					Rechercher			Aurélien THIRIET
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Re: Structure savanne avec GEDI								
	Expéditeur : (Le Bienfaiteur S	Sagang					
À: (dominique lamonica) (aurelien thiriet)								
	Cc: (pierre couteron						

Salut Dominique et Aurelien,

J'ai essayé de fournir ci-dessous une description des variables générées. J'ai également rajouté des liens avec plus de détails sur le peu de biblio à la fin pour se familiariser avec ces questions de dynamiques de transition forêt savane.

N'hésite pas si tu as des questions.

Α+

Le Bien.

Environnemental variables:

- **1- fire_freq** = 250-m yearly fire frequency (Fire/year) from MODIS Fire_cci Burned Area Pixel Product from 2001-2020. Each value that pixel. Maxed pixel values from MODIS will have NA meaning there were no fire data for that given pixel.
- **2- mean_precip** = Mean annual precipitation (MAP, mm/year) from ERA5 Monthly Aggregates (~ 30km resolution)
- **3- cv rainfall** = MAP variance (MAP, mm/year)
- **4- eff_rainfall** = Effective rainfall (mm/year) is equal to the difference between MAP and the evapotranspiration.
- **5- mean_temp** = Mean temperature (¤C)
- **6- temp_range** = Temperature range (¤C)
- **7- ecoregion** = The RESOLVE Ecoregions dataset from the WWF, updated in 2017. We focused on Tropical & Subtropical Grasslar by MODIS canopy cover product).

Vegetation structure variables (see more details about GEDI here https://gedi.umd.edu/mission/technology/):

- **1- GEDI RH98** = canopy height measured from best quality filtered shots (25 m resolution) over savanna. We only considered pix sure that we only consider data from woodlands and savanna.
- **2- GEDI canopy cover** = proportion of the canopy between 5-10 m from the ground for each 25 m GEDI shot. This was extracted https://developers.google.com/earth-engine/datasets/catalog/LARSE_GEDI_GEDI02_B_002_MONTHLY#description)

The GEDI data were aggregated from 25 m to 250 m resolution using the average values in order to match the resolution of the fi

https://doi.org/10.1002/fee.2585

Sankaran, M., Hanan, N., Scholes, R. et al. Determinants of woody cover in African savannas. Nature 438, 846–849 (2005). https://d Lehmann, C.E.R., Archibald, S.A., Hoffmann, W.A. and Bond, W.J. (2011), Deciphering the distribution of the savanna biome. New P Marina Hirota et al., Global Resilience of Tropical Forest and Savanna to Critical Transitions. Science334,232-235(2011). DOI:10.112 Caroline E. R. Lehmann et al., Savanna Vegetation-Fire-Climate Relationships Differ Among Continents. Science 343, 548-552 (2014). Higgins, S. I., Conradi, T., Kruger, L. M., O'Hara, R. B., & Slingsby, J. A. (2023). Limited climatic space for alternative ecosystem state On 1/8/2024 7:27 AM, dominique.lamonica@ird.fr wrote: