



When the Forest Burns, Water Disappear

Scientific Insights on Fire and Water
Vulnerability in the Amazon



Presenter:

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What is RAISG?

Red Amazónica de Información Socioambiental Georreferenciada (RAISG)

The Amazon Network of Georeferenced Socio-Environmental Information is a consortium of civil society organizations from the Amazon countries, supported by international partners, concerned with the socio-environmental sustainability of Amazonia.

We generate and disseminate knowledge, statistical data, and information.

We seek to visualize the Amazon as a whole, as well as the threats and pressures that loom over it.



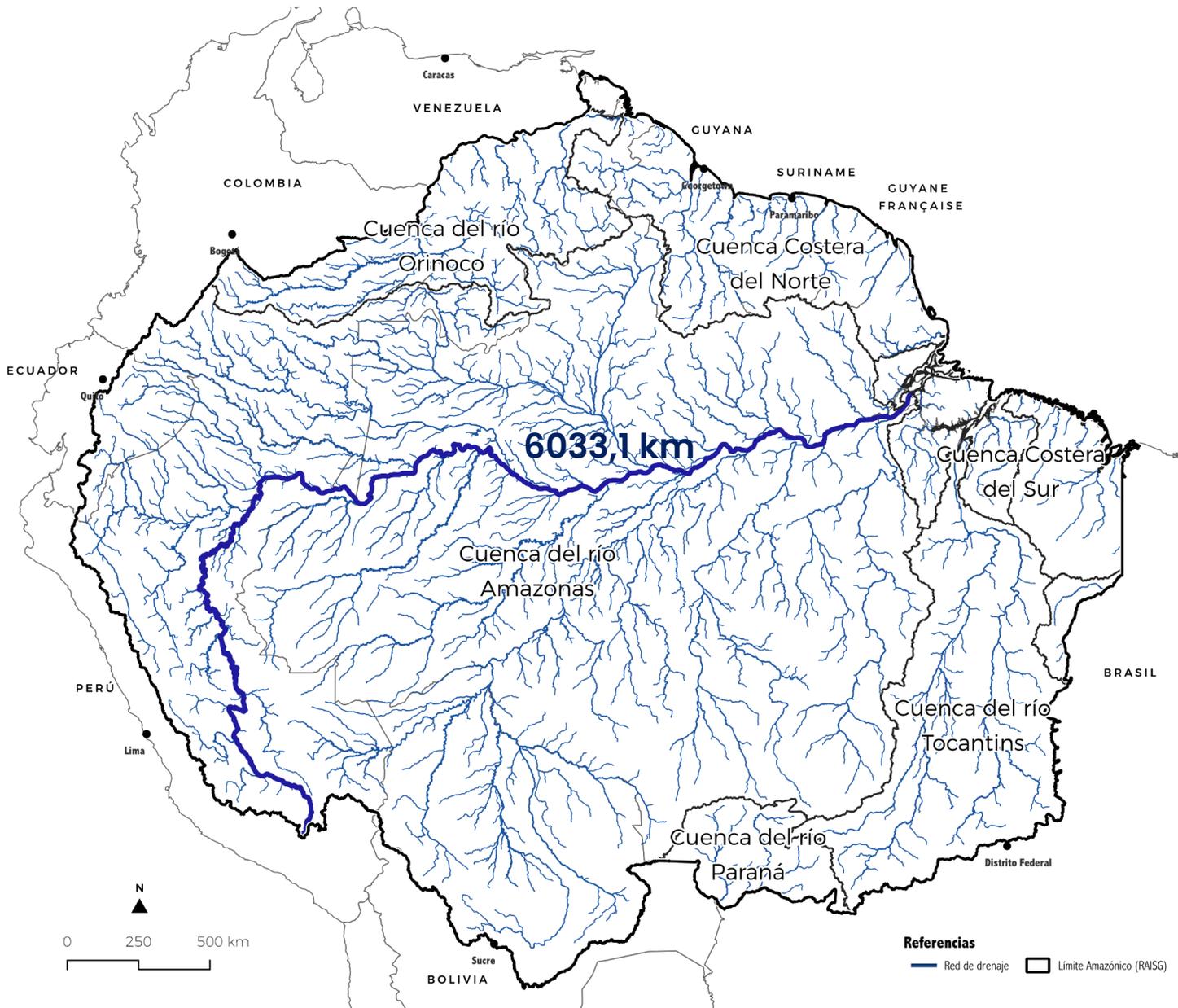
Water is the system that connects and sustains Amazonian life

The Amazon River originates in Perú, at the Ucayali River, and flows into Brazil around Marajó Island.

