

“THE INNOVATION OF THIS MANAGEMENT MODEL LIES IN THE FACT THAT USERS ARE SIMULTANEOUSLY BENEFICIARIES OF THE SERVICE, BUT ARE ALSO RESPONSIBLE FOR THE MANAGEMENT [...]. WITH THIS MODEL, WE MOVE FROM A PATERNALISTIC, WELFARE-ORIENTED, AND DEFICIT-PRONE SITUATION TO A SIMPLER AND WORKABLE SOLUTION.”

improved health, reducing migration from rural areas, providing infrastructure for local development by improving people's living conditions and strengthening local communities. Today, the state of Ceará has eight SISARs, strategically located in different watersheds (see map below).

Location of the eight SISARs in the State of Ceará



Since the inception of the model, CAGECE has given the necessary support to each SISAR in order to settle in and get organized, encouraging them to reach self-sufficiency. Gradually, while each SISAR consolidates its economic base, CAGECE's role changes from support provider to partner that contributes with its technical and management knowhow.

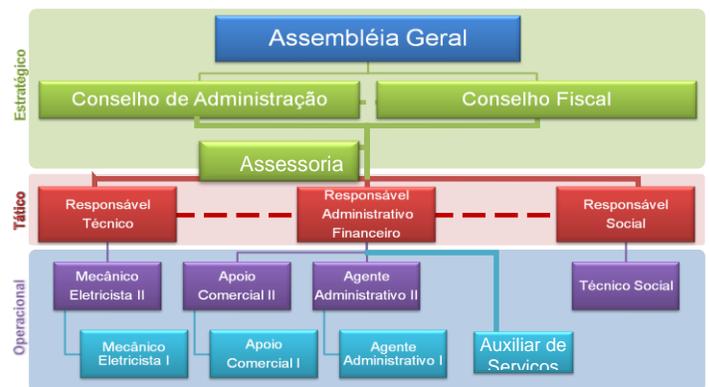
As already stated, the community, through their local association, is responsible for the administration and operation of the system. For instance, the amount of energy consumed by the system is prorated in proportion to consumption among the users, and it is displayed prominently in each water bill. In addition, although the local system operator is a volunteer, the users pay them an amount that is determined by the local association. SISAR itself only keeps the amount that corresponds to the water consumed as measured by the meter. The revenue thus collected is used by SISAR to perform the preventive and corrective maintenance of the systems, provide chemicals for water disinfection, conduct water quality analyses, organize educational campaigns, and support the local management of the system through the training of associations' members. Given that the operators of each community perform the operation of the systems, SISAR has a limited number of staff members. SISAR only requires office structure for keeping the accounts, perform maintenance, planning, and management, and training the volunteer operators in each community.

In order to become a SISAR member, an association has to express its interest to join the federation through a document called the Consultation Charter. SISAR then performs a thorough inspection by issuing a technical assessment on the conditions of the system and the legitimacy of the association. If the association does not meet the criteria, all the actions and costs necessary to make it compliant with the required standards must be specified in a document. Once an association becomes compliant with the standards, the Consultation Charter, supported by technical and social assessment reports, is presented to the SISAR Administration Board, which makes the final decision on the suitability of the community for SISAR membership.

SISAR is administered by the following bodies: a General Assembly, composed by all the representatives of the affiliated associations and a Board of Directors, consisting of eleven members: six representatives from the affiliated associations, elected at the annual general meeting for a term of three years, and five co-partaker members, one representative of the Secretariat for Water Resources (SRH), one from the Secretariat for Agrarian Development (SDA), one from the Council for Policy and Management of the Environment (CONPAM), one from GACECE and a representative of the municipalities of each relevant watershed. All these representatives have a commitment to contribute to the growth of SISAR.

These co-partaker members have a voice and vote in the board meetings and participate as collaborators answering questions and assisting affiliates in decision-making. It is noteworthy that the elected positions of the Council (President, Treasurer and Secretary) must be occupied, by mandate, by representatives of the affiliated associations. SISAR also has a Supervisory Board, responsible for the oversight of SISAR's actions, which is composed by representatives of the affiliated associations, elected by the Assembly for a term of two years, of whom three are permanent members and three act as deputies. The co-partaker members are appointed by their secretariats, while the representative of CAGECE is designated by Executive Order signed its President. The representative of the municipalities is elected at a meeting convened by SISAR for this purpose, every four years, when municipal elections take place.

GESAR provides advice and support to the eight SISARs, analysing and monitoring the technical, social and administrative-financial indicators, and with the overall objective of achieving the self-sufficiency of the systems.💧



* Manager of the Rural Sanitation Management Unit (GESAR) at [Ceará's Water and Sanitation Company \(CAGECE\)](#), one of DESAFIO's partners in Brazil.



