

Science for rivers: communicating science behind the movement of rivers

Evelyn Calderon¹, Gabriela Flores¹, Jorge D. Abad¹, Gerardo Valencia¹, and Roger Marquez¹

¹Universidad de Ingenieria y Tecnologia - UTEC

November 22, 2022

Abstract

In Peru, a group of scientists are investigating the main Amazonian rivers to understand all those physical variables that define their behavior and ecological importance throughout the Amazon basin. But what happens with this information? How does it connect with the citizens and become mechanisms of valorization and conservation? “Science for Rivers” is a comprehensive educational initiative that seeks to channel all the scientific knowledge generated regarding rivers towards different actors who are linked to them. The communication strategies implemented have translated complex information in a way that is accessible and useful to all audiences. Therefore, many specialized courses and workshops have been developed for different government institutions in order to incorporate this type of knowledge into their development plans. Also, two free access web pages have been developed that show in an interactive way the multiple technical and social variables when intervening in rivers. Likewise, an educational graphic proposal was implemented through social media where information about the rivers is shared with a simple and playful language. Appropriating this knowledge at different levels is fundamental to guarantee policies coherent with this ecosystem, as well as to forge a citizenry that knows, values and cares for its rivers.

Science for rivers: communicating science behind the movement of rivers

Evelyn Calderon 1, Gabriela Flores 1, Roger Marquez 1, Jaime Del Alcazar 1, Gerardo Valencia 1 & Jorge D. Abad 1.

1: Centro de Investigación y Tecnología del Agua, Universidad de Ingeniería y Tecnología, Lima, Perú.



cita

Join the movement!



Rivers provide fundamental ecosystem function in the Amazon, the world's largest tropical forest that houses the largest biodiversity. Without rivers, there would be no Amazon. Despite its importance, unfortunately very little research has been done in the Peruvian Amazonian region, and there are no policies that recognize its importance and promote measures for its management.

Education



CITA-UTEC has organized 30 events including talks, workshops, contests and a national congress to promote scientific discussion on the hydrogeomorphology of the Amazonian rivers. These events convened over 2800 participants in six cities in Peru. Among the participants, approximately 10% of the audience was from government institutions, 50% was from academia, 40% was from civil society, and women and men were respectively 40% and 50%.

River Stories



River Stories is a webportal where stories about rivers, which are collected from individuals across discipline, are shared. The participant can meet the rivers through the stories from people who live with them and work for them. It aims to bridge different perspectives on rivers, such as ecological, social, scientific, economic and political.

Dancing Rivers



Dancing Rivers is a first interactive web portal in the world that gathers data on the hydrogeomorphological dynamics of the Amazonian rivers obtained from field surveys and satellite image analyses. On this website, the participant can access all the scientific information that our team has generated through an interactive map that allows for user

Science to any audience



We have also developed courses on river monitoring. They were designed for undergraduate students from universities and technical personnel from government institutions in the Peruvian Amazon.



ABSTRACT CONTACT AUTHOR PRINT GET IPOSTER

SCIENCE FOR RIVERS: COMMUNICATING SCIENCE BEHIND THE MOVEMENT OF RIVERS

Evelyn Calderon 1, Gabriela Flores 1, Roger Marquez 1, Gerardo Valencia 1, Jaime Del Alcázar 1 & Jorge D. Abad 1

1. Centro de Investigación y Tecnología del Agua, Universidad de Ingeniería y Tecnología, Lima, Perú



PRESENTED AT:

AGU FALL
MEETING
Online Everywhere | 1-17 December 2020



Join the movement!

Rivers provide fundamental ecosystem function in the Amazon, the world's largest tropical forest that houses the largest biodiversity. Without rivers, there would be no Amazon. Despite its importance, unfortunately, very little research has been done in the Peruvian Amazonian region, and there are no policies that recognize its importance and promote measures for its conservation.

Our work, which includes field observation and remote sensing analysis, has shown that the Amazonian rivers are interconnected, highly dynamic and complex. In addition to this scientific component of our work, an initiative called "Science for the Rivers" has been developed as an educational component. It aims to contribute to transforming the way of intervening rivers by promoting scientific understanding of the Amazonian rivers.



Science to any audience

The implemented communication strategies have translated complex scientific information in a way that it is accessible and understandable to all audiences. For example, an educational graphic has been implemented through social media where information about the rivers is shared with a simple and playful language. These infographics provide scientific and technical information in an understandable language for an audience of non-experts to disseminate the importance of rivers and support their optimal management.



Education

CITA-UTEC has organized 30 events including talks, workshops, contests and a national congress to promote scientific discussion on the hydrogeomorphology of the Amazonian rivers. These events convened over 2800 participants in six cities in Peru. Among the participants, approximately 10% of the audience was from government institutions, 50% was from academia, 40% was from civil society, and women and men were respectively 40% and 50%.

We have also developed courses on river monitoring. They were designed for undergraduate students from universities and technical personnel from government institutions in the Peruvian Amazon.



River Stories

River Stories is a webportal where stories about rivers, which are collected from individuals across discipline, are shared. The participant can meet the rivers through the stories from people who live with them and work for them. It aims to bridge different perspectives on rivers, such as ecological, social, scientific, engineering and political. Moreover, River Stories is a space that reflects current issues that rivers and ecosystems face, and a measure that may guarantee their conservation. River Stories hosts more than 150 written and video stories from the Peruvian Amazonian region about their own experiences with the rivers in an interactive way.

Link: www.historiasdelrio.com

Dancing Rivers

Dancing Rivers is a first interactive web portal in the world that gathers data on the hydrogeomorphological dynamics of the Amazonian rivers obtained from field surveys and satellite image analyses. On this website, the participant can access all the scientific information that our team has generated through an interactive map that allows the user to 1) tour the Peruvian Amazonian rivers to learn and understand the science behind their behavior, 2) accessing newly collected data and drone videos and 3) much more!

Link: www.dancingrivers.com