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## IKI News Brazil Newsletter



### News from IKI projects in Brazil

A service provided by the Climate Policy Programme Brazil (PoMuC)

### Welcome!

In this first edition of the year, we have once again gathered several updates from Brazil's IKI projects. We, the Climate Policy Programme Brazil (PoMuC) team, are happy to report that we promoted a climate education workshop with children from CEF Dr. Zilda Arns School in Itapoã/Brasília. We had a lot of fun with the kids and were impressed by their ideas for local climate change solutions.

This edition is also a moment to say goodbye. The bilateral IKI project Climate Neutral Alternative Fuels (ProQR) concludes its activities, leaving behind an important legacy for clean aviation. For over six years, ProQR's cooperation with the government, academia, and the private sector has contributed to reducing carbon emissions in aviation, aiming to make Sustainable Aviation Fuels a reality in Brazil and the world.

In the area of adaptation, we bring you study results on climate risks and adaptation measures for port infrastructure, presented by the Supporting Brazil in the Implementation of its National Agenda for Climate Change Adaptation (ProAdapta) project. ProAdapta also joined forces with the Viva Água Movement to launch a video to raise awareness about climate change among local business owners. Don't miss it and if you like it, share it with a friend!

Contributions from projects working in the areas of climate finance and sustainable urban development include a series of videos to demonstrate how to incorporate climate change into low-carbon sectoral policy processes, launched by the Strengthening the Implementation of National Climate Policy (SNAPFI) project. Furthermore, IKI's Support for the Brazilian National Agenda for Sustainable Urban Development (ANDUS) project informs us about their event on promoting sustainable development in the cities of the Amazon region.

We wish everyone an excellent reading!

PoMuC Team



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#### FUTURE EVENTS

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## PROJECT NEWS

# MITIGATION

## Educational climate change workshop for children in Brasília

from Nathalia Rezende, [PoMuC](#) project



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In celebration of the National Day of Climate Change Awareness in Brazil, the team of IKI's Climate Policy Programme (PoMuC) promoted an educational workshop on climate change with students from the CEF Dra. Zilda Arns elementary school in Itapoã (Federal District). The students

participated in an interactive class about the causes and consequences of climate change. The main objective of the event was to raise awareness on possible solutions to face climate-related problems. Reflecting about their own realities, the class came up with local solutions which are able to contribute to a more climate-friendly and just future. In the afternoon the participants had the opportunity to experience a graffiti workshop to address the subject in a creative and fun way.

## Sustainable Aviation Fuels in Brazil - a success story

from [ProQR](#) project



© Soninha Vil / GIZ Brazil

After a fruitful journey, the bilateral IKI project Climate Neutral Alternative Fuels (ProQR) comes to an end. To capture the legacy of the project, an article which recalls the main impacts achieved for the mitigation of carbon emissions in aviation was published. For almost six years ProQR joint forces with stakeholders from the government, academia and the private sector to make Brazil a protagonist in the search for net zero solutions. Through the promotion of Sustainable Aviation Fuels (SAF) produced by Power-to-Liquid technology, ProQR contributed to making clean aviation a reality in Brazil.

### More information

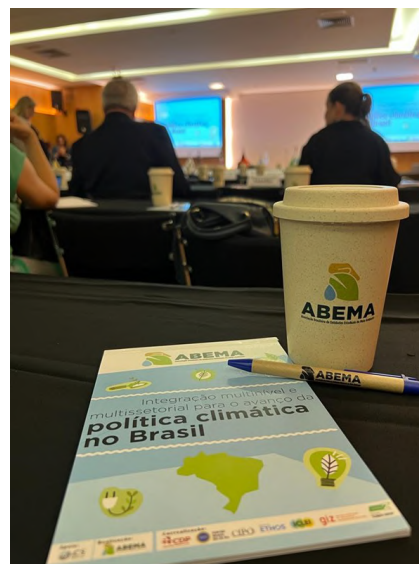
» [The impacts of ProQR for the promotion of Sustainable Aviation Fuels in Brazil \(EN\)](#)

