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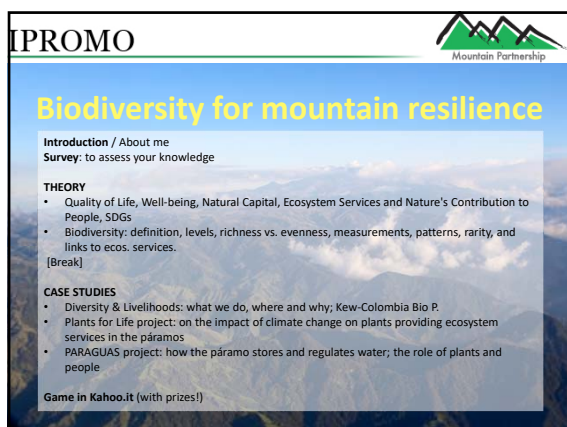
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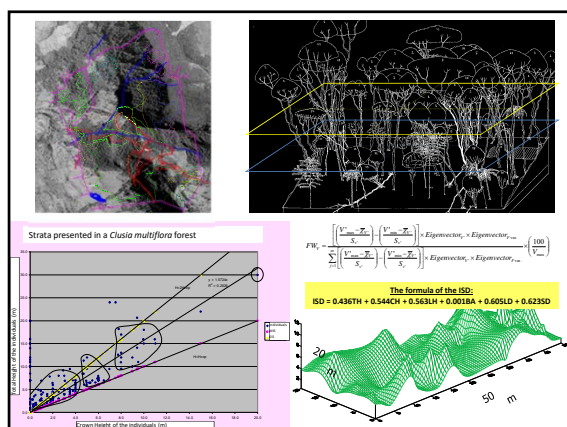
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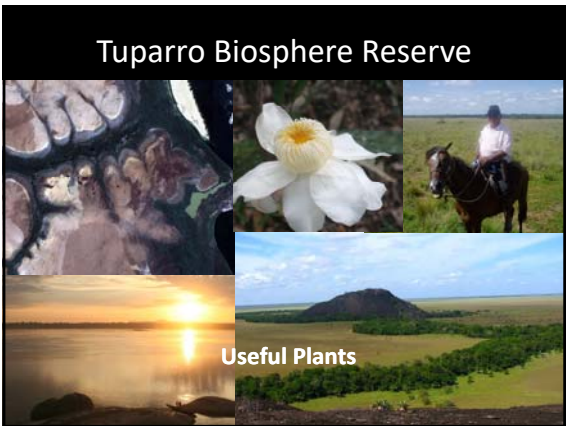
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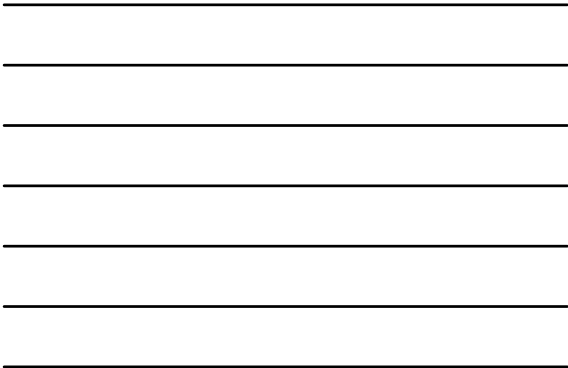
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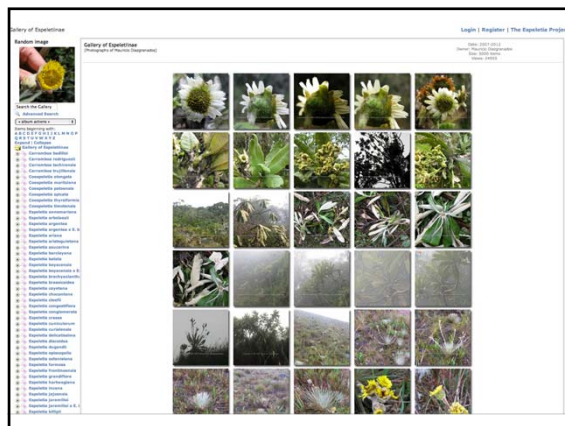
