

## Cecilia SALDIAS ZAMBRANA

Av. Eudoro Galindo #1915, Cochabamba, Bolivia | Tel. +591 76920857 | Email: [cecilia.saldias@outlook.com](mailto:cecilia.saldias@outlook.com)  
[www.linkedin.com/in/cecilia-saldias-b55184a/](https://www.linkedin.com/in/cecilia-saldias-b55184a/) | [ORCID: 0000-0002-9988-4103]

### PROFESSIONAL SUMMARY

Experienced water professional with over a decade of expertise in water resources management, water, and sanitation, applying a socio-technical approach. Specializes in tackling climate change challenges and developing sustainable water management solutions. Highly skilled in conducting comprehensive research, analyzing complex data, and projects that deliver measurable impact. With extensive experience as a consultant and university lecturer, I have successfully collaborated with diverse stakeholders, driven successful projects, and contributed to both academic and professional fields through peer-reviewed publications. I am now eager to leverage my expertise to advance impactful initiatives in water management and sustainability.

### EDUCATION

- **Ph.D. in Applied Biological Sciences: Land and Water Management** | Ghent University, Belgium | 2012 – 2016  
Thesis: Analyzing the institutional challenges for the agricultural (re)use of wastewater in developing countries
- **MSc in International Land and Water Management** | Wageningen University and Research, Netherlands | 2007 – 2009  
Specialization: Irrigation and Water Management  
Thesis: Unfolding water allocation in Abanico Punata, area of influence of the Pucara watershed, Bolivia.
- **Bachelor in Civil Engineering** | University of San Simon, Bolivia | 1998 – 2007  
Specialization: Sanitary Engineering  
Degree Project: Design of the “Molle Molle” drinking water treatment plant.
- **Diploma in Higher Education Based on Competencies** | University of San Simon, Bolivia | 2022

### WORK EXPERIENCE

#### Head of Civil Engineering Program

*Universidad Privada Boliviana, Cochabamba, Bolivia | September 2024 – December 2024*

- The position involves developing and updating the academic schedule and curriculum plans, supervising students' academic performance, and coordinating activities with faculty and the Dean's Office. Additionally, it includes managing the administration of the department, including the selection and onboarding of new faculty, syllabus review, and monitoring progress in course content. The role also entails coordinating the use of classrooms and laboratories, as well as following up with new faculty or those with low performance scores. It includes activities to promote the program and academic events.

#### Consultant

*Water for People, Cochabamba, Bolivia | June 2024 – September 2024*

- Developed a climate risk profile for rural areas in eight Bolivian municipalities, focusing on water and sanitation.
- Conducted comprehensive analysis of threats, vulnerabilities, exposure, and response capacities, including risk assessment, and provided actionable recommendations for targeted interventions.

#### Consultant in Water Cycle Management

*HELVETAS Swiss Intercooperation, Tarija, Bolivia | June 2024 – May 2024*

- Provided specialized technical advice to the Water Security Project, mitigating water scarcity vulnerability in Tarija through efficient water system use and wastewater treatment.
- Coordinated with the municipal government, service operator, universities, and local communities to implement sustainable water management practices, benefiting over 50,000 residents.
- Conducted capacity-building workshops on Integrated Water Resources Management (IWRM) for local stakeholders.

#### Consultant in Water Cycle Management

*HELVETAS Swiss Intercooperation, Tarija, Bolivia | March 2024 – March 2024*

- Specialist in water cycle management for the Water Security Project in Tarija, focused on reducing water scarcity through efficient use in water systems and wastewater treatment.
- Coordinated with local institutions and facilitated dialogue among stakeholders to secure agreements and develop sustainable water management tools.

#### Team Leader and Specialist in Water and Sanitation Projects

*IMG Consulting SRL, Cochabamba, Bolivia | October 2023 – February 2024*

- Led a team in diagnosing decentralized sanitation options in Sacaba and Cochabamba municipalities, commissioned by JICA.
- Provided technical advice on water, sanitation, and wastewater management, and developed a technical guide for selecting decentralized sanitation solutions.

## **Independent Professional**

*Various Locations | April 2023 – Present*

- Specialized in developing project proposals that effectively communicate goals, objectives, and potential impacts, increasing the likelihood of securing financial support.

