

# Biosphere Reserves and Biodiversity Conservation in Megadiverse Ecuador

Perdita Pohle<sup>(1)</sup>, Andrés Gerique<sup>(1)</sup>, María Fernanda López<sup>(2)</sup>

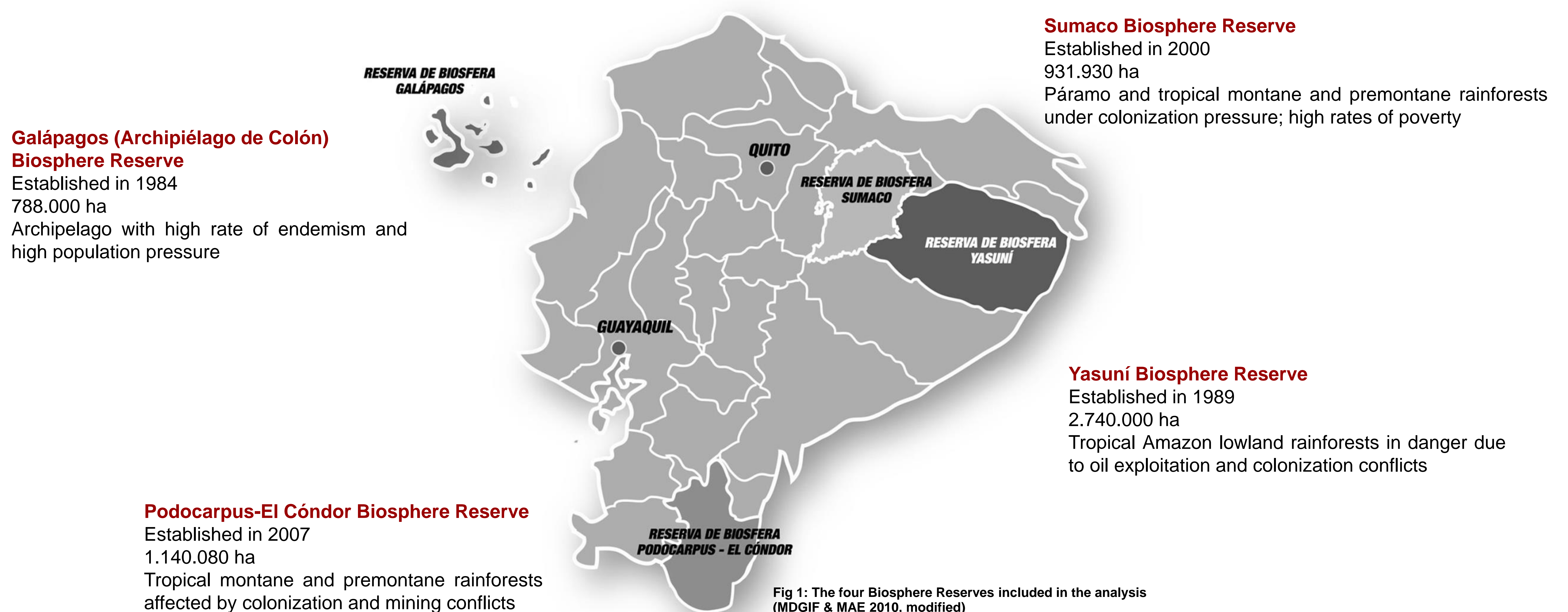
<sup>(1)</sup> Institute of Geography, Friedrich-Alexander-University Erlangen-Nürnberg

<sup>(2)</sup> Facultad Latinoamericana de Ciencias Sociales FLACSO

perdita.pohle@fau.de, andres.gerique-zipfel@fau.de, maflopez@flacso.edu.ec

## Biodiversity Conservation and Biosphere Reserves in Ecuador

Ecuador constitutes one of the most important hotspots of biodiversity worldwide. This fact has led to the creation of 12 national parks, along with other nature conservation areas, and seven biosphere reserves. UNESCO Biosphere reserves (BR) combine the concepts of the conservation of biodiversity, sustainable development and research, monitoring, education and training. BR have a concentric structure with the core area, often National Parks, meant to secure long-term protection in law, buffer zones with sustainable activities compatible with the objectives of the core, and the transition area devoted to the promotion and practice of sustainable development. This spatial zoning is in accordance with the reasoning of those who argue that conservation should not only guarantee the existence of biodiversity, but also ensure the actual use, and the options for future use, without excluding local people from the protected areas (cf. DE LA VEGA-LEINERT ET AL. 2012).