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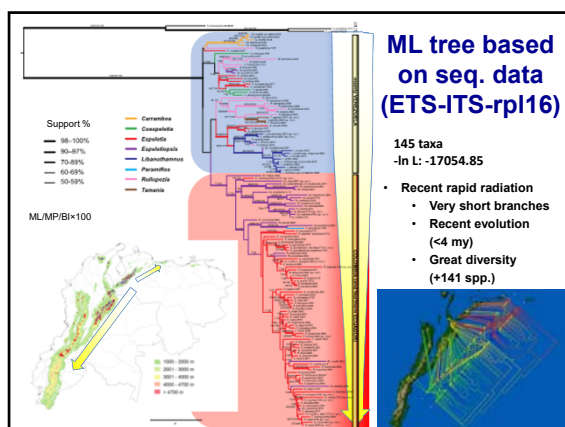
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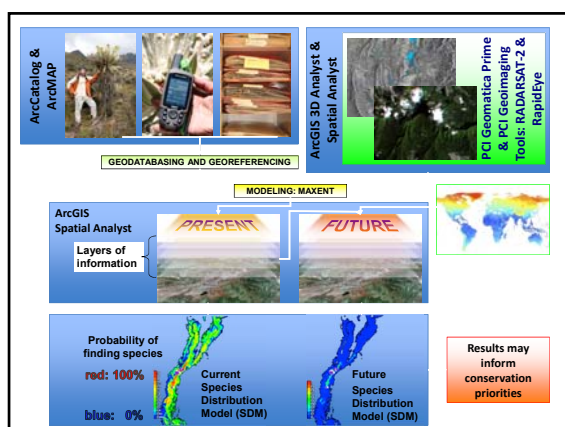
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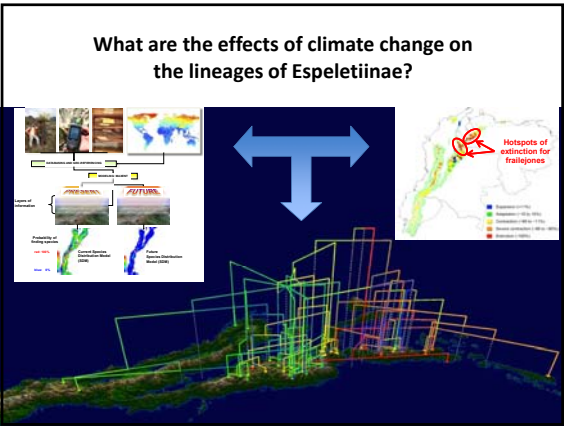
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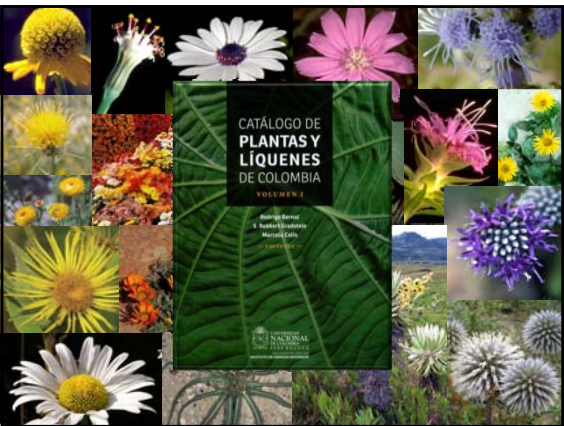
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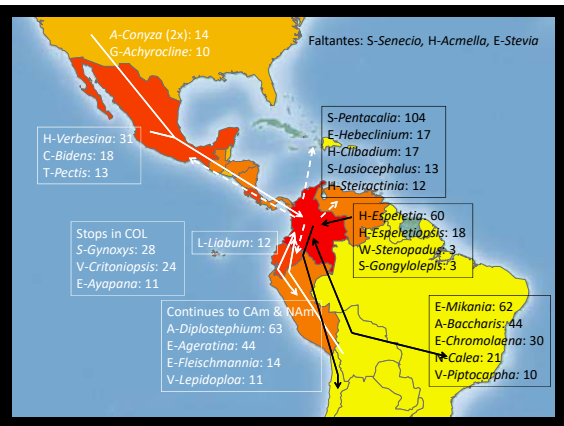
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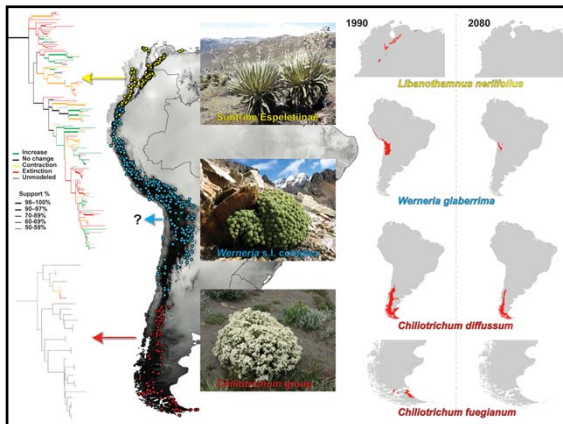