50th Congress of the International Society of City and Regional Planners (ISOCARP), Gdynia, Poland, 23-26 September 2014

Antonella Maiello (UFRJ) participated in this congress on the theme of [Urban Transformations – Cities and Water](#). She presented a paper based on the preliminary results of DESAFIO's case study on [Assessment of Appropriate WSS Technologies in Vulnerable Communities in the Baixada Fluminense, Rio de Janeiro, Brazil](#). The paper entitled "Bridging formal and informal systems in water and sanitation governance. A socio-technical perspective" explored the questions of how public governance institutions, formally responsible for providing basic water and sanitation services, interact with community-based informal mechanisms and which are the innovations that combining social and technical requirements allow bridging these formal and the informal systems, while addressing the governance process towards water democratization.



Figure 37. Antonella Maiello, at the ISOCARP event in Poland

XVI National Meeting of the Groups and Centres Network on Juridical and Socio-juridical Research of Colombia, Pereira, Colombia, 23-24 October 2014

Esteban Castro, DESAFIO's Co-ordinator, was invited to address the event, which focused on the topic "Post-conflict in Colombia: a proposal of social reconstruction from the academy". He draw on examples from our research project to discuss the relevance of water-related inequality, injustice, and conflict as an obstacle to democratic development.



VI International Meeting of the WATERLAT-GOBACIT Network, Manizales, Caldas, Colombia, 27-31 October 2014



The meeting was focused on the topic of [Water, violence and utopias in Latin America and the Caribbean. What are the priorities for egalitarian water politics?](#)

Several members of DESAFIO participated in the event, which included a special session to present our preliminary results to the audience. Mariela García and Miguel Peña from UNIVALLE presented the case studies of [Mondomo](#) and [La Vorágine](#). Hermelinda Rocha from UFPE presented results on the [Condominial](#) and [Integrated](#) Sanitation case studies from Recife, Brazil. Léio Heller from UFMG addressed the [three case studies](#) focused on the SISAR system or rural sanitation in the state of Ceará, and on the [intervention](#) being implemented in the Quilombola communities of Lagedo and Riacho in Minas Gerais, Brazil. Ana Lúcia Britto and Suyá QuintsIr presented the case study of [Queimados](#) in Rio de Janeiro. Esteban Castro coordinated the session, and presented an overall view of the project progress and plans. The session was well attended and elicited a highly constructive discussion with the participants. We also counted with the participation of Javier Gonzaga Valencia, our member of the [Strategic Advisory Committee](#) in Colombia.



2nd Brazilian Symposium on Health and the Environment, Belo Horizonte, Brazil, 19-22 October 2014

Bárbara Passos (UFMG) presented her work at this congress organised by the Brazilian Association of Collective Health (ABRASCO). The central theme of this symposium was [Development, Territorial Conflicts and Health: Science and Social Movements for Environmental Justice in Public Policies](#). Her presentation entitled "Assessment of the effects of a sanitation intervention in the health of a rural community in the Brazilian semiarid region: a study of SISAR (Ceará)", presented the preliminary results of DESAFIO's case study on a [Community Oriented Water and Sanitation System in a Rural Community in North Eastern Brazil](#).



DESAFIO's researcher invited to be part of the Scientific Committee of Iberian-American water conference, Fortaleza, Brazil, 3-6 November 2014

Maria da Conceição Cunha, DESAFIO's coordinator at the [Marine and Environmental Research Centre at the University of Coimbra \(IMAR-UC\)](#), was invited to be part of the scientific committee of the [XIII Iberian-American Symposium on Water, Wastewater and Drainage Networks \(SEREA\)](#) that took place in Fortaleza, Brazil between 3 and 6 November 2014. The symposium centred on Iberian languages as an instrument of knowledge, science and technology.

International Seminar "Risks of Water-related Disasters: Applicability of the conceptual bases of the human and social sciences to concrete cases. Universidade Federal Fluminense (UFF), Campos dos Goytacazes, Rio de Janeiro, 18 November 2014.

Esteban Castro was invited to deliver the opening conference of the Seminar, where he addressed conceptual aspects connected with the project. He paid particular attention to issues of water-related inequality and injustice as obstacles to the process of democratization that particularly affect vulnerable communities.

AQUACOL launches its programme "Learning among equals... in rural diversity", Cali, Colombia, 26 November 2014.

This initiative is part of the Unified Capacity Building Programme (PUFC by its Spanish acronym), funded by the [Aviná Foundation](#), whose objective is to contribute to concrete and relevant changes that lead to more sustainable development in Latin America. The programme supports the institutionalization and sustainability of community management of WSS and has been successfully implemented in other countries in Latin America and the Caribbean. In Colombia, the initiative seeks to strengthen the capacities of the Community Organizations for Water and Sanitation Services affiliated to AQUACOL, one of DESAFIO's associate in the country, through training workshops focused on sharing knowledge that will improve the management of water and basic sanitation in rural areas.