## Governance Problems in Biosphere Reserves

While state centralized top-down conservation governance practices often fail to solve highly contextualized problems in conservation areas, bottom-up approaches via groups of local actors, social networks or community leaders are frequently uncoordinated and marginalize certain stakeholders by depriving them access to resources (CHAFFIN ET AL. 2014). *Adaptive governance* proposes multiscale, flexible, dialogue based collaborative and decision-making processes which aim to adaptively negotiate management of social-ecological systems and ecosystem services across landscapes involving state and non-state actors (SCHULTZ ET AL. 2015). This requires social networks allowing for broad participation and establishing a culture of learning (CHAFFIN ET AL. 2014). Also, biodiversity governance is rooted in the participation of local actors, problems and knowledge systems (SOBERÓN & PETERSON 2015).

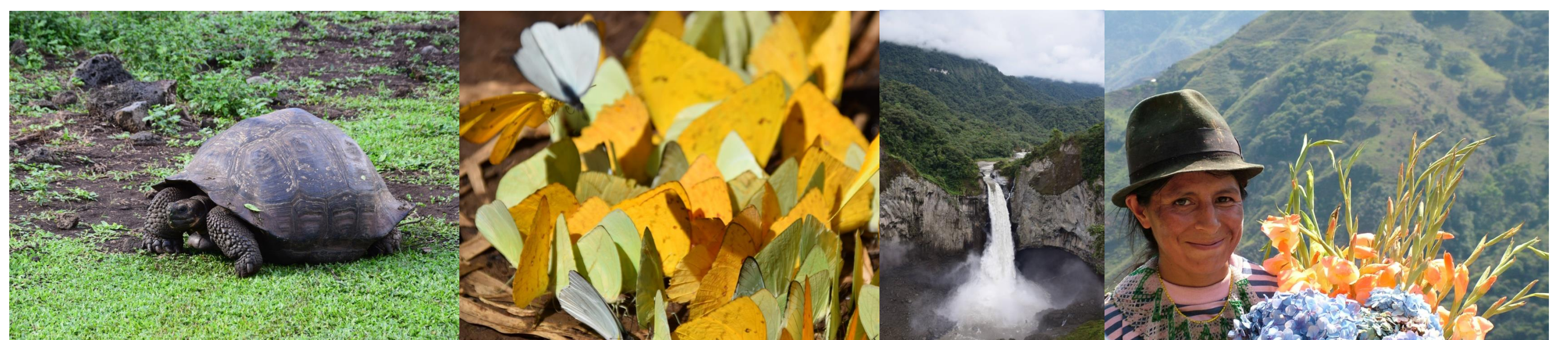
## Description and Aim of the Project

The project will concentrate on biodiversity governance in the four oldest BR of Ecuador, selected for their comprehensive experience and as representative of major ecosystem types and problem settings (cf. Fig 1). The main goal of the project will be to enhance biodiversity conservation by improving knowledge about biodiversity conservation measures and governance in BR. The activities of the project are focused along four lines:

- 1) Involving Ecuadorian and German researchers in the **research** process to investigate biodiversity conservation measures.
- 2) Developing science-directed governance **guidelines** for the sustainable management of BR supporting respective administrative structures via a participatory approach together with the national authorities, NGOs, and local communities.
- 3) Implementing biodiversity issues at the Ecuadorian partner university by organizing e.g. a **course about BR governance**.
- 4) Enhancing **public education** in biodiversity governance through public presentations and workshops, facilitating the transfer of the compiled knowledge to the public to boost awareness of biodiversity conservation in order to safeguard ecosystem services and human well-being, and in turn, to attain the acceptance of the local population.

## Project-Timeline

	2019	2020	2021	2022
Research	→			
Student trips to EC	×	×		
Guidelines		→		
Courses			→	
Public events			×	×
Student trip to GER				×



## Literature

CHAFFIN, B. C., H. GOSNELL, & B.A. COSENS 2014: A decade of adaptive governance scholarship: synthesis and future directions. In: *Ecology and Society* 19(3): 56.  
 DE LA VEGA-LEINERT, A.C. NOLASCO, M.A. & S. STOLL-KLEEMANN: 2012: UNESCO Biosphere Reserves in an Urbanized World. *Environment: In: Science and Policy for Sustainable Development*, 54:1, pp. 26-37.  
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 SOBERÓN J. & A.T. PETERSON 2015: Biodiversity Governance: A Tower of Babel of Scales and Cultures. In: *PLOS Biology* https://doi.org/10.1371/journal.pbio.1002108

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