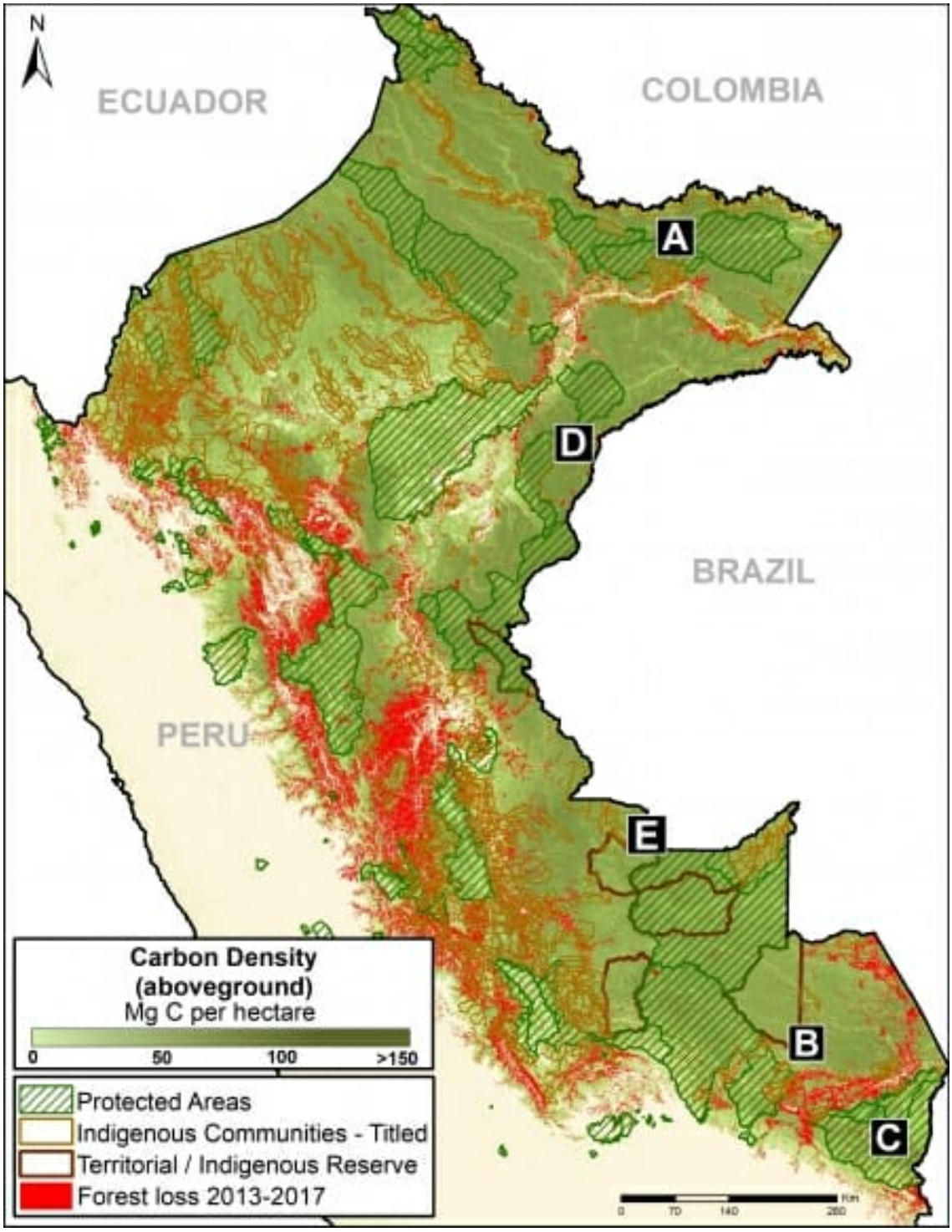
MAAP #83: Climate Change Defense: Amazon Protected Areas and Indigenous Lands



Base Map. Data: Asner et al 2014, MINAM/PNCB, SERNANP, IBC

Tropical forests, especially the Amazon, sequester huge amounts of **carbon**, one of the main greenhouse gases driving climate change.

