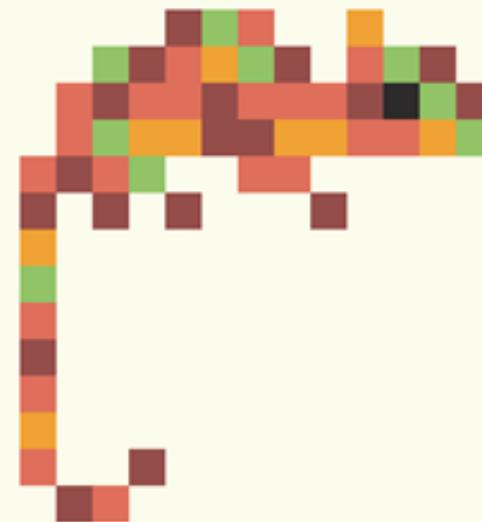




adaptes

I Conferência Ibérica
sobre Adaptação às
Alterações Climáticas

I Conferencia Ibérica
para la Adaptación
al Cambio Climático

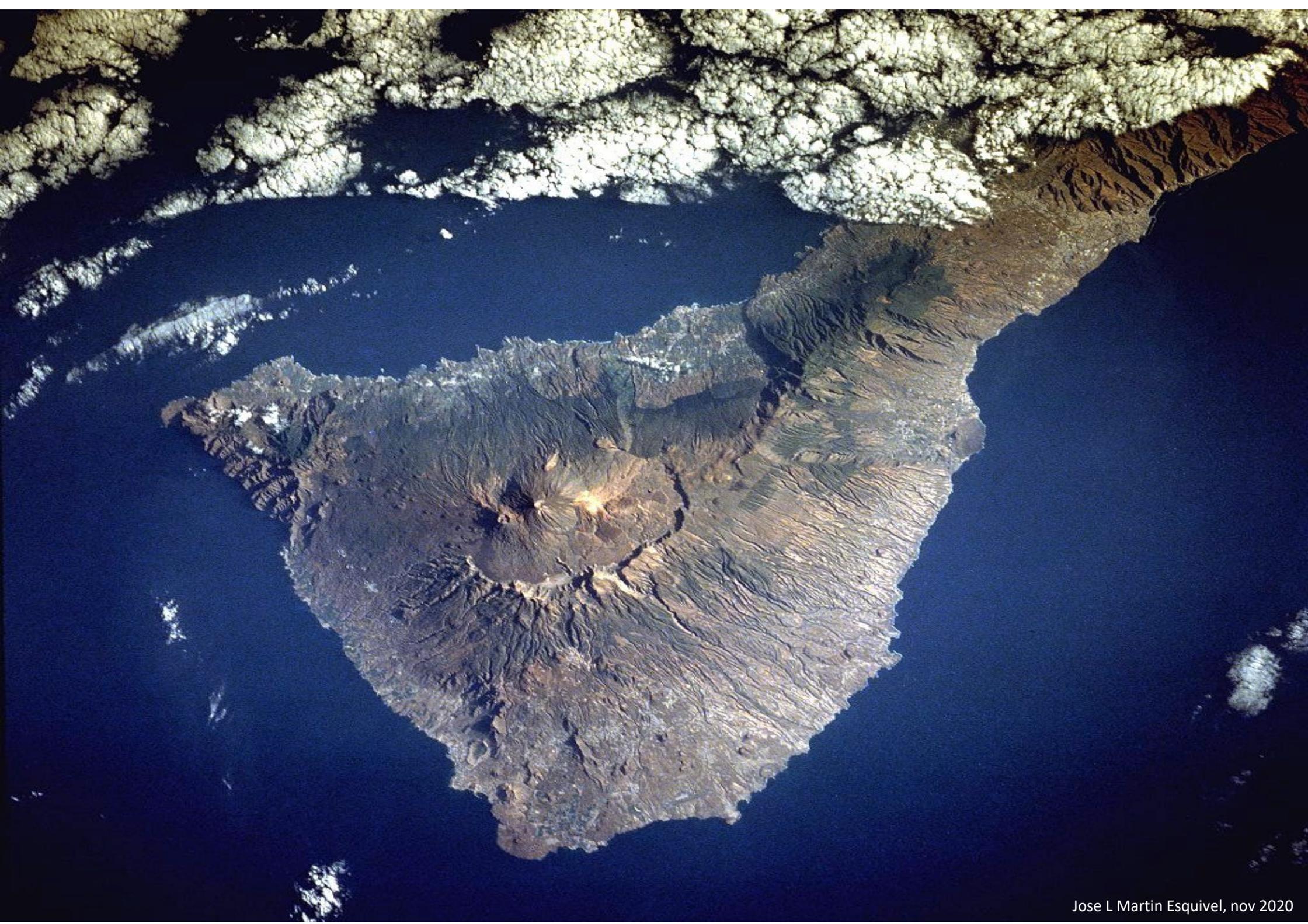


Principales retos para la conservación de la biodiversidad frente al impacto del cambio climático en la isla de Tenerife