800.000 rivers
+1.100 tributaries



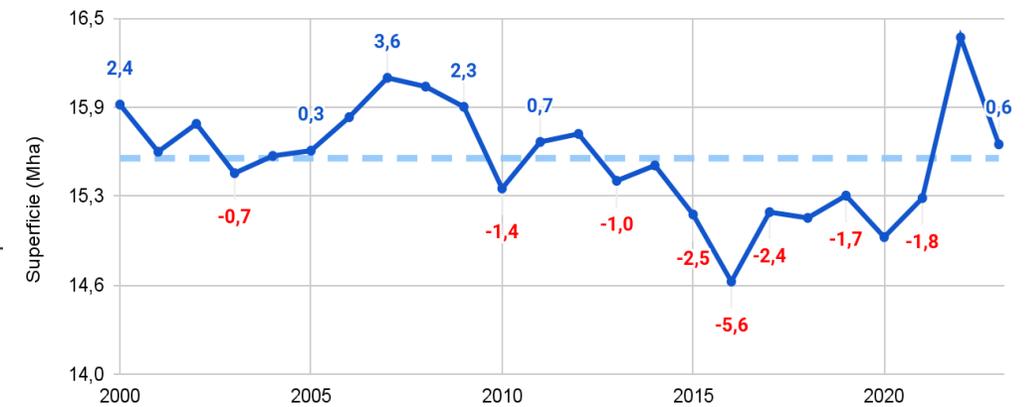
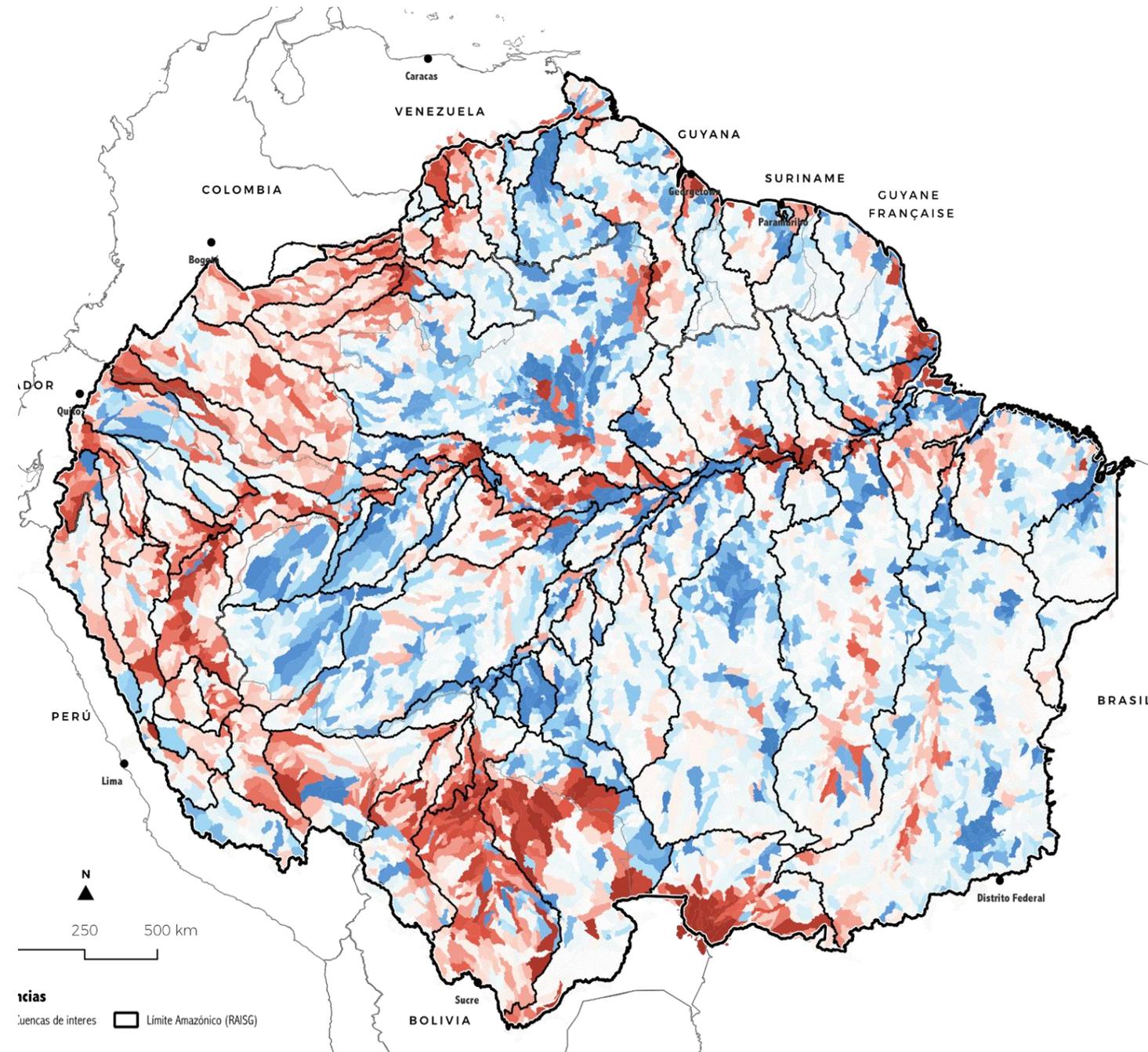
The Amazon holds nearly 20% of the Earth's surface freshwater—making its conservation critical for global water security.

