Corridors: routes for adaptation

David Suárez-Duque, **Susan V. Poats**, **Tatiana Castillo** and **Tania Delgado** of the Corporación Grupo Randi-Randi highlight the importance of conservation corridors for climate change adaptation.

Biological corridors have conventionally been seen as a means of countering habitat fragmentation and facilitating species movements between protected areas. Our NGO, Corporación Grupo Randi-Randi, has been promoting the establishment of one such corridor in the Ecuadorian highlands to connect two protected areas – the El Angel Ecological Reserve and the Golondrinas Protected Forest. The planned corridor project involves the establishment of farm and community-level management plans that outline areas for conservation of the natural vegetation and areas for productive activities. These local plans have the approval of Ecuador's Ministry for the Environment as a strategy for zoning and managing natural resources within and around the protected areas.

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Last year, we started to investigate the possible effects of climate change on the proposed corridor area. The study, financed by the MacArthur Foundation, looked at potential impacts at both the landscape and the plot level. At the landscape scale, using the HadCM3-A2 scenario put forward by the Intergovernmental Panel on Climate Change, we looked at possible changes in the corridor's floral diversity over a 70-year time horizon. At a plot level we implemented the GLORIA monitoring protocol in the upper slopes of the corridor. As a result of the scenario modelling, we have identified areas where changes in species richness are forecast and areas where new species might potentially colonize, or where they might be extinguished. The majority of the zones to which species might migrate were found to be outside of the two protected areas. At the same time, other species are expected to colonize the protected areas, changing the current structure of these natural ecosystems. This has caused us to reconsider our own view of corridors. While we had initially aimed to simply connect the two protected areas through community conservation, we now see that the corridor will be important as a means to enable species to adapt to climate change. This is particularly the case in this area as high-altitude ecosystems are likely to suffer more from climate change impacts than lower lying areas.

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Corporación Grupo Randi-Randi is an Ecuadorian NGO which has been a member of IUCN for five years.

Participatory planning in the corridor route

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