







## A collaborative partnership in the Peruvian Amazon

The Amazon rainforest plays a vital role in the maintenance of regional climate systems, biodiversity, the carbon cycle and the water cycle. Despite this, the Amazon rainforest is increasingly threatened due to infrastructure expansion, in-migration and advance of the agricultural frontier, and extractive development. Amazonian universities are particularly important to reconciling conservation and development in the region given they train the future professionals and decision makers most likely to reside permanently in the Amazon. However, Amazonian faculty and students not only lack access to cutting edge scientific theories and tools, but also are increasingly urban, and thus removed from the forested landscapes and waterways most important for conserving biodiversity and mitigating climate change.

The Ucayali (National University of Ucayali - Peru) (UNU)- Richmond (University of Richmond - USA) (UR) partnership financed by the United States Agency for International Development (USAID) through the American Council for Education's (ACE) Higher Education for Development Program (HED), is one of four international alliances for improving university education in Colombia, Ecuador and Peru under the Initiative for the Andean Amazon Conservation II: Program for Higher Education. The program seeks to strengthen conservation science capacity through the improvement of applied research, student training, and public sector engagement in biodiversity conservation. Our partnership initiative, "Building Conservation Capacity in a Changing Amazonia," uses innovative and interdisciplinary approaches to teach the sustainable use of tropical resources in the dynamic Southwestern Amazonia.

## **Objectives**



Increased regional conservation capacity by expanding NGO-GO science projects with applied UNU theses



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## Building Conservation Capacity through Higher Education in the Peruvian Amazon Andrea B. Chavez<sup>1</sup><sup>2</sup>, Stella Han<sup>3</sup>, Edgar Díaz Zúñiga<sup>2</sup>, David Salisbury<sup>3</sup>, Roly Baldoceda Astete<sup>2</sup>,

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Source. The Carnegie Institution for Science (2014). The High-Resolution Carbon Geography of Peru. A collaborative Report of the Carnegie Airborne Observatory and the Ministry of Environment of Peru.

## THESES

1.	Ethno-climatic know
2.	Characterization of
3.	Climatic variability
4.	Impact of climation
5.	Soil characterizati
6.	Evaluation of a
7.	Socio-economic a
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9.	
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11.	Socio-economic
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thinking.

Thesis students have shown increased scientific and place-based knowledge along with increased conservation skills during the project implementation based on critical thinking, skills training, and experiential activities. Student field work has expanded interdisciplinary, applied environmental research in poorly understood remote areas with high biological and cultural diversity and has built trust with communities through extension activities. □ The project enhanced faculty-mentor relationships, improved pedagogy and teaching content in science and field methods, provided publication outlets, and integrated university, NGO, and GO personnel into a professional community of scholars.

Acknowledgments

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# Capacity-Building Instruments: Applied interdisciplinary science-based undergraduate certificate program

University students train in Ucayali's capital of Pucallpa to conduct project activities and research within the remote, bio- and culturally diverse Purús and Yurua watersheds of the Peruvian Amazon Basin. The Purús and Yurua contain more than 40 indigenous communities from 11 ethnic groups living in large expanses of biodiversity- and carbon-rich standing forest. Research integrates both university students and indigenous communities in participatory research to train current and future leaders to reflect critically on natural resource management as indispensable to our planet's climate stability. ✤ Our project model broadens student skill sets (composed by theory, skills and practice) so they can analyze linked socio-ecological systems from an interdisciplinary, environmental science perspective and communicate to a range of stakeholders including policy makers, local communities, and the urban Amazon public. Education and research partners CIFOR, ProPurús, IBC, Woods Hole Research Center, and the Ucayali Government help train our students to respond to the emerging challenges of changing Amazonia. ✤To date, the project facilitated two climate change workshops (Purús) and Yurua) and has funded 21 Ucayali National University students to conduct interdisciplinary applied environmental research in Ucayali's most remote, carbon-rich, and bioculturally diverse regions. Student research topics are enumerated below:

nowledge of the Asháninka in the Purús Province of Yaminahua Agricultural Production Systems: Doradillo, El Dorado and 20 de Mayo Indigenous communities, Yurua District y viewed through the perception of a Huni Kuin Indigenous community San Jose de Conta, Purús Province ic variability in the extraction of fishery resources in the Ashéninka Indigenous community of Dulce Gloria, Yurua District tion in relation to land use change in a Huni Kuin Indigenous community: Balta, Purús Province pilot wildlife breeding center in an Ashéninka Indigenous community: Dulce Gloria, Yurua District analysis of the 2014 economic development of six Indigenous communities in the Districts of Calleria and Iparia nemis unifilis) population density in the Yurua River, Yaminahua Indigenous community of El Dorado, Yurua District e and deforestation in an Asháninka Indigenous community: Pankirentsi, Purús Province ecotourism potential in an Ashéninka Indigenous community: Dulce Gloria, Yurua District impact of wild fauna use in the village of Breu, Yurua District ental impact analysis of the dirt road in Sharanahua and Huni Kuin Indigenous communities: San Jose de Conta and Bola de Oro, Purus Province of forestry species in Yaminahua and Ashéninka Indigenous communities: El Dorado and Nueva Victoria, Yurua District y of extractive flora and fauna systems in an Amahuaca Indigenous community: Santa Rosa, Yurua District Charapa (*Podocnemis expansa*) and Taricaya (*Podocnemis unifilis*), populations and their use by an Ashéninka Indigenous community: Dulce Gloria, Yurua ntal impacts of mahogany (Swietenia macrophylla) extraction in permitted forestry areas of borderland Indigenous communities in the Yurua River Basin natural regeneration of 5-year Meliacea plants in an Amahuaca Indigenous community: Santa Rosa, Yurua District try use in an Ashéninka Indigenous community: Dulce Gloria, Yurua District species in secondary forests by a Huni Kuin indigenous community: Balta, Ucayali Region onstruction of the Puerto Esperanza to Iñapari road and the law of previous consultation process for indigenous communities in the Province of Purus R*inchosforum palmarum, Euprosperna elaeasa, Cyparissius daedalus y Plesobyrsa bicincta* in the yarina, ungurahui and pona palm tree species in an Ashéninka Indigenous community: Dulce Gloria, Yurua District.

## Conclusion