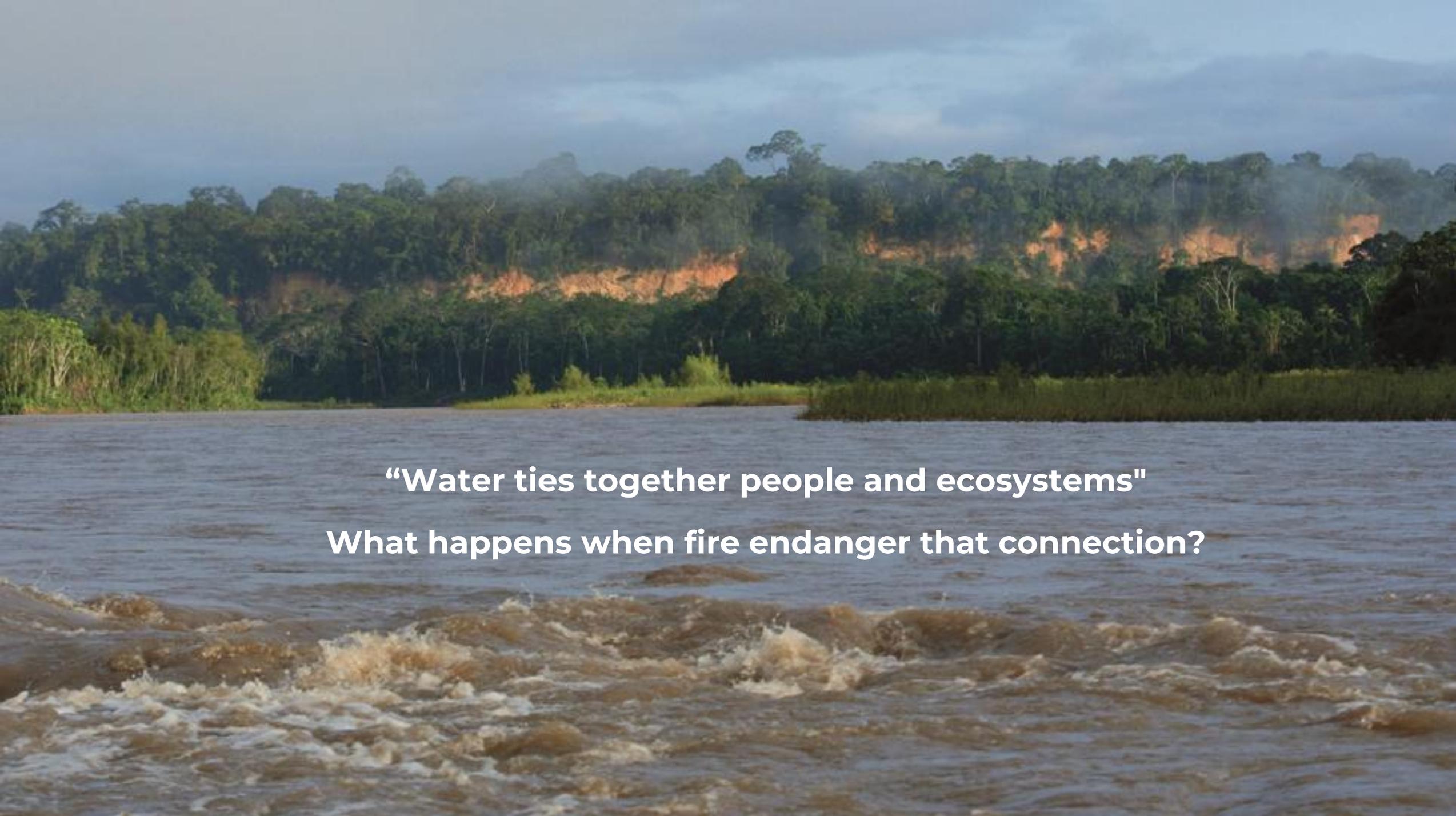


Water surfaces are disappearing in the Amazon

50%

of the micro-basins lost