## **Expert in Water Cycle Management**

*HELVETAS Swiss Intercooperation, La Paz, Bolivia | January 2023 – March 2023*

- Thematic expert for the Municipal Environmental Management (GAM) project funded by the Swiss Development Cooperation, focused on enhancing the quality and efficiency of wastewater treatment services, and aligning local institutions with national environmental management policies and standards.
- Developed and executed plans to boost the operational efficiency and skills of municipal governments and service operators.
- Collaborated with local institutions to reinforce effective environmental management services.
- Facilitated collaboration and coordinated the implementation of project interventions among various stakeholders.
- Managed procurement processes, including drafting Terms of Reference, to meet project requirements.
- Organized workshops to transfer knowledge to local stakeholders, ensuring the sustainability of project outcomes.

## **Expert in Water Cycle Management**

*HELVETAS Swiss Intercooperation, La Paz, Bolivia | November 2020 – December 2022*

- Thematic expert and water cycle management specialist for two Swiss Development Cooperation -funded projects: Municipal Environmental Management (GAM) and Integrated Water Management (GIA). The GAM project enhanced the quality and efficiency of Wastewater Treatment and Integrated Solid Waste Management services and strengthened local institutions to align with national environmental policies. The GIA project supported the implementation of water and watershed public policies, and built capacities in water management for public, private, and social actors.
- Provided specialized technical advice, strategic planning, and concept development for interventions across both projects.
- Contributed to institutional strengthening and capacity development, ensuring effective environmental management and policy alignment.
- Coordinated with government bodies and key stakeholders to ensure sustainable project outcomes.
- Managed procurement processes and service contracting, including drafting Terms of Reference.
- Developed a conceptual model for WWTP management, established water security indicators for Bolivian watersheds, and contributed to the creation of resilient multifunctional landscapes.

## **Specialist in Sanitation and Water Quality**

*AIN ACTIVE BOLIVIA SRL, Cochabamba, Bolivia | September 2020 – October 2020*

- Provided technical advice for the "Implementation of the Paranturí Multipurpose Project," focusing on sanitation and water quality.

## **Specialist in Water Quality**

*IMG Consulting SRL, Cochabamba, Bolivia | August 2019 – December 2019*

- Developed a proposal for the classification of water bodies and water quality management in the Cotagaita River Basin.

## **Consultant**

*World Bank Group, La Paz, Bolivia | March 2019 – June 2019*

- Analyzed the legal framework for wastewater treatment plant effluents in Bolivia, identifying gaps and proposing solutions.

## **Consultant**

*Stockholm Environment Institute, Cochabamba, Bolivia | February 2019 – March 2019*

- Proposed solutions for improving water quality in the Rocha River Basin under climate change scenarios.

## **Consultant**

*IMG Consulting SRL, Cochabamba, Bolivia | January 2019*

- Proposed the use of wastewater from Puchukollo WWTP for agricultural irrigation in the Katari River Basin.

## **Researcher**

*Hydraulics Laboratory, University of San Simon, Cochabamba, Bolivia | March 2018 – January 2019*

- Conducted research on water use in the Maylanco river basin and coordinated the Andean Watersheds Monitoring Project.
- Developed research proposals aimed at securing funding.

## **Consultant (Civil Engineer)**

*National Electricity Company - ENDE, Cochabamba, Bolivia | March 2017 – October 2017*

- Coordinated the irrigation component of the Rositas Hydroelectric Project, reviewing and monitoring technical documents.

## **Consultant**

*Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Cochabamba, Bolivia | July 2016 – October 2016*

- Assessed wastewater treatment plants with potential for reuse in agriculture in Bolivia's arid regions.

## Researcher (PhD)

Ghent University, Belgium, and International Water Management Institute (IWMI), Various Locations | January 2012 – January 2016

- Conducted doctoral research on the institutional challenges of wastewater reuse in agriculture in developing countries.
- Published findings in peer-reviewed journals and presented at international conferences.

## Project Manager Assistant

Asociación Accidental PROGRESO, Cochabamba, Bolivia | April 2010 – December 2011

- Provided technical assistance in a civil infrastructure construction project, including cost analysis, budget control, and on-site monitoring.

## Intern

Institute of Landscape Hydrology, Leibniz-Centre for Agricultural Landscape Research (ZALF), Müncheberg, Germany | September 2008 – December 2008

- Analyzed the impact of water management options in cultivated wetlands in Northeast Germany as part of a climate change adaptation project: Global Change Impacts on the Water Cycle in the Elbe River Basin.

## Technical Manager Assistant

Empresa Misicuni, Cochabamba, Bolivia | November 2006 – August 2007

- Assisted in the design, budgeting, and review of technical documents for civil engineering projects within the Multipurpose Misicuni Project, which aimed to provide water for the city of Cochabamba.