Here, we show the importance of **protected areas** and **indigenous lands** to safeguard these carbon stocks.

In MAAP #81, we estimated the loss of **59 million** metric tons of carbon in the Peruvian Amazon during the last five years (2013-17) due to forest loss, especially **deforestation** from mining and agricultural activities.

This finding reveals that forest loss represents nearly half (**47%**) of Peru's annual carbon emissions, including from burning fossil fuels.[1,2]

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In contrast, here we show that protected areas and indigenous lands have safeguarded **3.17 billion** metric tons of carbon, as of 2017.[3,4]

The **Base Map** (on the right) shows, in shades of green, the current carbon densities in relation to these areas.

The breakdown of results are:
1.85 billion tons safeguarded in the Peruvian national protected areas system;
1.15 billion tons safeguarded in titled native community lands; and
309.7 million tons safeguarded in Territorial Reserves for indigenous peoples in voluntary isolation.

The total safeguarded carbon (3.17 billion metric tons) is the equivalent to 2.5 years of carbon emissions from the **United States**.[5]

Below, we show several examples of how protected areas and indigenous lands are safeguarding carbon reservoirs in important areas, indicated by **insets A-E**.

A. Yaguas National Park

The following Image A shows how three protected areas, including the new **Yaguas National Park**, are effectively safeguarding 202 million metric tons of carbon in the northeastern Peruvian Amazon. This area is home to some of the highest carbon densities in the country.