natural water surface area (2000-2023)

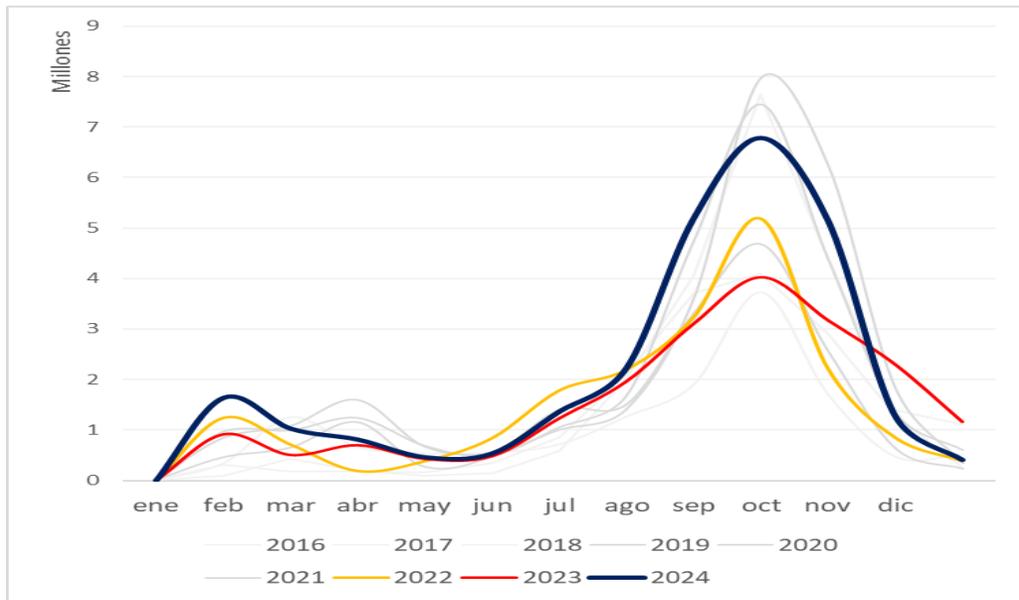
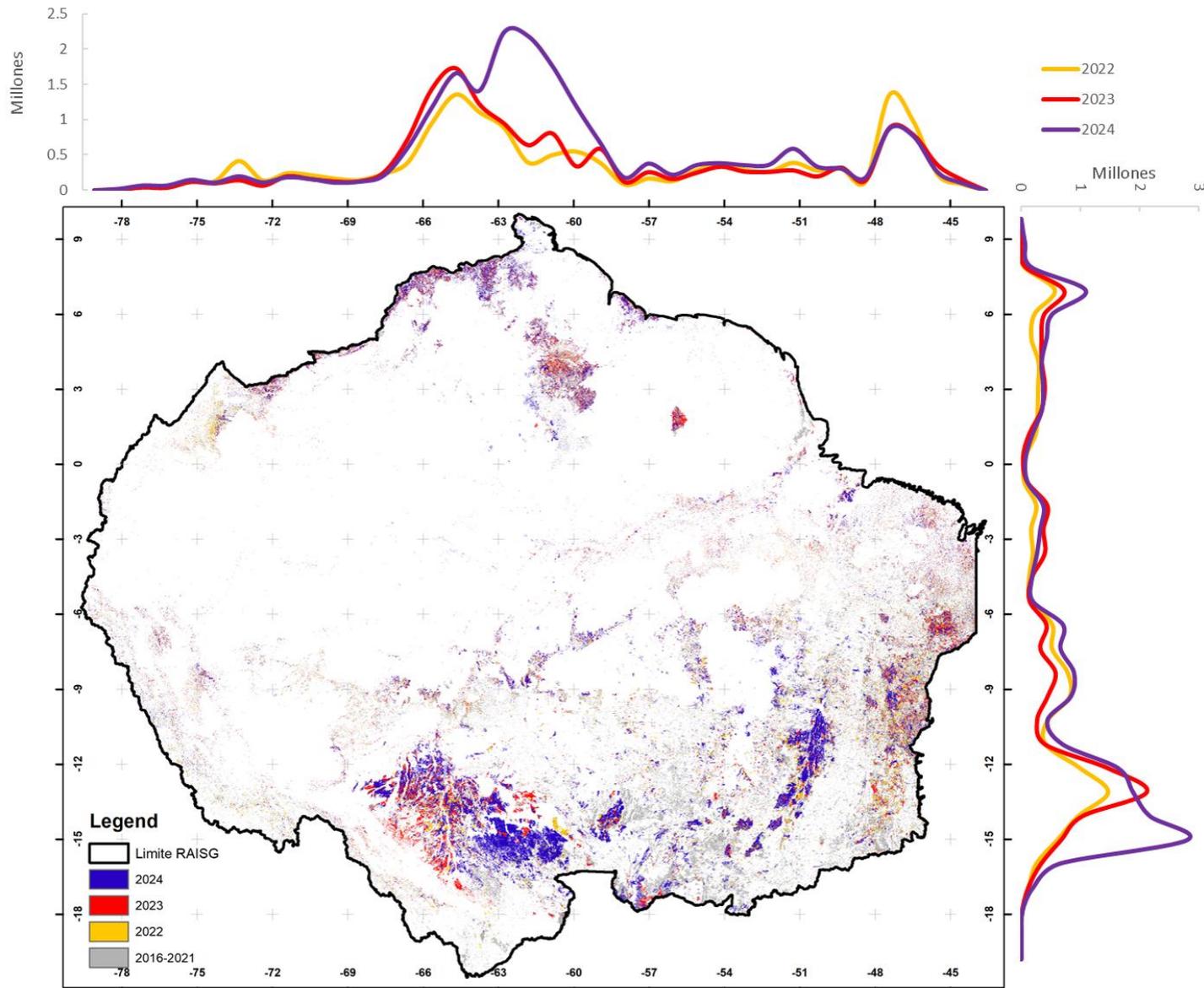