## Multilevel and multisectoral integration of Brazil's climate policy

from [Vitória Souza](#), [PoMuC](#) project

Federal, state, and local governments, as well as civil society and the private sector are essential for the formulation and implementation of climate change adaptation and mitigation policies. With this in mind, the bilateral IKI project Climate Policy Programme Brazil (PoMuC) and the Brazilian Association of State Environmental Entities (Abema) held the event "Multilevel and multisectoral integration in advancing Brazil's climate policy". It promoted dialogues on governance perspectives

with national and international authorities such as Marina Silva - the Minister of Environment and Climate Change, Luciana Santos - the Minister of Science, Technology and Innovation, Carlos Fávaro - the Minister of Agriculture and Livestock, Ignacio Ibáñez - the European Union Ambassador, Friederike Sabiel - Counsellor for Environmental Affairs at the German Embassy, and Renato Casagrande - the Governor of the state of Espírito Santo. The event was supported by the Climate and Society Institute, the CIPÓ Platform, CDP Latin America, the Ethos Institute, ICLEI, the Brazilian Climate Center and the Under 2 Coalition.



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### More Information

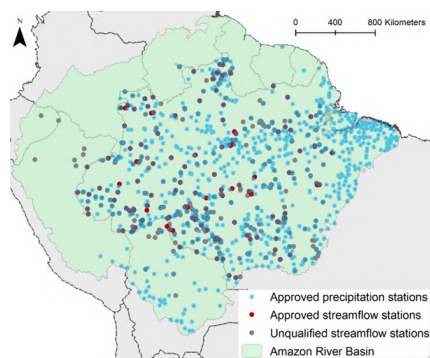
- » [Video: Brazil's climate policy \(PT\)](#)
- » [Article: Tocantins participates in an event to integrate the states to advance Brazil's climate policies \(PT\)](#)



## ADAPTATION

### Research to understand the water-food-energy nexus in Brazil

from [Gabriela Chiquito Gesualdo](#), [Carlos Antonio Fernandez Palomino](#) and [Eduardo Mario Mendiondo](#), B-EPICC project



© Gabriela Chiquito Gesualdo, Carlos Antonio Fernandez Palomino and Eduardo Mario Mendiondo

Strengthening its collaboration with local organizations, the global IKI project Brazil East Africa Peru India Climate Capacities (B-EPICC), in partnership with Gabriela Gesualdo, a PhD candidate at the University of São Paulo, is working to collect, verify, and fill gaps in hydro-meteorological data, with a focus on the Amazon River Basin (ARB). The preliminary data quality control process involves selecting stations with at least an 8-year record between 1980 and 2022 while excluding those with over 30% missing values. As a result, the study identified 895 precipitation and 116 streamflow stations in the ARB. The findings contribute to research on the water-food-energy nexus in Brazil.

### Are companies prepared for the challenges of climate change?

from [Luciana Mara Alves](#), ProAdapta project



© MVA / ProAdapta

The awareness of individuals and organisations about climate change impacts is the theme of a new video, titled "Are companies prepared for the challenges of climate change?". It presents the Viva Água Miringuava Movement and seeks to raise awareness among local business owners to actively engage with the issue. Released in January, the video features footage from an event held in September 2022. It focused on the Movements business sector and the partnership between the bilateral IKI project Supporting Brazil in the Implementation of its National Agenda for Climate Change Adaptation (ProAdapta) and the Boticário Group Foundation. The video aims to contribute to a better understanding of the importance of the Movement as collective action and territorial performance in the search for greater water security and climate resilience. The Movement has the objective to use Nature-Based Solutions to ensure water security and adaptation to climate change in the Miringuava River watershed in the region of São José dos Pinhais (Paraná).

#### More information

» [Video: Are companies prepared for the challenges of climate change? \(PT\)](#)

## Climate risks and adaptation measures for port infrastructure

from [Eduarda Freitas](#), [ProAdapta](#) e [CSI](#) project



© Luciana Alves

As a result of a survey study on climate risks, adaptation measures were presented for three important Brazilian ports - Santos in São Paulo, Rio Grande in Rio Grande do Sul, and Aratu in Bahia. Representatives from the Port Authorities were present and highlighted the importance of these results and the use of other tools presented for improving risk management. The study is a result of a partnership between IKI's ProAdapta and the Enhancing Climate Services for Infrastructure Investment (CSI) projects with the National Waterway Transportation Agency (ANTAQ).

During the event, ANTAQ emphasised the importance of the partnership with the IKI projects in order to raise awareness and develop the port sector capacity for climate risk management and adaptation.

