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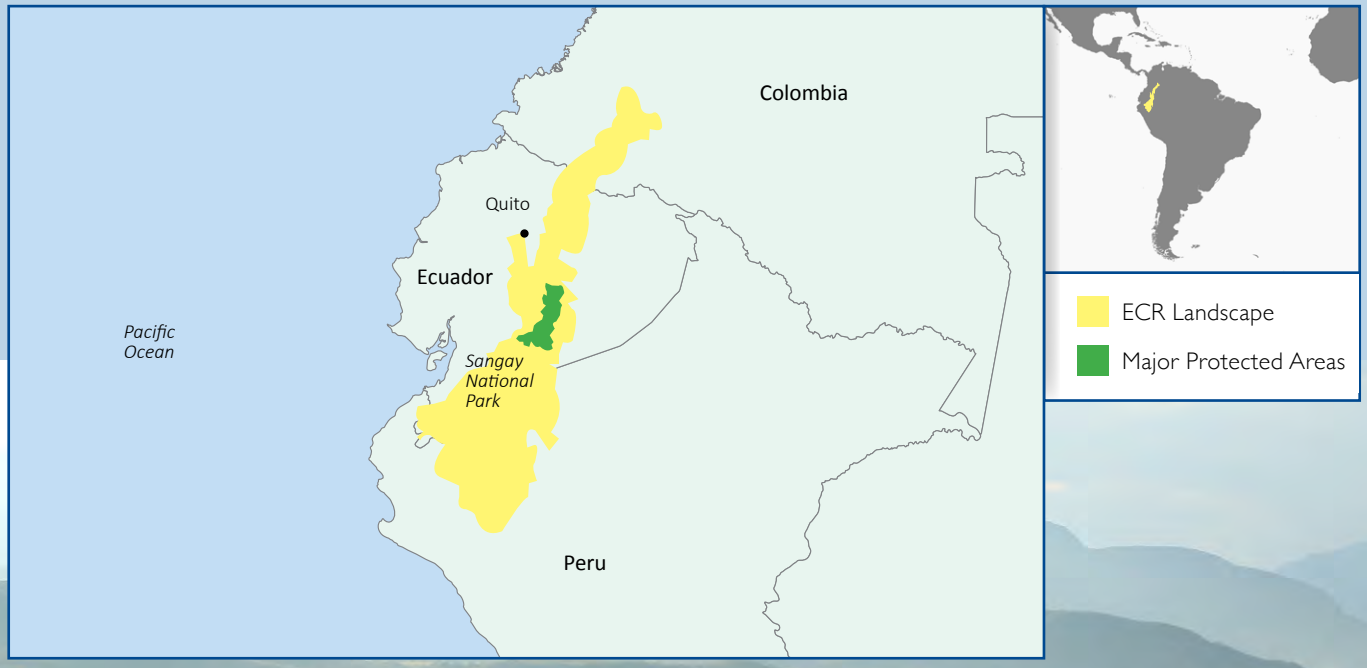
SCAPES LANDSCAPE PROFILE:

EASTERN CORDILLERA REAL LANDSCAPE



PERU, 2014: Huancabamba River. Photo by Juan Carlos Isaza for WWF

THE EASTERN CORDILLERA REAL AT A GLANCE

- The Eastern Cordillera Real landscape covers 9 million hectares of the western Amazon basin, from southern Colombia to northern Peru.
- The project was implemented by the World Wildlife Fund (WWF), which has been active in the area since 1999.
- WWF partnered with Fundación Natura to conduct a climate change vulnerability assessment for the entire Eastern Cordillera Real. WWF partnered with CARE Peru in that country on vulnerability assessments and with the MacArthur Foundation in modeling climate niches for 54 bird and 27 mammal species.

THE PLACE AND THE PEOPLE

The Eastern Cordillera Real landscape lies at the junction of the Amazon Basin, the Andes Mountains and the Pacific Ocean. Spanning 90,000 square kilometers, it runs hundreds of miles from southern Colombia to Northern Peru, and includes 29 distinct ecosystems, from chilly mountain peaks and alpine lakes to steamy lowland forests. The landscape hosts more than 140 species of amphibians and 1,145 species of birds, many found nowhere else, as well as 250 species of mammals and 7,000 species of flowering plants. In addition to its natural beauty and its role in sustaining wildlife, the landscape provides drinking water, irrigation and hydroelectric power for more than one million people in rural areas and mid-sized cities.

Vulnerable species such as the Andean bear and the mountain tapir make the landscape home, while the golden-plumed parakeet and the red-bellied grackle spend time there during their seasonal migrations. Thanks in part to its inaccessibility, 75 percent of the andscape's forest remains intact, but threats loom from large-scale infrastructure projects, mining, oil drilling, illegal logging, cattle ranching and unsustainable agricultural practices. Recent studies indicate that climate change presents an even greater peril to the landscape and the people who are connected to it. Climate change is expected to disrupt environmental connections that are essential for the Amazon biome and will likely force residents to make costly adjustments to where and how they live.