“Water ties together people and ecosystems”
What happens when fire endanger that connection?

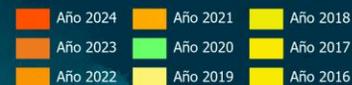
Fire dynamics in the Amazon **are complex**

The multitemporal analysis shows that **large-scale** and **extreme-behavior fires** are mainly concentrated in Bolivia, affecting between **10 to 12.5** million hectares burned.



Incendios en la Amazonía

Cicatrices de fuego: 2016 a 2024

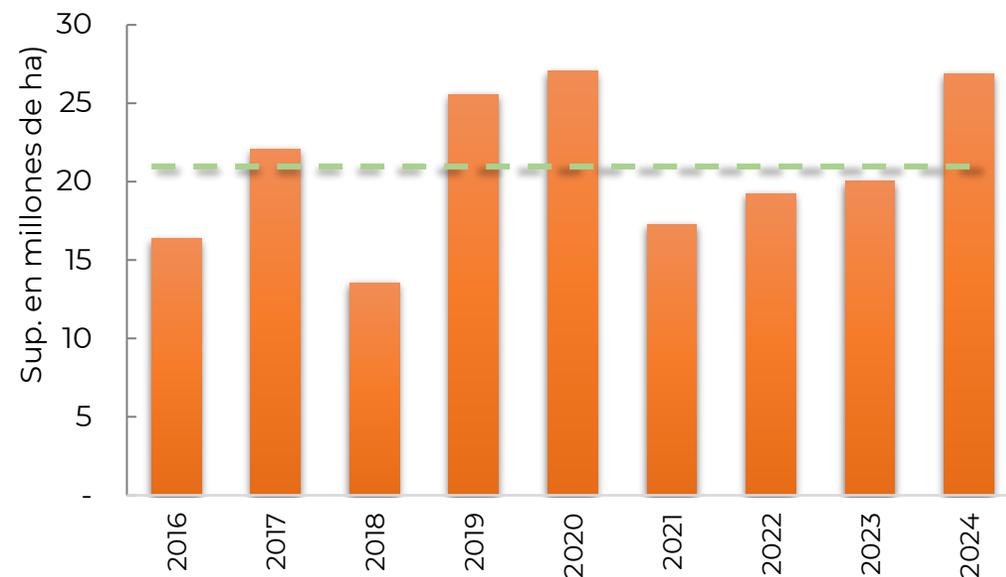


Amazon on fire

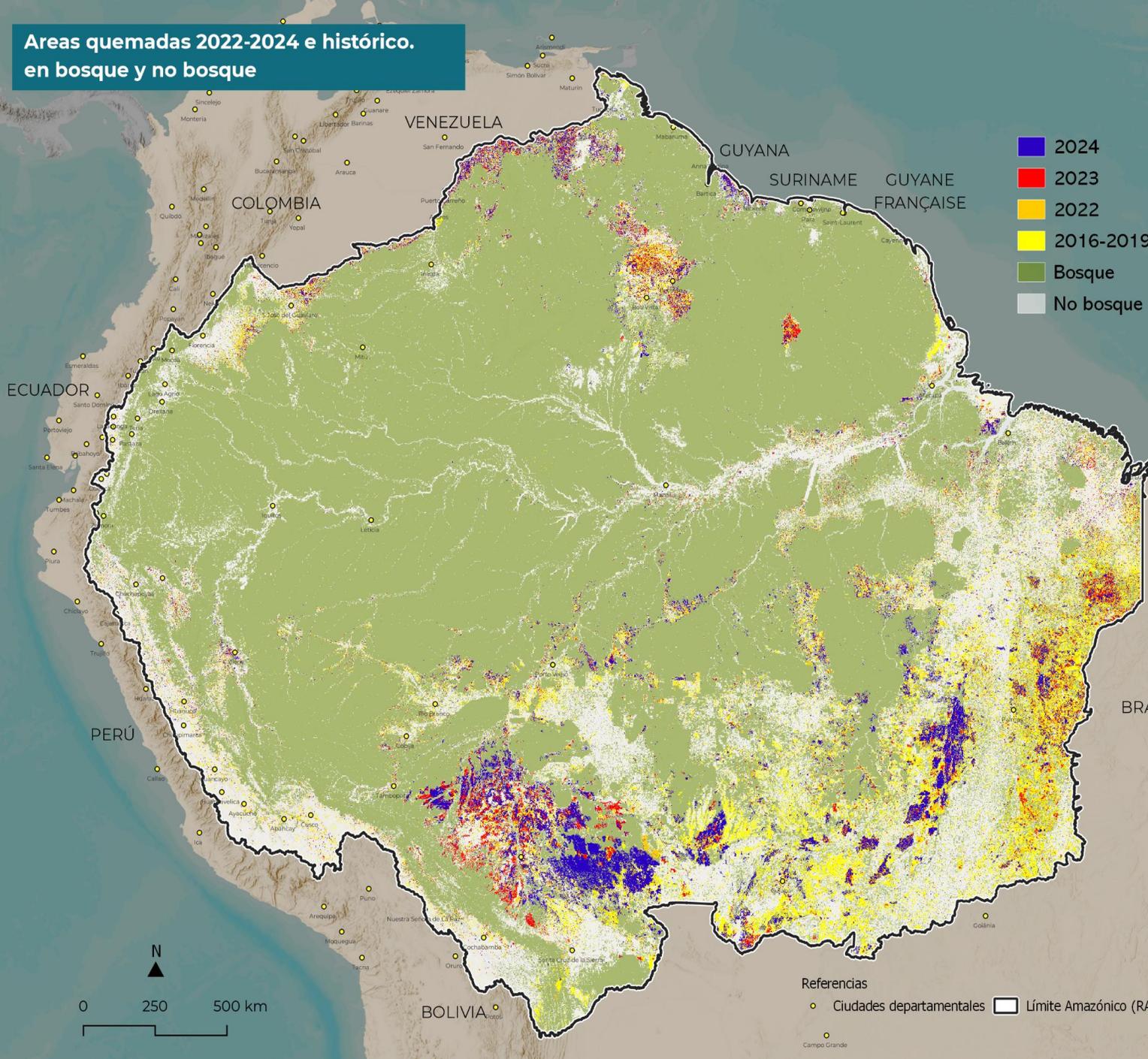
27 Mha 2024- One of the Worst Fire Season on Record

52%

of all affected areas are burning for the **first time** — expanding fire into new ecosystems..