#### More information



## CLIMATE FINANCE

### Incorporating climate change into low-carbon sectoral policy processes

from [Camila Yamahaki](#), SNAPFI project



© FGVces

A series of videos presenting the results of the study "Cabotage navigation in Brazil: an analysis of the legislative process of statute No. 14.301/2022 ("BR do Mar") using Kingdon's Multiple Streams Framework" was released by the Center for Sustainability Studies (FGVces) in February. The study analyses how low-carbon sectoral policy processes can incorporate the issue of climate change and how international organisations can contribute to public policy processes in emerging markets. Other studies are being developed by FGVces on low-carbon transport infrastructure in the context of the global IKI project Strengthening the Implementation of National Climate Policy (SNAPFI).

#### More information

» [Videos: Cabotage navigation in Brazil - an analysis of the legislative process of statute No. 14.301/2022 \(PT\)](#)



## SUSTAINABLE URBAN DEVELOPMENT

### Territorial planning of Amazonian cities

from [Matheus Maia](#), ANDUS project



© Agência Belém / Belém City Government

The "Local Master Plans in Amazonian cities" seminar took place in the city of Belém, in Pará, on the 9th and 10th of February. It aimed at discussing and contemplating sustainable development in the cities of the region. In addition to a political meeting and a technical visit in Belém, a participatory workshop was held, in which the "Guide for the Revision and Development of Master Plans" was presented. The seminar was promoted by the Belém City Government, through the Local Planning and Management Secretariat, and by the IKI Support for the Brazilian National Agenda for Sustainable Urban Development (ANDUS) and the Sustainable Urban Development (DUS) projects. The Government of the city of Pará, the National Front of Mayors, the Fortaleza City Government, the Brazilian Network of Planning Institutes and WRI Brazil are also partners in these initiatives.

#### More information

» [Article: Brazil-Germany Cooperation promotes a seminar to discuss the territorial planning of Amazonian cities \(PT\)](#)

## Video launch about Nature-based Solutions in Campinas, Londrina, Belo Horizonte and Contagem

from [INTERACT- Bio](#) project



© Marcos Bruvic

As a way of sharing good experiences and sensitizing public managers, as well as the population about the importance of finding solutions to urban problems, that are based in nature, ICLEI South America launched a series of five videos on initiatives that were implemented in three Metropolitan Regions, and selected to participate in the IKI project INTERACT- Bio. The cities of Campinas in São Paulo, Londrina in Paraná, Belo Horizonte and Contagem in Minas Gerais were awarded with Nature-based Solutions (NbS)

demo projects. The initiatives, implemented by ICLEI in partnership with city halls and local supporters, form the plot of educational videos, available in Portuguese and subtitled in English. The

videos feature testimonies from specialists, public managers and partners involved with the implementation of the projects.

### More information

» [Article and videos: ICLEI launches videos with experiences of Nature-based Solutions.\(EN\)](#)



## FUTURE EVENTS

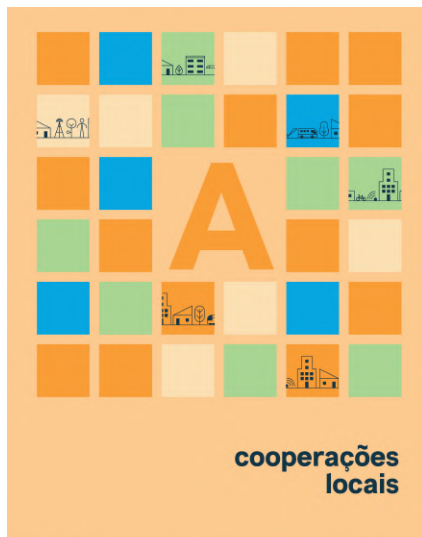
### ■ 18-20 April: PIEVC Global Forum on Climate Risk and Vulnerability Assessment for Infrastructure

Organized by: Enhancing Climate Services for Infrastructure Investment (CSI)

Location: [Online](#)



## PUBLICATIONS



[Local Cooperation, Environmental Agenda, Participatory Processes, National Urban Development Agendas \(PT\)](#)  
ANDUS project, 2023

It is important to strengthen and transmit the knowledge produced throughout the implementation of the bilateral IKI project ANDUS. Therefore, a series of publications was produced, written in an inclusive language. Its content is primarily aimed at guiding decision-makers, city governments, and/or local departments. There are four volumes that bring together journals and studies produced during the project on Local Cooperation, Environmental Agenda, Participatory Processes and National Urban Development Agendas.