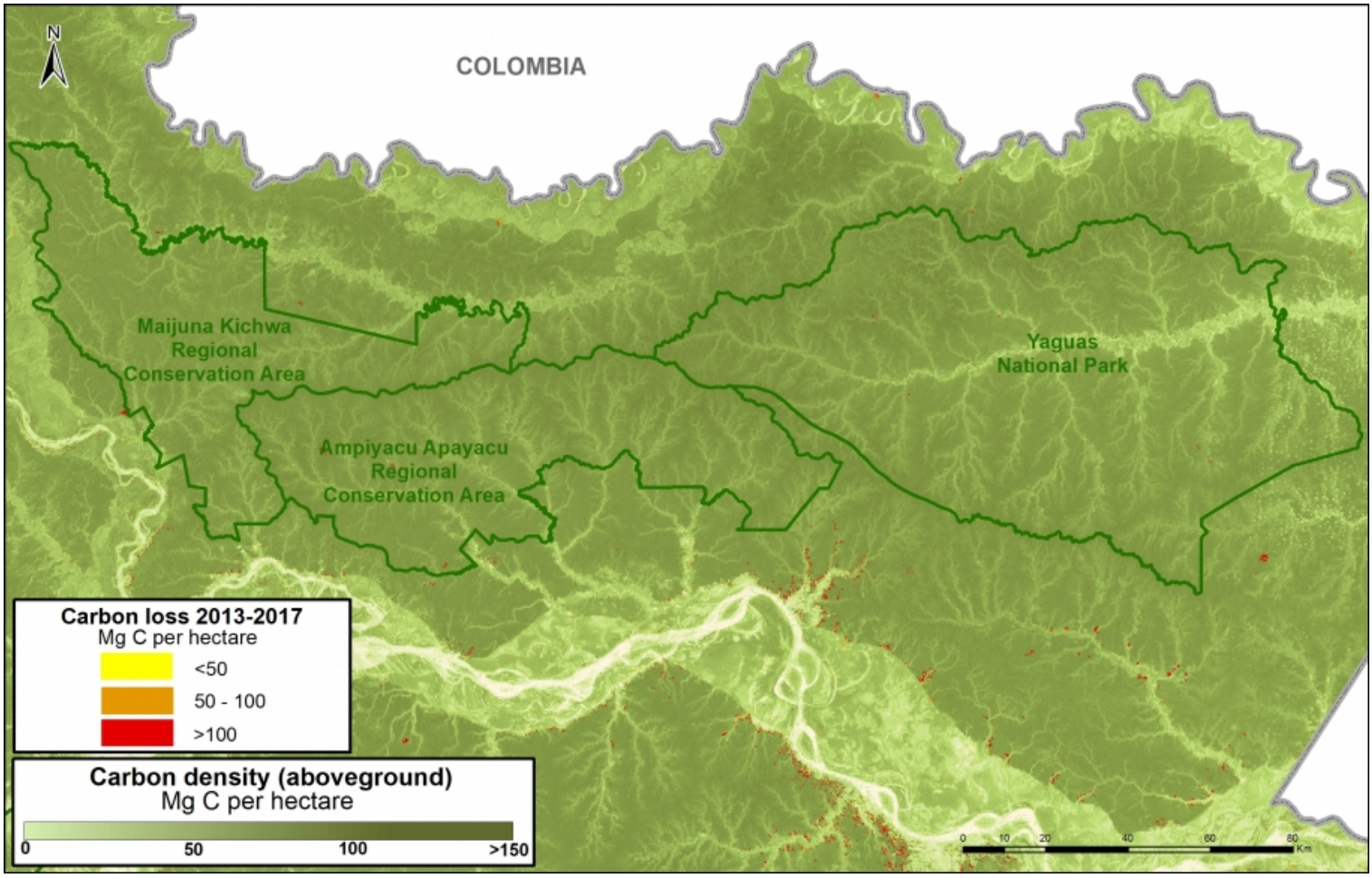

Image 83a. Yaguas. Data: Asner et al 2014, MINAM/PNCB, SERNANP

B. Manu National Park, Amarakaeri Communal Reserve, CC Los Amigos

The following Image B shows how **Los Amigos**, the world's first conservation concession, is effectively safeguarding 15 million

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metric tons of carbon in the southern Peruvian Amazon. Two surrounding protected areas, **Manu National Park** and **Amarakaeri Communal Reserve**, safeguard an additional 194 million metric tons. This area is home to some of the highest carbon densities in the country.

