



International Training School 2026



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Flowing Towards Uncertainty **@ddressing Land Use and Climate Change** **in Andean River Systems**

28.11.2026 - 05.12.2026
Bogotá, Colombia

Supported by:



| Background

Land-use change, climate variability, and increasing pressure on natural resources are transforming tropical Andean ecosystems at an unprecedented rate. Addressing these complex challenges requires interdisciplinary approaches that connect environmental sciences, engineering, economics, governance, and society.

The SDG^{nexus} Network International Training School 2026 offers an intensive interdisciplinary learning experience exploring the water-land-climate nexus in the Tropical Andes. Through lectures, hands-on workshops, collaborative projects, and field activities, participants will bridge physical and social sciences—from hydrological monitoring, modelling, and remote sensing to economic policy, governance, and socio-environmental conflicts—to develop evidence-based solutions for sustainable water and land management under climate uncertainty.

Organized by the SDG^{nexus} Network in collaboration with Justus Liebig University Giessen, Universidad de los Andes, Universidad Nacional de Colombia, Universidad de Cuenca, and CAPAZ, the programme brings together Master's students, PhD candidates, and professionals from across Latin America to learn from leading experts while building an international network committed to the sustainable future of tropical mountain regions.

| Quick Facts

DATES A Blended Learning Experience 28.11.2026 – 05.12.2026 + virtual preface (5 online lectures) 20.08.2026 - 03.09.2026	LOCATION Bogotá, Colombia	BACKGROUND Environmental sciences, engineering, economics, political science, law or similar
TARGET GROUP Master's and PhD students, and professionals from NGOs and the public sector	LANGUAGE Spanish English (B2) to understand reading materials provided	WHY JOIN? Interdisciplinary learning, Hands-on workshops, International networking, Field experience, Group project



**APPLY by
July 31, 2026**

No participation or application fees.
Funding is available for those
selected for the in-person phase.

**Application
Platform**

| Thematic Areas

From Monitoring to Hydrological Modelling of Tropical Andean Catchments

Introduces the hydrological and ecohydrological processes that govern tropical Andean watersheds. Participants will learn about field monitoring techniques, environmental data collection, and hydrological modeling approaches used to understand water quantity, quality, and ecosystem dynamics. Through lectures and practical examples, the module highlights the integration of monitoring data and modeling tools for sustainable water resource management.

Effects of Climate Variability & Climate Change on Sustainable Water Resources Management

Explores how climate variability and climate change affect water availability and sustainable water resource management in Andean river basins. The topic considers major climate drivers, hydrometeorological data, climate scenarios, and modern analytical tools—including remote sensing, machine learning, and spatial analysis—to assess climate impacts and support adaptive water management strategies.

Remote Sensing of Urban Land-Use Change and Wetland Dynamics

Introduces participants to the use of remote sensing and geospatial analysis for monitoring urban land-use change and wetland dynamics. Through lectures and hands-on exercises, participants will analyze historical spatial data to assess urban expansion, wetland transformation, and ecosystem change, highlighting the role of geospatial technologies in supporting sustainable water management and evidence-based urban planning.

Economic Policy Instruments for Water Resources Management

Explores economic policy instruments for the sustainable management of water resources in tropical Andean river basins. The topic also covers regulatory, market-based, and governance approaches, including payment for ecosystem services (PES). The participants will learn how to evaluate and design policy instruments that promote efficient, equitable, and resilient water resource management under conditions of environmental and climate uncertainty.