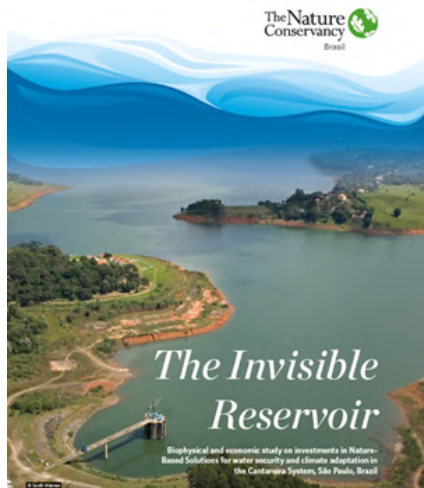
© ANDUS / GIZ Brazil

### [The Invisible Reservoir \(EN\)](#)

[Samuel Barrêto](#) and [Cláudio Klemz](#), 03/2023

The Invisible Reservoir is a complex study that deployed environmental models to explore the forest-water nexus. It suggests that Nature-based Solutions (NbS) can result in an increase of up to 33% in hydrologic components such as soil water and groundwater. NbS investments also mitigate the economic impacts of drought. This report instigates decision-makers to accept implied uncertainty as part of the challenge of designing policies aimed at climate adaptation and far-looking water security. It was elaborated by specialists from TNC and SESYNC/University of Maryland and supported by the IKI project Water Funds: A Sustainable Climate Adaptation and Resilient Model for Stressed Urban Watersheds in Latin America and the Caribbean and the Inter-American Development Bank (IDB).

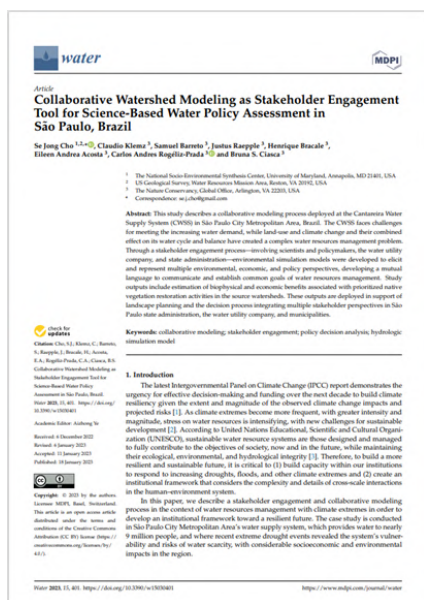




© TNC

### Collaborative Watershed Modeling as Stakeholder Engagement Tool for Science-Based Water Policy Assessment in São Paulo, Brazil (EN)

Se Jong Cho et al., 01/2023



© MDPI

This study describes a collaborative modeling process deployed at the Cantareira Water Supply System (CWSS) in São Paulo City Metropolitan Area, Brazil. The CWSS faces challenges for meeting the increasing water demand, while land-use and climate change and their combined effect on its water cycle and balance have created a complex water resources management problem. Through a stakeholder engagement process involving scientists and policymakers, the water utility company, and state administration—environmental simulation models were developed to elicit and represent multiple environmental, economic, and policy perspectives, developing a mutual language to communicate and establish common goals of water resources management. Study outputs include estimation of biophysical and economic benefits associated with prioritized native vegetation restoration activities in the source watersheds. These outputs are deployed in support of landscape planning and the decision process integrating multiple stakeholder perspectives in São Paulo state administration, the water utility company, and municipalities.

**Keywords:** collaborative modeling; stakeholder engagement; policy decision analysis; hydrologic simulation model

**1. Introduction**

The latest Intergovernmental Panel on Climate Change (IPCC) report demonstrates the urgency for effective decision-making and funding over the next decades to build climate resilience given the extent and magnitude of the observed climate change impacts and projected risks [1]. As climate extremes become more frequent, with greater intensity and magnitude, stress on water resources is intensifying, with new challenges for sustainable development [2]. According to United Nations Educational, Scientific and Cultural Organization (UNESCO), sustainable water resource systems are those designed and managed to fully contribute to the objectives of society, now and in the future, while maintaining their ecological, environmental, and hydrological integrity [3]. Therefore, to build a more resilient and sustainable future, it is critical to (1) build capacity within our institutions to respond to increasing droughts, floods, and other climate extremes and (2) create an institutional framework that considers the complexity and details of cross-scale interactions in the human-environmental system.