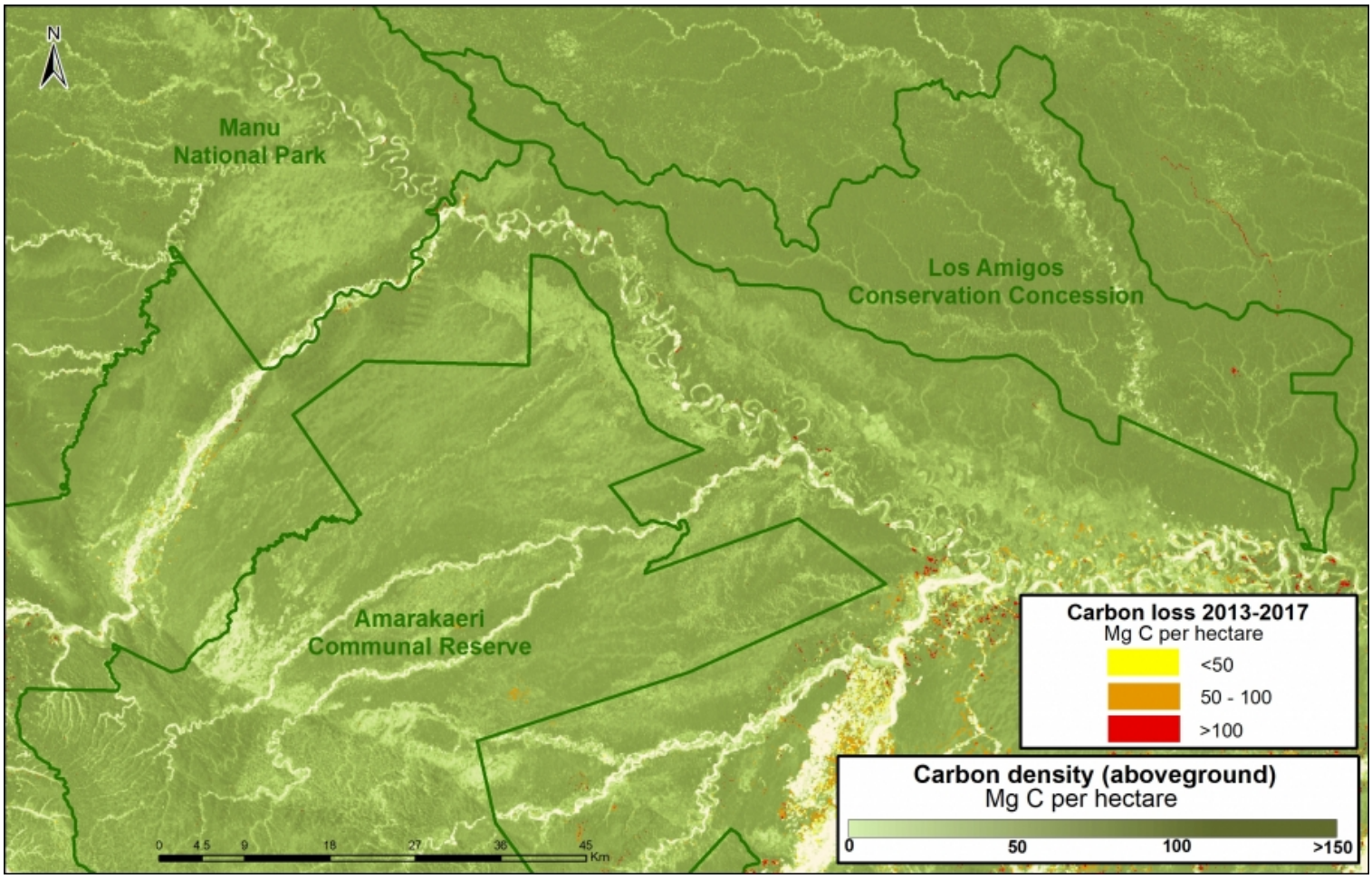

Image 83b. Los Amigos-Manu-Amarakaeri. Data: Asner et al 2014, MINAM/PNCB, SERNANP, ACCA

C. Tambopata National Reserve, Bahuaja Sonene National Park

The following Image C shows how two important natural protected areas, **Tambopata National Reserve** and **Bahuaja Sonene National Park**, are helping conserve carbon stocks in an area with intense illegal gold mining activity.