SAN IGNACIO, PERU, 2014: A woman gathers coffee grown at the Experimental Center for Coffee. Photo by Juan Carlos Isaza for WWF

THE CHALLENGE

The Eastern Cordillera Real was one of nine transboundary landscape-scale efforts under USAID's Sustainable Conservation Approaches in Priority Ecosystems (SCAPES) project. The project targeted three Eastern Cordillera Real lowlands — the Alto Fragua Indi Wasi National Park in Colombia, the Sangay-Llanganates Biological Corridor in Ecuador and the Tabaconas Namballe Sanctuary in Peru — largely because of their vulnerability to human actions and most importantly, to climate change. By choosing important protected areas and their buffer zones, the project aimed to create a model that could be replicated in other protected areas of the landscape as well as inform policy work at the national level.

The project engaged two primary stakeholders — farmers and local conservation officials — each of whom had distinct needs and required distinct services. Both groups, however, benefited from the project's creation of land-use and development plans that minimized the fragmentation of the forest.

Two tools, in particular, were valuable in generating these plans: a climate change vulnerability assessment for the entire landscape and Integrated Valuation of Ecosystem Services and Tradeoffs (InVEST) assessments in the three project sites. These tools allowed the project to diagnose the long-term threats and communicate them to protected area authorities so they could integrate the protection of ecosystem services and climate change adaptation measures into their management plans.

Elsy Aranda, who oversees environmental management in the buffer zone around the Tabaconas Namballe Sanctuary, noted that "with this program, as a local government, our technical teams have become stronger, and we are putting it to use in the field." With support from the project, Aranda and her colleagues became the first provincial leaders in Peru to apply a climate change adaptation and freshwater protection plan.

The project also worked with farmers in the buffer zones of all three targeted lowland areas, helping them to adapt sustainable grazing and farming practices on 1,752 hectares. Near the Alto Fragua Indi Wasi National Park in Colombia, the project taught agricultural methods such as intercropping, soil management and silvopasture (in which forestry and livestock grazing are combined for mutual benefit). Near the Tabaconas Namballe Sanctuary in Peru, where most farmers depend on coffee for their sustenance, the project installed a pilot irrigation system as an adaptive measure and built a greenhouse for the production of 15,000 native seedlings for reforestation.

"Our new coffee seedling center helps us reduce the impacts of climate change," said coffee grower Ezequiel Saldaña, who manages the nursery in Peru. "The new irrigation installation is increasing our production, so there's more money in our pockets and more happiness in our homes."

According to Douglas Cotrinas, head of the Tabaconas Namballe Sanctuary, "There has been a reciprocal effect. We support sustainable production, and [the farmers] support the conservation of the parks. Agricultural expansion and local illegal logging have decreased, and the local farmers are helping reclaim degraded lands." For example, to prevent landslides and erosion on the steep slopes surrounding their coffee farms, growers added native tree seedlings to the nursery, and they have begun to replant degraded areas.

Overall, the project led to improved management of 142,176 hectares in areas of high biological importance. It also trained 1,582 people in conservation-oriented natural resource management and helped 1,149 people increase their capacity to adapt to the impacts of climate change.

IHUAMACA, PERU, 2014: Farmers hold new coffee seedlings. Photo by Juan Carlos Isaza for WWF

THE LESSONS

Unlike other SCAPES efforts, Eastern Cordillera Real focus areas were not contiguous, nor did they straddle national borders. That means it was costly and time-consuming to do project work, and transboundary cooperation was not fostered on the ground. It was difficult to include all the stakeholders who wanted to participate in field site activities while also pursuing policy change at higher levels.

The policymaking atmosphere varied between countries. Despite their shared physical landscape and cultural history, the political climates in Colombia, Ecuador and Peru were distinct. Ecuador restricts the work of civil society organizations, while Colombia is preoccupied with ending violence in its southern region, and in Peru the central government is not heavily engaged in a site as remote as the Tabaconas Namballe Sanctuary. For these and other reasons, converting the project's local victories into guides for national-level policy was a challenge. Although project results have been shared with local governments and, to some degree, acknowledged within national-level working groups, they have not yet been reflected in national-level policies.

The SCAPES Eastern Cordillera Real effort may be the first large-scale landscape biodiversity project to address climate change variability and vulnerability in Latin America, and it could become a model for future projects. The InVEST tool and resulting maps resonated with local stakeholders, even those who could neither read nor write. Future projects may consider applying the same approach of engaging with inhabitants through information that is important to them, and thereby motivate communities to play a more active role in conservation and climate change adaptation.

ECUADOR, 2014: Devil's Falls. Photo by Juan Carlos Isaza for WWF