## TEACHING EXPERIENCE

### Lecturer

HELVETAS Swiss Intercooperation, La Paz, Bolivia | September 2023

- Delivered postgraduate-level lectures on “Water Security in Cities” as part of the capacity-building efforts for the Core Urban Project’s Continuing Education Program, funded by Helvetas Swiss Intercooperation.

### Lecturer

University of San Francisco Xavier of Chuquisaca, Sucre, Bolivia | February 2022 – March 2022

- Taught a postgraduate course on “Integrated Water Resources Management and Watershed Management” as part of the capacity-building initiative for the Integrated Water Management (GIA) project, funded by the Swiss Development Cooperation.

### Lecturer

Universidad Privada Boliviana, Cochabamba, Bolivia | April 2019 – April 2024

- Taught undergraduate courses in Sanitary Engineering for Civil Engineering students, focusing on the design of drinking water and sewage systems, as well as wastewater treatment. Provided students with practical knowledge and hands-on experience in system design, ensuring they are well-equipped to address real-world challenges in water and sanitation engineering.

## SKILLS

### Academic and research skills

- Research Methodology: Led research projects, including experimental design and data analysis, such as my Ph.D. work on wastewater reuse, resulting in multiple peer-reviewed publications.
- Data Analysis: Applied SPSS and Nlogit in water management studies, providing actionable insights for stakeholders.
- Academic Writing: Published peer-reviewed articles and presented at international conferences, influencing discussions on sustainable water management.

### Project management skills

- Planning and organization: Managed multi-phase projects like the Municipal Environmental Management (GAM) in Bolivia, ensuring on-time and within-budget delivery.
- Team leadership: Led a team in implementing sanitation solutions in Bolivian municipalities, improving local services.
- Stakeholder engagement: Coordinated with government bodies and local actors to ensure successful project outcomes.

### Technical skills

- Proficient in Microsoft Office (Word, Excel, PowerPoint)
- AutoCAD, SPSS, Nlogit (statistics and econometrics)
- Information and Communication Technologies (ICT) for education, collaborative work, research, and resource management (EndNote; Mendeley).

## LANGUAGES

- Spanish: Native
- English: Full professional competency
- French: Intermediate competency (DELF B2)
- German: Basic competency (Deutsches Sprachdiplom, Erste Stufe)

## PUBLICATIONS

### Peer-Reviewed Journal Articles

- Lima-Quispe, N., Coleoni, C., Rincón, W., Gutierrez, Z., Zubieta, F., Nuñez, S., Iriarte, J., Saldías, C., Purkey, D., Escobar, M., & Angarita, H. (2021). Delving into the Divisive Waters of River Basin Planning in Bolivia: A Case Study in the Cochabamba Valley. *Water*, 13, 190. <https://doi.org/10.3390/w13020190>
- Saldías, C., Speelman, S., Drechsel, P., & Van Huylbroeck, G. (2017). A livelihood in a risky environment: Farmers' preferences for irrigation with wastewater in Hyderabad, India. *Ambio*, 46(3), 347-360.
- Saldías, C., Speelman, S., Van Huylbroeck, G., & Vink, N. (2016). Understanding farmers' preferences for wastewater reuse frameworks in agricultural irrigation: lessons from a choice experiment in the Western Cape, South Africa. *Water SA*, 42(1), 26-37.
- Saldías, C., Speelman, S., van Koppen, B., & Van Huylbroeck, G. (2016). Institutional arrangements for the use of treated effluent in irrigation, Western Cape, South Africa. *International Journal of Water Resources Development*, 32(2), 203-218.
- Saldías, C., Speelman, S., Amerasinghe, P., & Van Huylbroeck, G. (2015). Institutional and policy analysis of wastewater (re)use for agriculture: case study Hyderabad, India. *Water Science & Technology*, 72(2), 322-331.
- Saldías, C., Speelman, S., & Van Huylbroeck, G. (2013). Access to Irrigation Water and Distribution of Water Rights in the Abanico Punata, Bolivia. *Society & Natural Resources*, 26(9): 1008-1021.
- Saldías, C., Boelens, R., Wegerich, K., & Speelman, S. (2012). Losing the watershed focus: a look at complex community-managed irrigation systems in Bolivia. *Water International*, 37(7): 744-759.
- Saldías, C., Speelman, S., & Van Huylbroeck, G. (2011). A source of conflict? Distribution of water rights in Abanico Punata, Bolivia. *WIT Transactions on Ecology and the Environment*, 145, 473-484.