José L Martín Esquivel

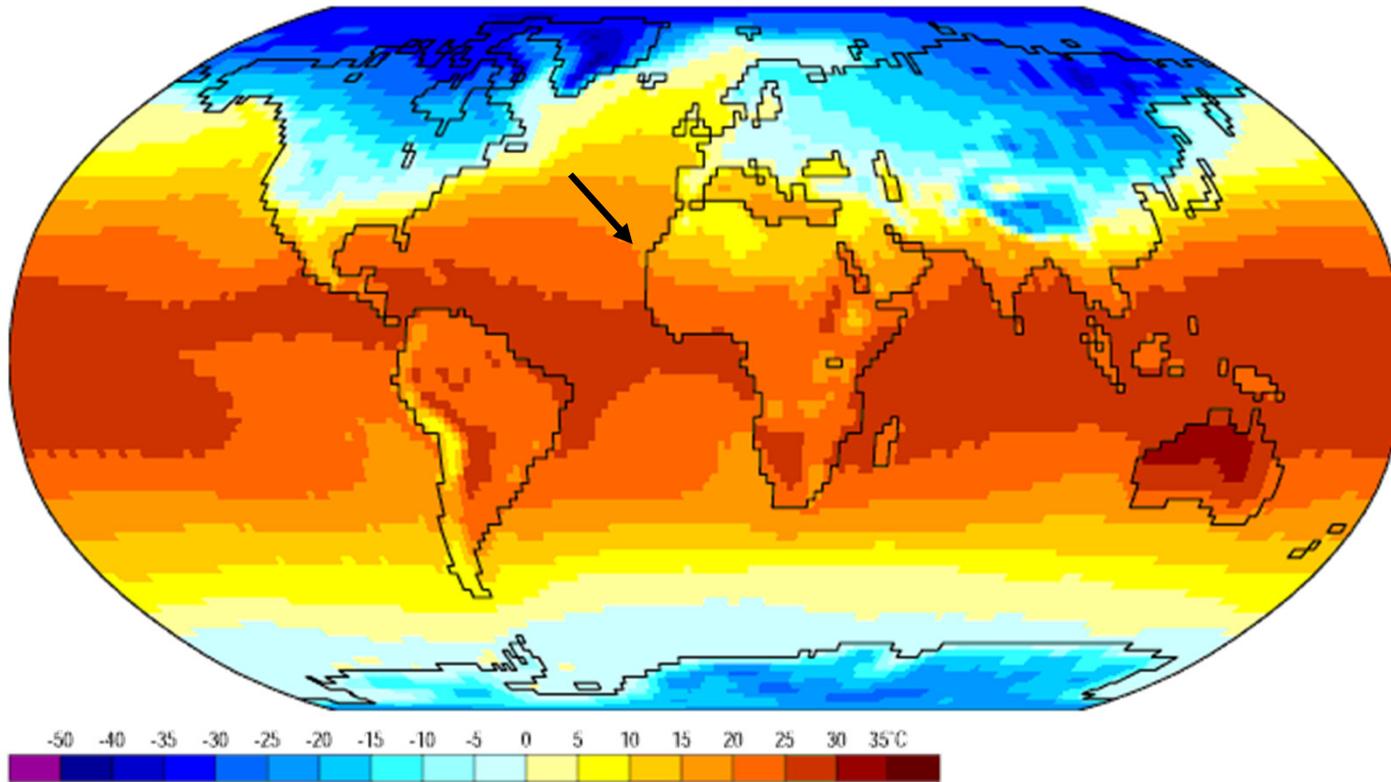
Organizado por





Air Temperature

Dec



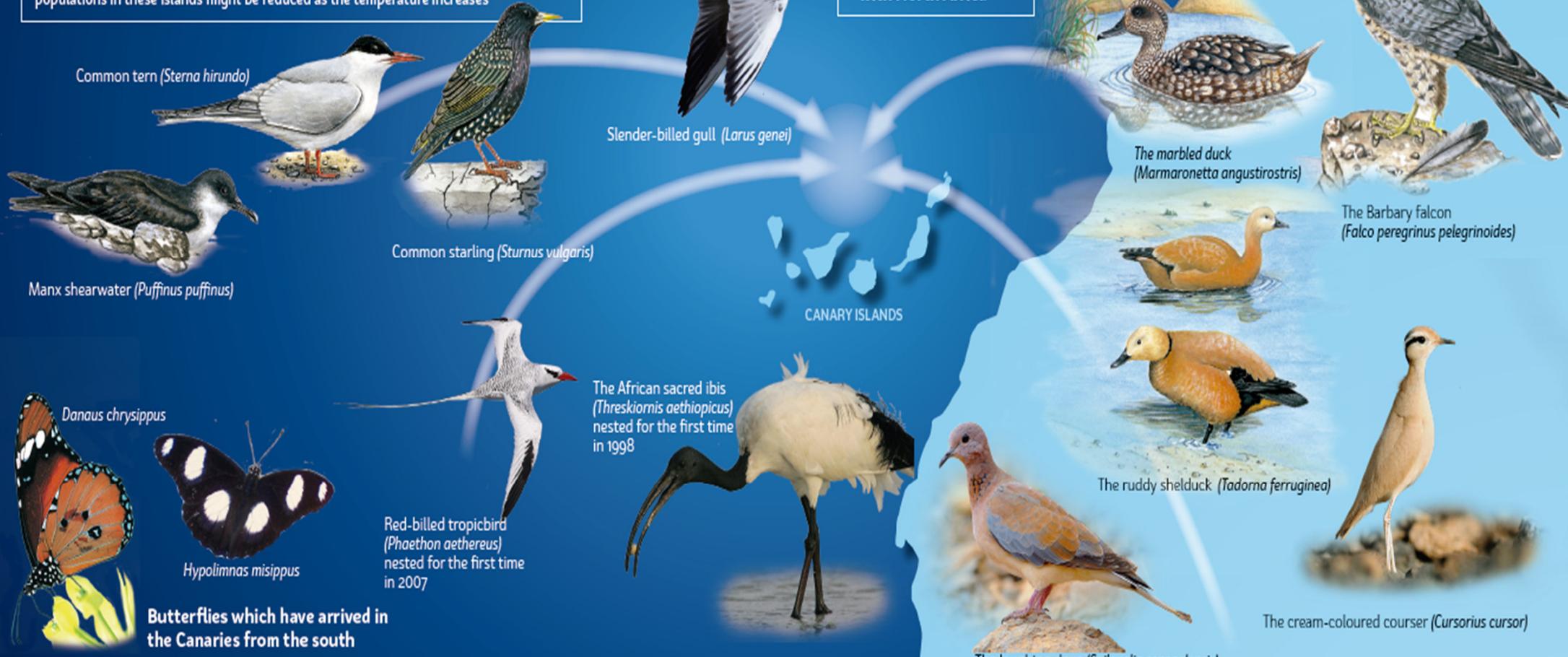
Data: NCEP/NCAR Reanalysis Project, 1959-1997 Climatologies
Animation: Department of Geography, University of Oregon, March 2000

Northward shift of the land fauna due to climate change

The species from the south of the Canaries advance towards the north, African species move west and migratory species from the north withdraw from the south

The Manx shearwater (*Puffinus puffinus*), the slender-billed gull (*Larus genei*), the common tern (*Sterna hirundo*) and the common starling (*Sturnus vulgaris*) are species which have in the Canaries and their surroundings the southern limit of their distribution so that their populations in these islands might be reduced as the temperature increases

Birds which nest in the Canaries and have populations which exchange individuals with North Africa



Common tern (*Sterna hirundo*)

Slender-billed gull (*Larus genei*)

The marbled duck (*Marmaronetta angustirostris*)

The Barbary falcon (*Falco peregrinus pelegrinoides*)

Common starling (*Sturnus vulgaris*)

Manx shearwater (*Puffinus puffinus*)

CANARY ISLANDS



The ruddy shelduck (*Tadorna ferruginea*)