Figure 38. Lunching of AQUACOL's programme "Learning among equals... in rural diversity".



Preparation meeting for the 2015 Congress of the Latin American Sociological Association (ALAS), Recife, Brazil, 21 November 2014: Perspectives of Post-development in Latin America.

Esteban Castro participated in the roundtable "Glocal powers and democracy: is it possible to do development?" He used examples from DESAFIO to illustrate the challenges facing Latin American countries to improve the living conditions of the population and the need to reassess our conventional thinking about "development" and "democracy".

OTHER ACTIVITIES

Member of DESAFIO successfully defends his Master's dissertation in France, 18 September 2014

Colin Brown, successfully defended his dissertation for the master's programme in Environmental Policies and Social Practices of the Sociology department at the [University of Toulouse II – Le Mirail](#), France. Colin developed his research alongside colleagues at the Federal University of Minas Gerais (UFMG). His dissertation entitled "Un système communautaire de la gestion de la ressource en eau: Approche sociotechnique de l'innovation" contributed to DESAFIO's

intervention case study on a [Community Oriented Water and Sanitation System in a Rural Community in North East Brazil](#).



Figure 39. : Images from Colin's defence presentation

Liaising with the communities.

The UNR team in Santa Fe, Argentina, was invited to take part in one of the schools' annual cookouts, where the all the food consumed is produced by the students themselves (this particular school has an agro-technical orientation). This illustrates the fact that our research has helped us to develop strong bonds with the schools, the teachers, the students, and their communities



Figure 40. Members of the UNR team at a local school gathering in Santa Fe, Argentina

Student internships.

Two students in the last semester of the Sociology programme at UNIVALLE have joined DESAFIO's team to do their undergraduate internship. The student Sara Isabel Bolaños worked on the systematic processing of the files of the community associations of Mondomo and La Vorágine, while Diana Morales conducted a review of local press reports on issues related to water and sanitation and environmental change in the Pance river basin.

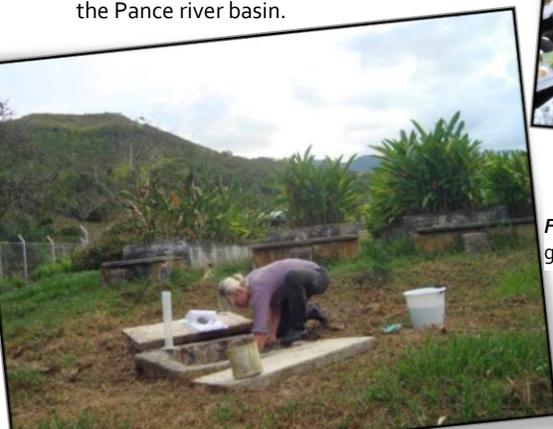


Figure 41. Dutch Students from Delft University participating in field work activities with the UNIVALLE team, Colombia.



engagement of the beneficiaries in all stages of the process, who participated in the discussions surrounding the technical, administrative and social aspects of the systems.



Figure 43. Our partner CAGECE inaugurates the water system in Cristais, Ceará



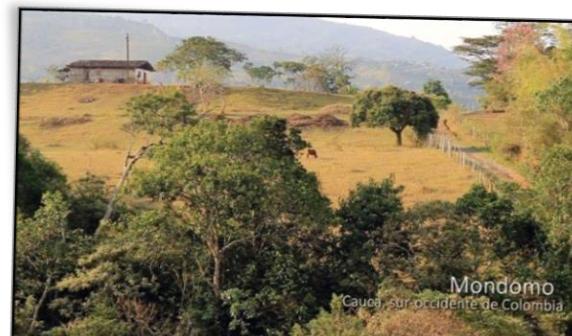
Figure 42. Meeting in Cristais community to complete the arrangements for joining the SISAR system, Ceará

The experience of Mondomo, Colombia captured on video.

Mondomo: a community, an water system. This video documents the history and processes of community management of in [Mondomo](#), one of DESAFIO's case studies in Colombia. It highlights the experiences of local residents and the leaders in charge of the community' water system. The video also documents the community's collaboration with our partner UNIVALLE within the framework of DESAFIO and the implications that this collaboration can have for the community in the longer term. The video is available on our [YouTube playlist](#).

SISAR-CAGECE inaugurates Water Supply System in the community of Cristais, Ceará, Brazil, 14 December 2014.

As part of DESAFIO's intervention case study on a [Community Oriented Water and Sanitation System in a Rural Community in North East Brazil](#), CAGECE inaugurated a water supply system in the community of Cristais. The system will be managed and operated by the community through the Integrated Rural Sanitation System, SISAR, and will provide both water and sewerage. All the 345 households in Cristais have been connected to the water supply . The water supply system was developed with the active





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