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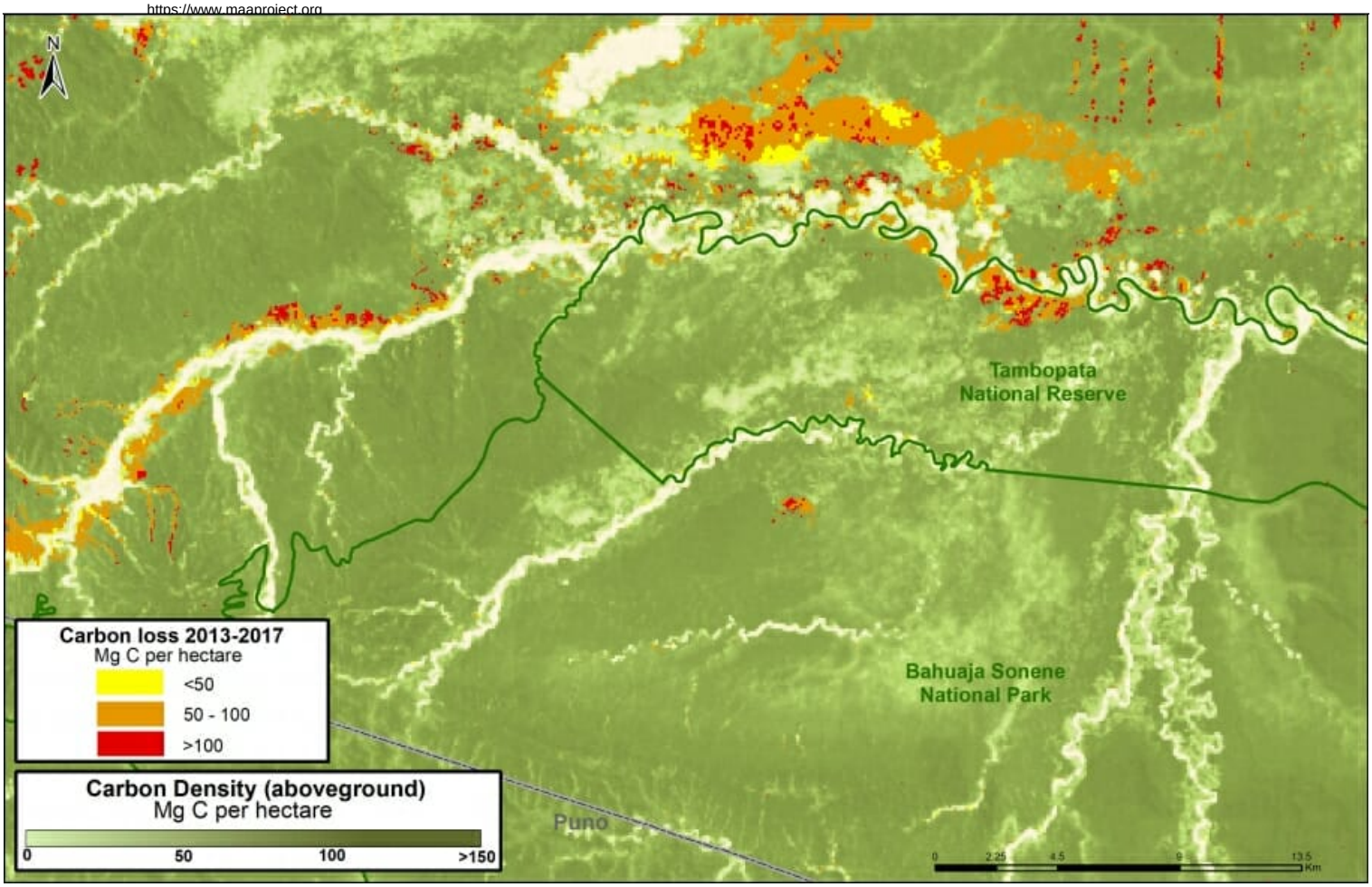