In this paper, we describe a stakeholder engagement and collaborative modeling process in the context of water resources management with climate extremes in order to develop an institutional framework toward a resilient future. The case study is conducted in São Paulo City Metropolitan Area's water supply system, which provides water to nearly 9 million people, and where recent extreme drought events revealed the system's vulnerability and risks of water scarcity, with considerable socioeconomic and environmental impacts in the region.

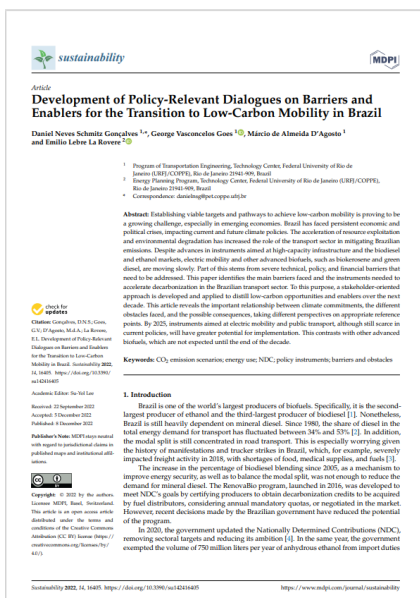
### Biophysical Benefits Simulation Modeling Framework for Investments in Nature-Based Solutions in São Paulo, Brazil Water Supply System (EN)

Eileen Andrea Acosta et al., 02/2023

In order to understand the hydrological impacts of the nature-based solutions in the Cantareira Water Supply System, this study evaluates six different land cover and land use change scenarios. The first and second consider the restoration of native vegetation in riparian areas, the third prioritizes restoration sites using biophysical characteristics, the fourth considers best management practices and the fifth and sixth are hypothetical extreme scenarios converting all pasture to forest and vice versa. Two hydrological models were developed to represent the distributions of water and yields in



the study watershed: HEC-HMS and SWAT. This study was supported by the IKI project Water Funds.

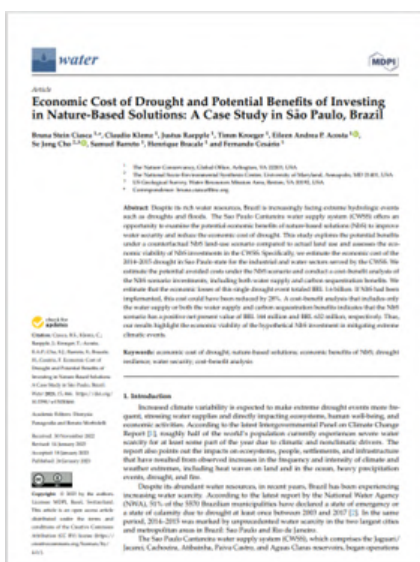


## Development of Policy-Relevant Dialogues on Barriers and Enablers for the Transition to Low-Carbon Mobility in Brazil (EN)

Daniel Neves Schmitz Gonçalves et al., 12/2022

This paper identifies the main barriers faced and the instruments needed to accelerate decarbonization in the Brazilian transport sector. To this purpose, a stakeholder-oriented approach is developed and applied to distill low-carbon opportunities and enablers over the next decade. This article reveals the important relationship between climate commitments, the different obstacles faced, and the possible consequences, taking different perspectives on appropriate reference points. The paper is the result of the regional IKI project Enabling Conditions for Investment in the Transition to a low carbon society in Latin American

Countries (DecarBOOST).



## Economic Cost of Drought and Potential Benefits of Investing in Nature-Based Solutions: A Case Study in São Paulo, Brazil (EN)

Bruna Stein Ciasca et al., 01/2023

Despite its rich water resources, Brazil is increasingly facing extreme hydrologic events such as droughts and floods. The São Paulo Cantareira water supply system (CWSS) offers an opportunity to examine the potential economic benefits of nature-based solutions (NbS) to improve water security and reduce the economic cost of drought. This study explores the potential benefits under a counterfactual NbS land-use scenario compared to actual land use and assesses the economic viability of NbS investments in the CWSS. Specifically, we estimate the economic cost of the 2014–

2015 drought in Sao Paulo state for the industrial and water sectors served by the CWSS. This study was supported by the IKI project Water Funds.



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