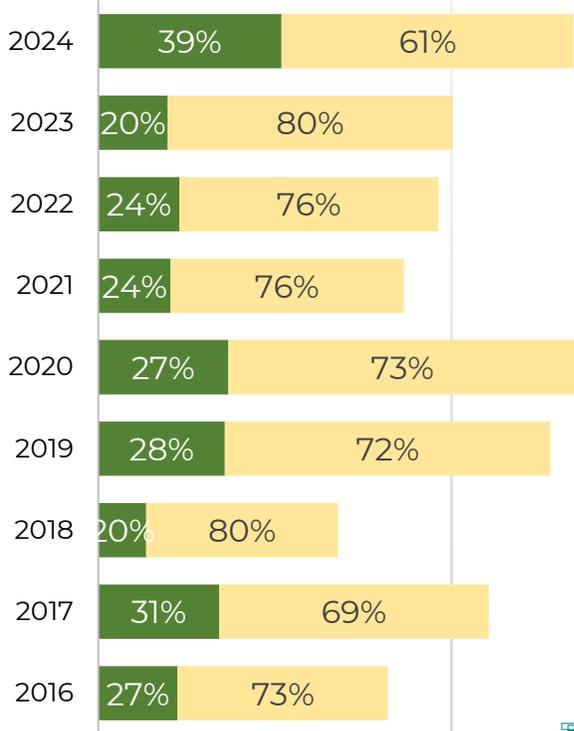
Áreas quemadas 2022-2024 e histórico. en bosque y no bosque



Fires are reaching the heart of the forest.

Nearly **40%** of the burned area in 2024 affected **forests**.

Burnt area 2016-2024 (forest / non-forest)