D. Sierra del Divisor National Park, National Reserve Matsés

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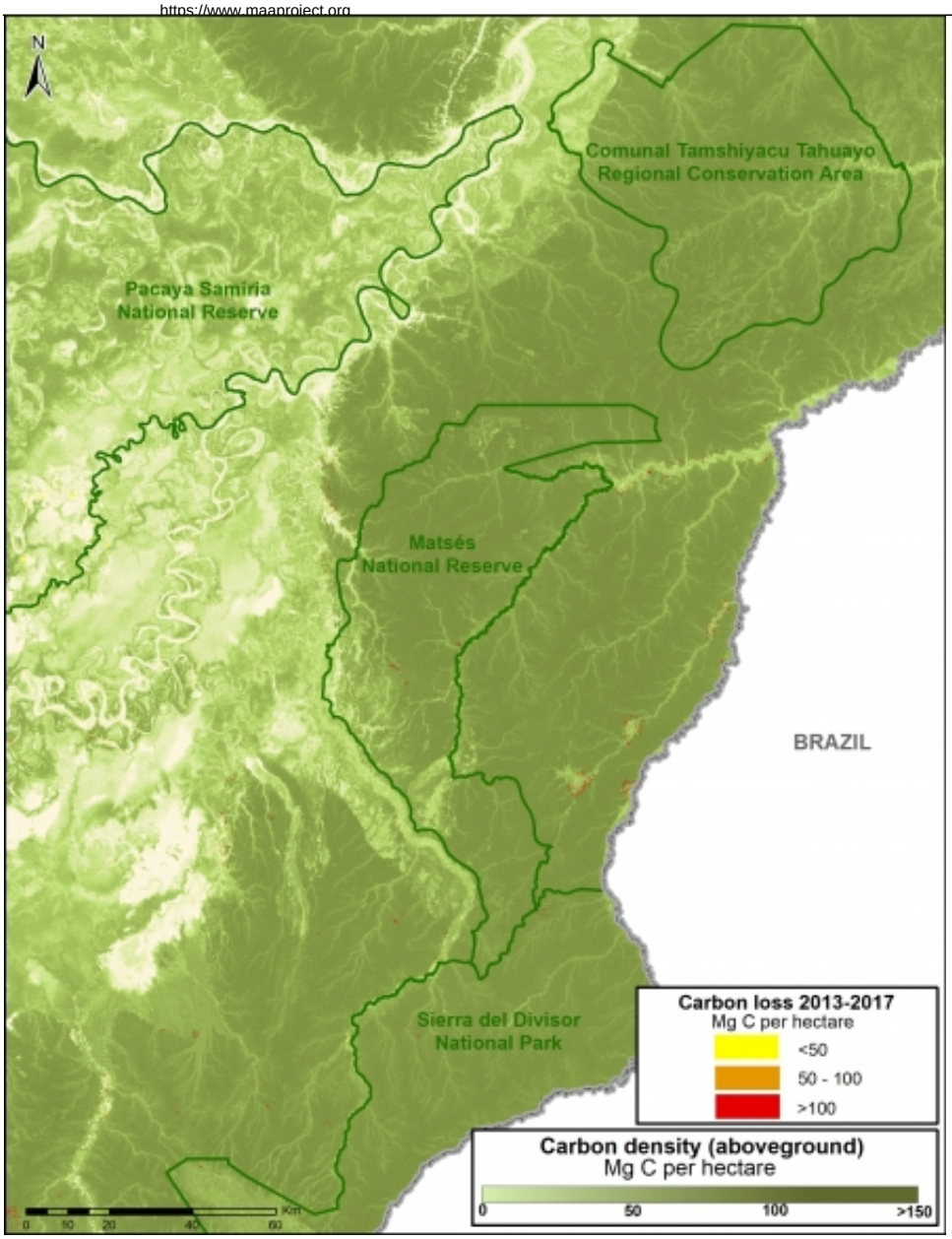

Image 83d. Data: Asner et al 2014, MINAM/PNCB, SERNANP

The following Image D shows how four protected areas, including the new **Sierra del Divisor National Park**, and adjacent **National Reserve Matsés** are effectively safeguarding 270 million metric tons of carbon in the eastern Peruvian Amazon.

This area is home to some of the highest carbon densities in the country.

E. Murunahua Indigenous Reserve

The following Image E shows the carbon protected in the Murunahua Indigenous Reserve (for indigenous peoples in voluntary isolation) and the surrounding titled native communities.