Extractivism, Socio-Environmental Conflicts, and Environmental Peace: Theoretical-Conceptual Reflections

Introduces key concepts from environmental issues and their relationships with economic, political, and social dynamics to an interdisciplinary audience. It discusses various proposed definitions and their connections to broader theoretical debates within the social sciences—such as political economy, peace and conflict studies, social inequalities, and the role of the state.

| Structure

The school is organized in a two-phase format that maximizes high-impact interaction and field-based learning. On a first virtual phase, participants will be introduced to the five thematic areas described below, ensuring a common scientific language before we meet in person. Afterwards, participants will have the opportunity to work together in small groups (remotely) on a specific problem to address, which they will present on the first day of the in-person phase of the school in Bogotá, Colombia. In this second phase, participants will also engage in lectures from international academics and practitioners, work on interdisciplinary projects under expert supervision, participate in a field trip about Andean river systems, and present the results of their projects to an expert panel.

| Online Lectures

Day	Time (COT)	Topic
Thursday, 20.08.2026	06:30 - 08:00	Effects of Climate Variability and Climate Change on Sustainable Water Resources Management
Tuesday, 25.08.2026	06:30 - 08:00	Remote Sensing of Urban Land-Use Change and Wetland Dynamics
Thursday, 27.08.2026	17:00 - 18:30	Market failures and the viability of markets for managing natural resources
Tuesday, 01.09.2026	18:30 - 20:00	Extractivism, Socio-Environmental Conflicts, and Environmental Peace: Theoretical-Conceptual Reflections
Thursday, 03.09.2026	17:00 - 18:30	From Monitoring to Hydrological Modelling of Tropical Andean Catchments

| In-Person Lectures

Period	Topic
Friday, 27.11.2026	Arrival of Participants
Saturday, 28.11.2026	Opening Session, Preparation Field Trip, Introductory Group Presentations
Sunday, 29.11.2026	Field Excursion: Bogotá River Basin
Monday, 30.11.2026 - Friday, 04.12.2026	Thematic Modules, Practical Sessions & Workshops
Saturday, 05.12.2026	Final Group Project Presentations & Conclusion
Sunday, 06.12.2026	Departure of Participants

| Field Trip

Participants will visit the upper Bogotá River Basin to explore the challenges of water pollution and watershed management in a developing-country context, reflecting on the risks to public health and ecosystems. Through hands-on field measurements of water quality and streamflow, they will learn how to assess river health, identify pollution sources, and discuss innovative, nature-based solutions for sustainable water management. The excursion also includes a creative environmental activity that encourages participants to reflect on the ecological and societal importance of healthy river systems. The field trip aims to raise awareness about water pollution issues in developing countries and the urgent need to generate creative, transformative solutions at the territorial and community levels.

| Who should Apply

Master Student and PhD candidates, NGOs practitioners, public sector and institutions in Latin America with an academic background in environmental sciences, economics, political science, law or similar.

| How to Apply

Submit your application including your professional and academic background, motivation, professional goals, and your chosen topic of expertise. You will need a short (max. 2 pages) CV and a letter from your institution approving your participation and confirming your availability for all scheduled dates of both the online and in-person phases. Around 50 candidates will be shortlisted and will participate in the first phase of the school (online). Afterwards, only 30 participants will be selected based on active participation and evaluation of a small assignment. Those will be invited to attend in person to the second phase of the School in Bogotá.

**Participation is free of charge and there are no application fees.
Funding is available for those selected for the in-person phase.**

**APPLY by
July 31, 2026**



**Application
Platform**

| Experts

- Dr. Luis Alejandro Camacho, Universidad de Los Andes
- Dr. Liliana Castillo, Universidad Nacional de Colombia
- Dr. Rolando Célleri, Universidad de Cuenca
- Dr. Alicia Correa, SDG^{nexus} Network, Justus Liebig University
- Dr. Yanet Díaz-Esteban, Justus Liebig University
- Dr. Jesús Efrén, Universidad Nacional de Colombia
- Dr. André Große-Stoltenberg, Justus Liebig University
- Dr. Iván Lizarazo, Universidad Nacional de Colombia
- Dr. Jorge Maldonado, Universidad de Los Andes
- Dr. Jorge Montero, Universidad de Los Andes
- Dr. Juan Pesantez, Universidad de Cuenca
- Dr. Stefan Peters, Instituto CAPAZ
- Dr. Björn Weeser, SDG^{nexus} Network, Justus Liebig University

| Get in Touch

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Organized by:



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