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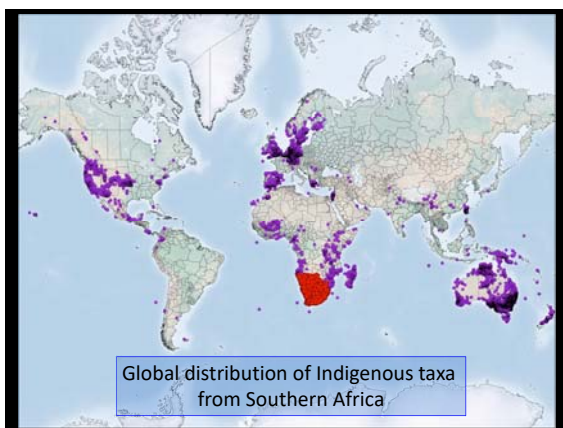
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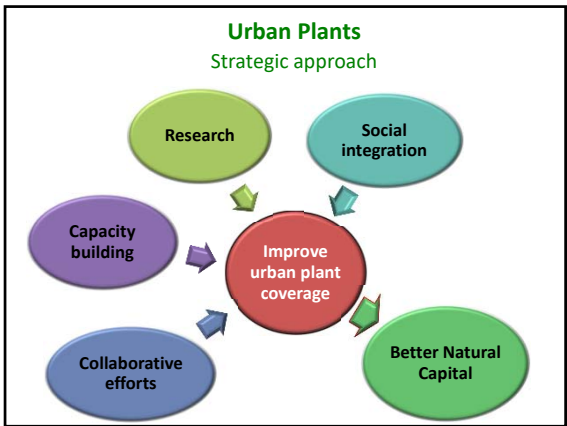
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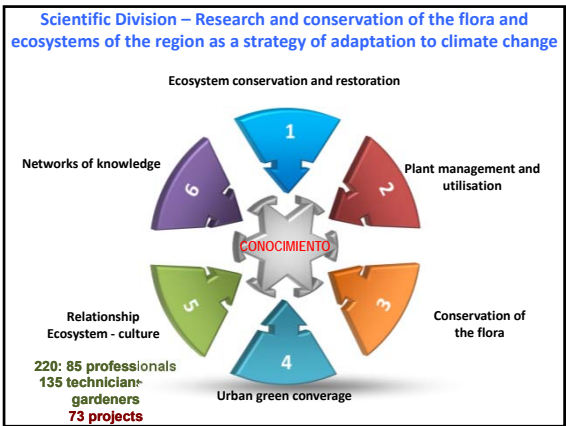
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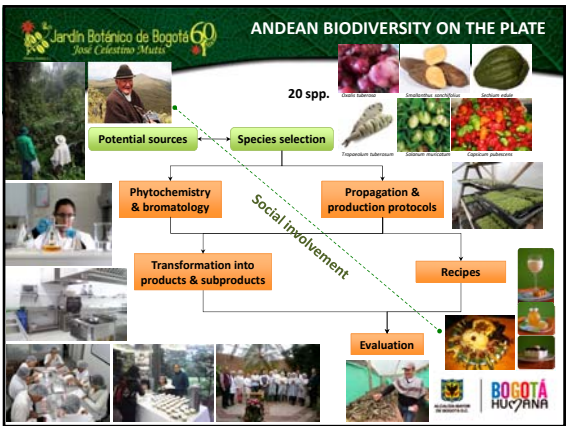
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**The Royal Botanic Gardens, Kew:**  
global resource for plant and fungal knowledge