Million of ha

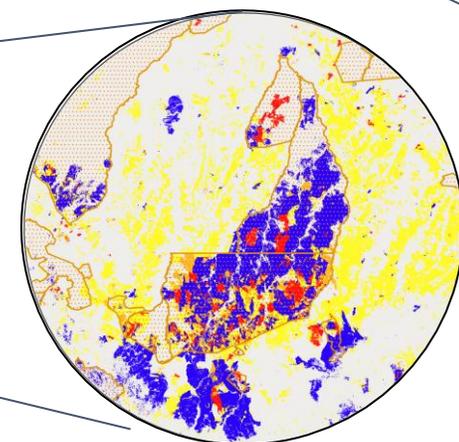
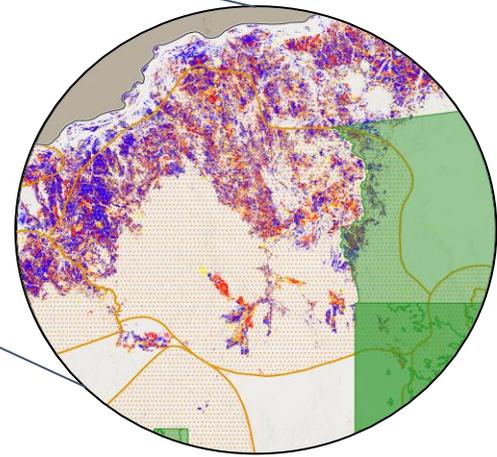
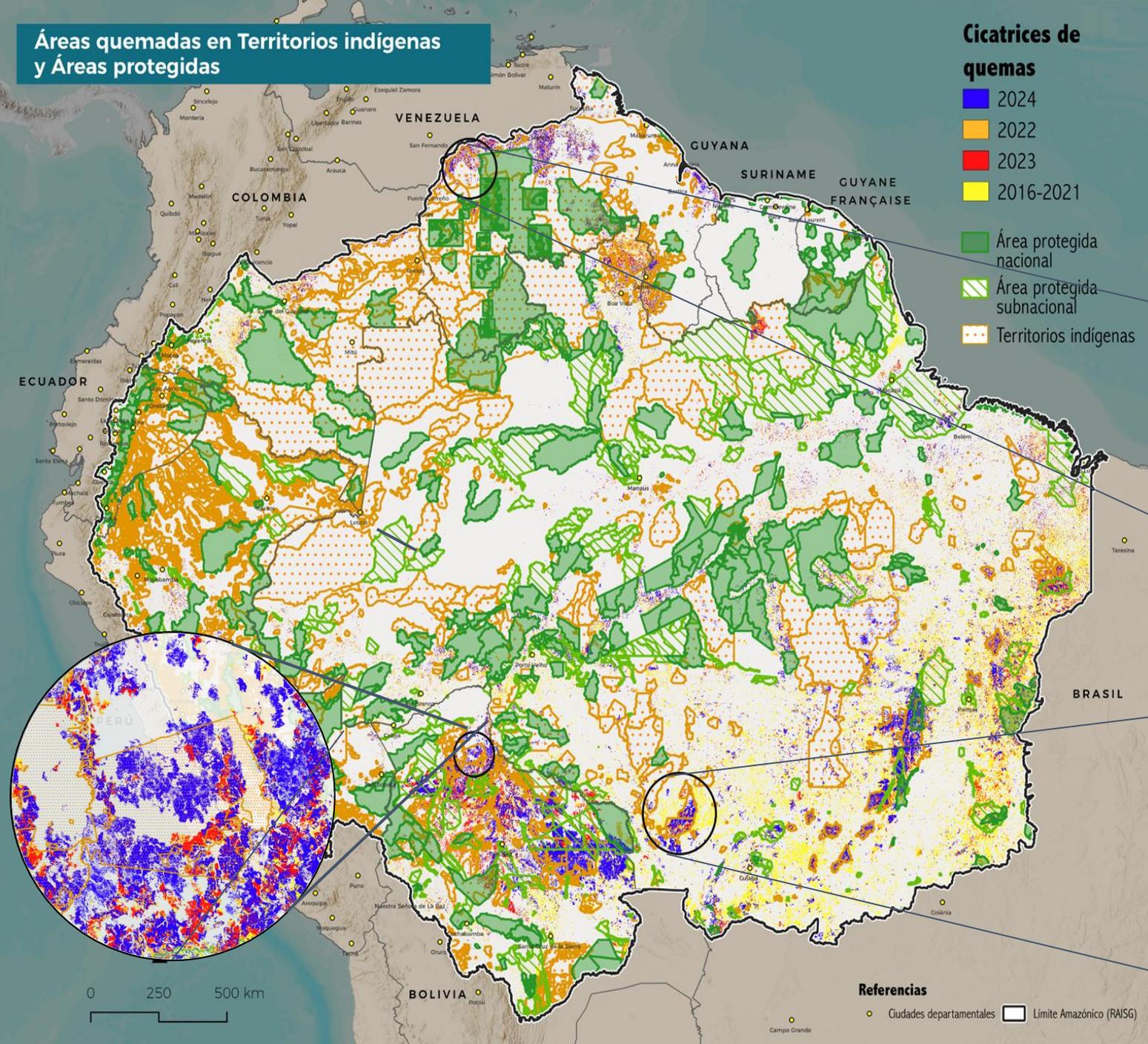
Áreas quemadas en Territorios indígenas y Áreas protegidas

Cicatrices de quemas

- 2024
- 2022
- 2023
- 2016-2021

- Área protegida nacional
- Área protegida subnacional
- Territorios indígenas

Growing fire pressure on protected areas and indigenous territories.



THE FIRE–WATER–LIFE CONNECTION

CLIMATE CHANGE THE INTENSIFIER

- Rising temperatures and prolonged droughts increase wildfire risk
- Greenhouse gas emissions both cause and result from fires

When forests burn, water suffers

WATER – THE HIDDEN VICTIM

- Fires increase sediment and ash in rivers and reservoirs
- Changes in rainfall and runoff affect hydropower and fisheries

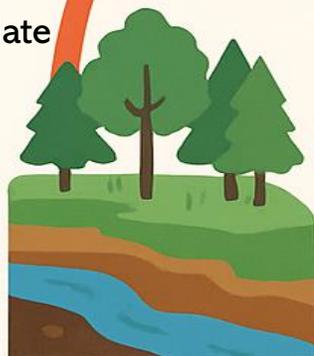
- Post-fire fogs contaminate drinking water and reduce availability for communities

- Fires increase sediment and ash in rivers and reservoirs → affect water

PEOPLE – THE HUMAN TOLL

- Communities lose crops and clean water sources
- Increased vulnerability for indigenous Peoples and local communities

Forest store carbon, regulate rainfall and protect watersheds



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Thanks!

www.raisg.org/es/cop30