The cream-coloured courser (*Cursorius cursor*)

The African sacred ibis (*Threskiornis aethiopicus*) nested for the first time in 1998



The laughing dove (*Spilopelia senegalensis*) nested for the first time in 2000

Red-billed tropicbird (*Phaethon aethereus*) nested for the first time in 2007



Butterflies which have arrived in the Canaries from the south



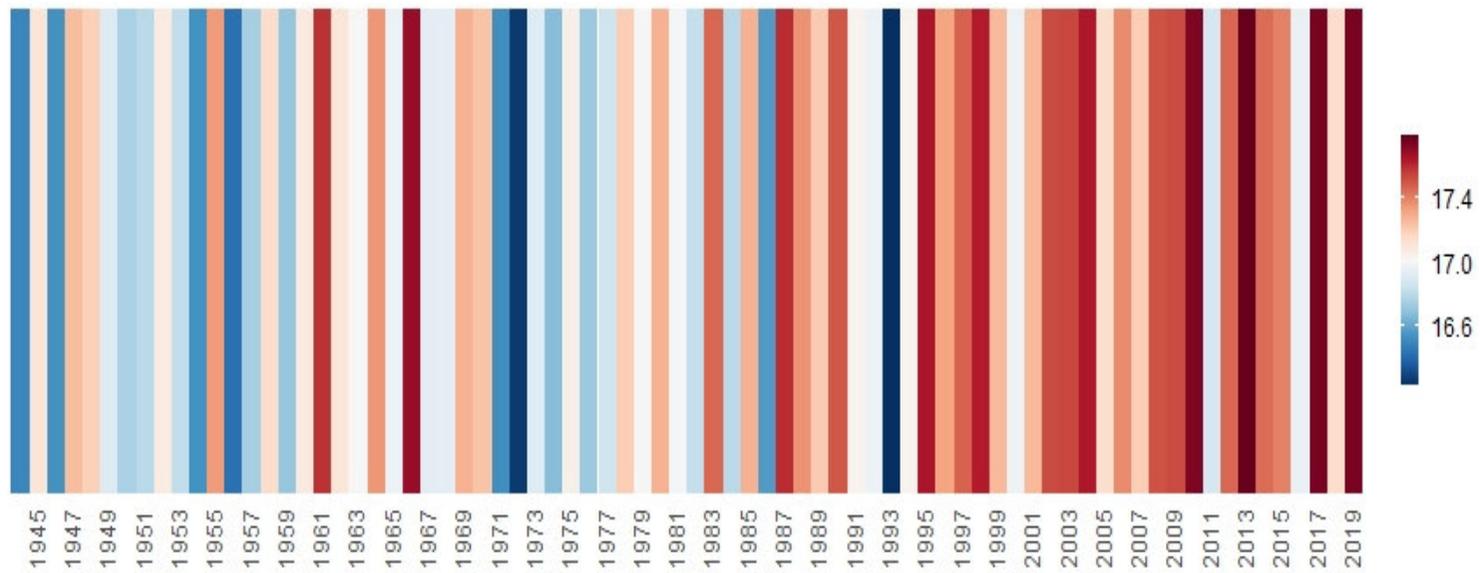
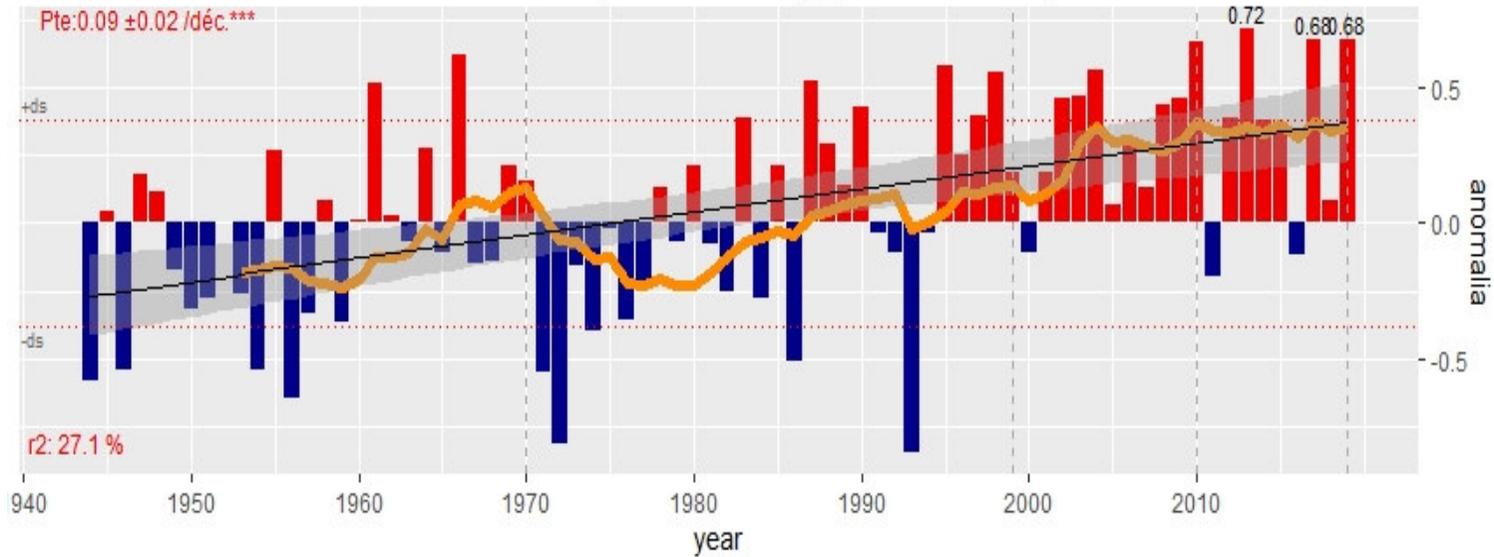
Danaus chrysippus