The largest and most diverse **collections of plant and fungal specimens** in the world:

- > 8 million herbarium vouchers,
- > 39,000 species conserved *ex situ* as seeds,
- > 30,000 *taxa* in the living collection,
- Library, art, archive.

Partnerships with **1,000 collaborators** in **> 100 countries**: solutions to global challenges such as biodiversity loss, food and water security, poverty, disease and climate change.

**Background**




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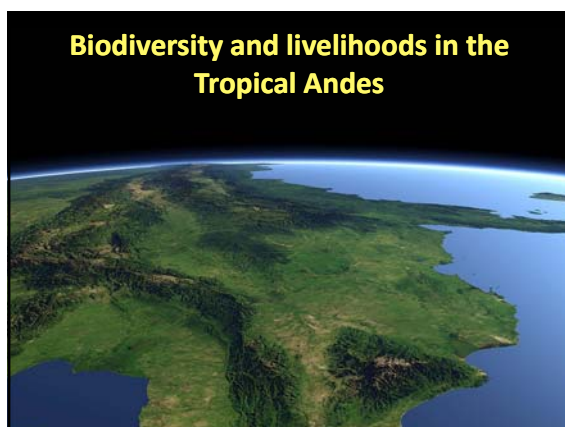
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**Tropical Andes**

- **Global Epicenter of Biodiv.**
- 5-7 countries
- 1,542,644 km<sup>2</sup>
- 133 ecosystems
- 350 families
- 4,100 genera
- 45,000 spp.
- 20,000 endemic
- **Useful plants?**
- 3,400 spp. vertebrates
- 1,600 endemic
- 80M people



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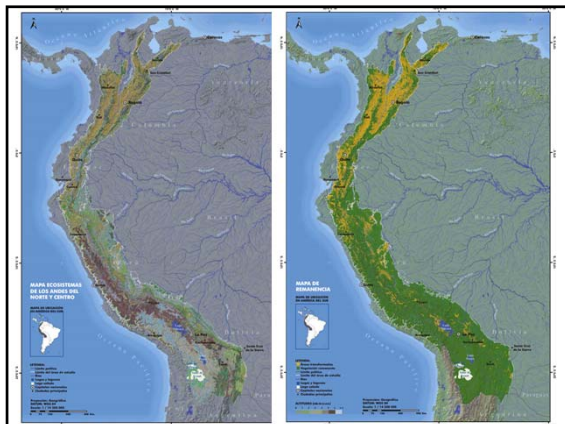
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### Problems

- 22-78% of land transformed
- 2100: habitat loss of 52–63%
- Climate change in the Tropical Andes: extinction of 30–60% of the plant species by 2080
- Extinction of endemic species ranging from 10.5–47%
- HIPPO**: **H**abitat destruction, **I**nvasive species, **P**ollution, human **o**ver-**P**opulation, and **O**ver-harvesting
- Gini coefficient: 48.3
- MICs; poverty: 25.3%, extreme poverty: 12.3%
- 75% of rural people under the poverty line
- Women: the poorest of the poor
- Low government presence, corruption, unsatisfied needs
- High violence: guerrillas, paramilitary forces, narco-trafficking, etc.

**Tropical Andes is the hottest of the hotspots**

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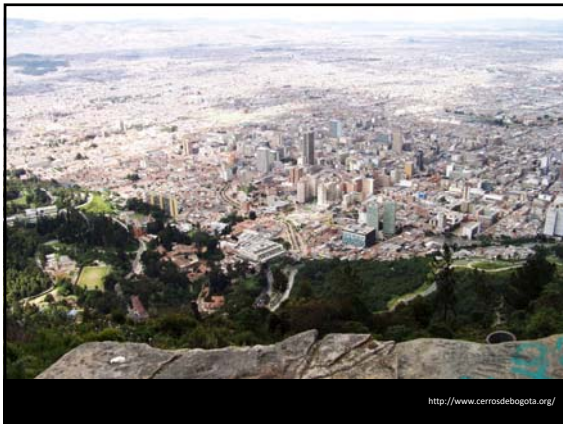
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### Broad research questions

- How can plant diversity contribute to improve **livelihoods** of people in the TA?
- What are the impacts of **climate change** on TA useful plants?

**Guiding principle 1:** to help the largest number of people improving their livelihoods, according to the UN Sustainable Development Goals.

**Guiding principle 2:** to contribute with the conservation of biodiversity

**Largest number of people**  
**Conservation of biodiversity**

Tropical Andes

Most biodiverse areas  
Most threatened species  
Most threatened knowledge  
Most impoverished communities

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### Approaches

- **Space (geographical dimension):**
  - 'Top to bottom' (high to low elevations)
  - Most threatened environments
  - Urban ecosystems
- **Time (historical dimension):**
  - 'Back to front' (oldest to recent)



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