### Book Chapters

- Saldías Zambrana, C., Boelens, R., Wegerich, K., & Speelman, S. (2017). Losing the watershed focus: a look at complex community-managed irrigation systems in Bolivia. In: R. Boelens, B. Crow, J. Hoogesteger, F. Lu, E. Swyngedouw, & J. Vos (Eds.), *Hydrosocial territories and water equity: theory, governance, and sites of struggle* (pp. 81–96). London, UK: Routledge.
- Speelman, S. & Saldías, C. (2014). Institutional settings for wastewater use in agriculture. In M. Falque & H. Lamotte. (Eds.). *Agriculture and Forestry: Property rights, economics and environment* (pp. 155-163). Bruylant.

### Other Publications

- Saldías, C. (2023). Town twinning process from the experience in water and environmental management. HELVETAS Swiss Intercooperation. [Link](<https://bit.ly/40mgvW5>)
- Saldías, C., & Kappeler, A. (2023). Management based on minimum standards: Wastewater Treatment Plants Conceptual model. HELVETAS Swiss Intercooperation. [Link](<https://bit.ly/40lyaeA>)
- Saldías, C., & Lemus, E. (2023). Development of capacities in service provider entities EPSA and EMA. HELVETAS Swiss Intercooperation. [Link](<https://bit.ly/3FXEpDd>)
- Saldías, C. (2017). Wastewater reuse for agriculture: business as usual or need for more integrity? Water Integrity Network. [Link](<http://www.waterintegritynetwork.net/2017/09/29/wastewater-reuse-agriculture-business-usual-need-integrity/>)

## CONFERENCES AND PROCEEDINGS

- Saldías, C. (2023). Comprehensive Wastewater Reclamation: Innovation to Address the Water Crisis. Presented at the Departmental Summit on Water, Sanitation, and Water Resource Management, Cochabamba, Bolivia, September 28-29, 2023.
- Saldías, C. (2022). Wastewater management models for intermediate municipalities, challenges, and experiences in the reuse of wastewater in Bolivia. Presented at the VI Latin American and Caribbean Sanitation Conference, Cochabamba, Bolivia, October 11-13, 2022.
- Saldías, C., Laca, F., Sotomayor, M., & Mazariegos, H. (2022). Strengthening of public policies and institutions for resilient management of water and sanitation services. Presented at the VI Latin American and Caribbean Sanitation Conference, Cochabamba, Bolivia, October 11-13, 2022.
- Saldías, C. (2018). "In Cloaca Veritas": Main problems of WWTPs in Cochabamba, Bolivia, and its potential for reuse in crop irrigation. Presented at the XVII Bolivarian Congress of Sanitary and Environmental Engineering "Equity and sustainable development in the management of water resources and the environment", Cochabamba, Bolivia, August 29-31, 2018.
- Saldías, C., Speelman, S., & Van Huylbroeck, G. (2015). Revealing the preferences of farmers for a framework to use treated effluent in irrigation: case study Western Cape, South Africa. Presented at the IWRA World Water Congress XV, Edinburgh, Scotland, May 25-29, 2015.
- Saldías, C., Speelman, S., & Van Huylbroeck, G. (2015). "If opportunity doesn't knock, build a door" The trajectory of a successful story of formal use of treated effluent in Western Cape Province, South Africa. Presented at the Dresden Nexus Conference (DNC) 2015, Dresden, Germany, March 25-27, 2015.
- Saldías, C., Speelman, S., Amerasinghe, P., & Van Huylbroeck, G. (2014). Institutional and policy analysis of wastewater (re)use for agriculture: case study Hyderabad, India. Paper presented at the IWA World Water Congress & Exhibition, Lisbon, Portugal, September 21-26, 2014.

- Saldías, C., Speelman, S., & Van Huylenbroeck, G. (2013). "A sewer is a cynic. It tells all": Preferences for agricultural wastewater (re)use among farmers in Hyderabad, India. Paper presented at the 7th Belgian Environmental Economics Day (BEED), Hasselt, Belgium, December 13, 2013.
- Saldías, C., Speelman, S., & Van Huylenbroeck, G. (2011). A source of conflict? Distribution of water rights in Abanico Punata, Bolivia. Paper presented at the Water Resources Management VI, Riverside California, May 23-25, 2011. WIT Transactions on Ecology and the Environment, 145, 473-484.

#### RELEVANT ACTIVITIES

- Supervisor and reviewer of undergraduate and postgraduate thesis projects at Universidad Privada Boliviana.
- Active member of the Technical Standardization Committee CTN 6.4 on Water Quality at IBNORCA, contributing to the development and adoption of regulations.
- **References available upon request.**