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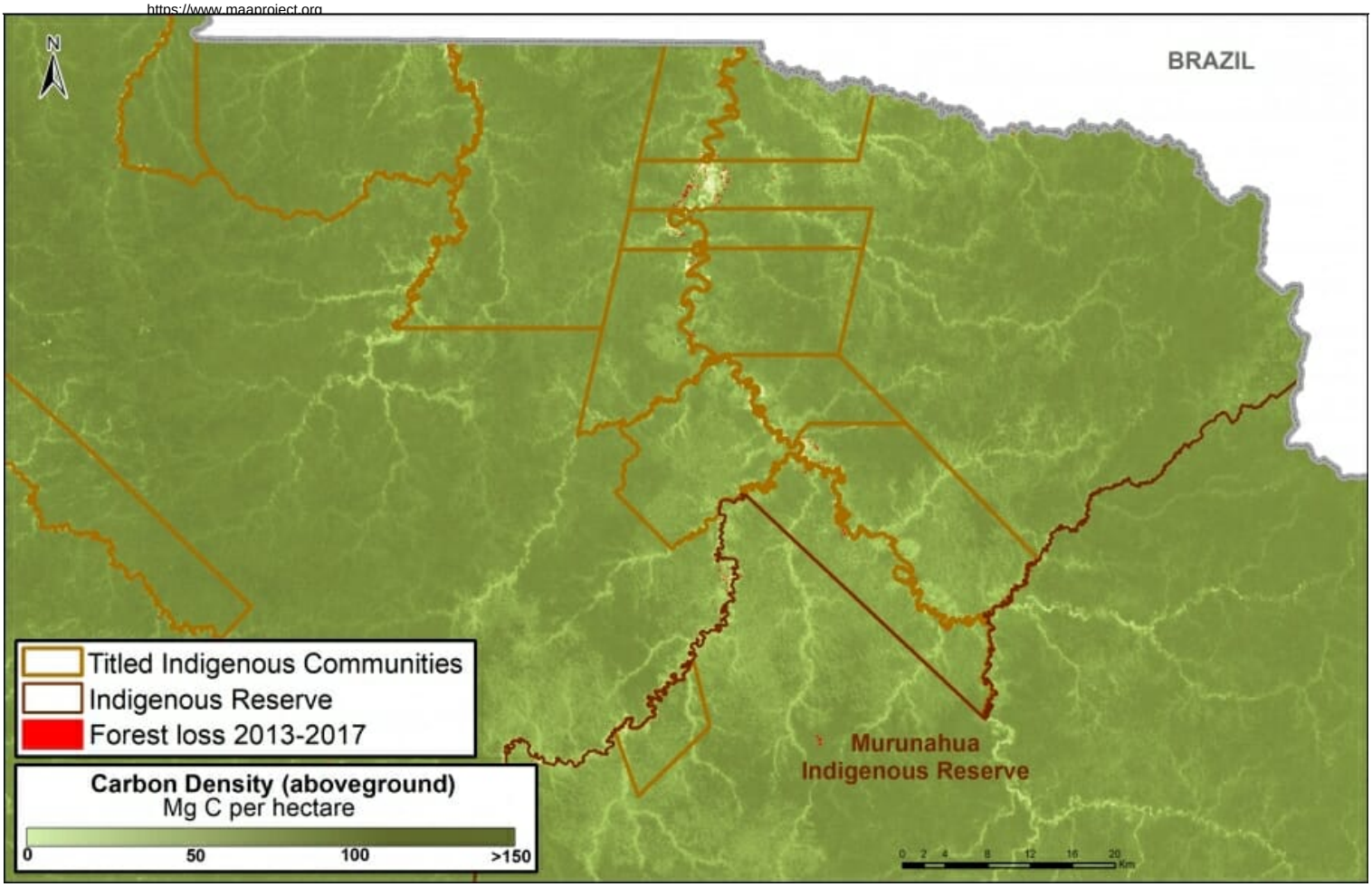

Imagen 83e. Datos: Asner et al 2014, MINAM/PNCB, SERNANP

References

[1] UNFCCC. Emissions Summary for Peru. http://di.unfccc.int/ghg_profile_non_annex1

[2] No incluye las emisiones por la degradación de bosques

[3] Asner GP et al (2014). The High-Resolution Carbon Geography of Perú. Carnegie Institution for Science. ftp://dge.stanford.edu/pub/asner/carbonreport/CarnegiePeruCarbonReport-English.pdf

[4] Sistema de Áreas Naturales Protegidas del Perú, que incluye áreas de administración nacional, regional, y privado. Datos de las tierras indígenas son de Instituto de Bien Común. Datos de pérdida forestal son de la Programa Nacional de Conservación de Bosques para la Mitigación del Cambio Climático (MINAM/PNCB).

[5] UNFCCC. Emissions Summary for United States. http://di.unfccc.int/ghg_profile_annex1

Citation

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