Hypolimnas misippus

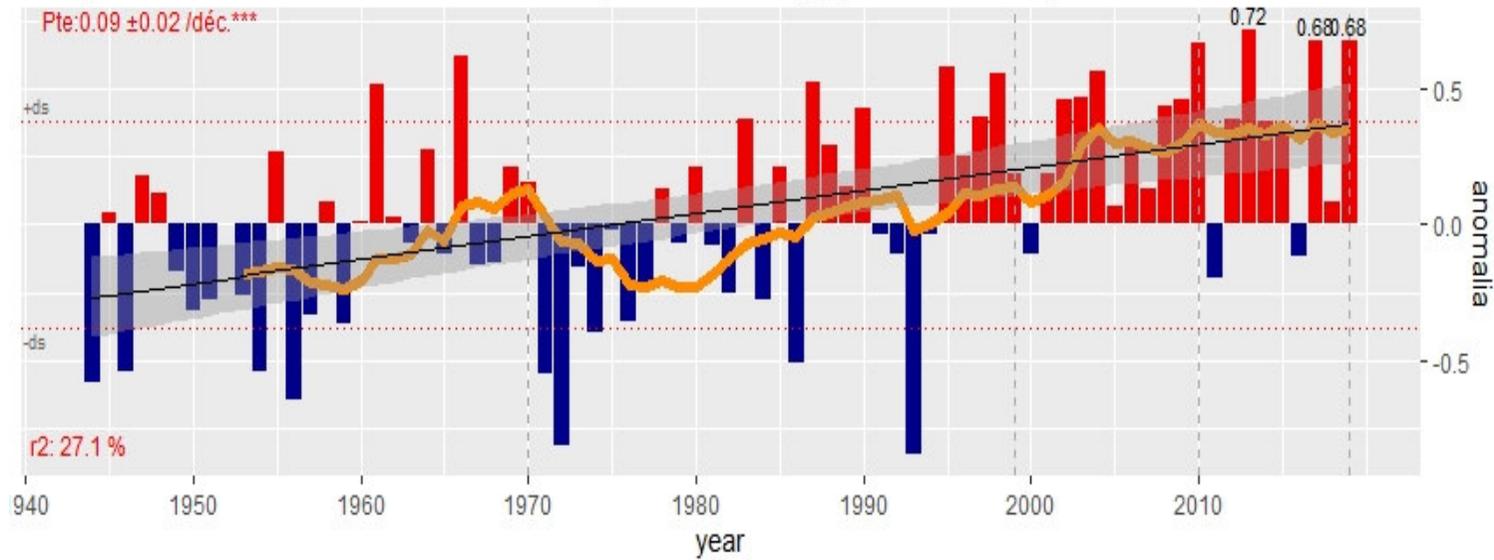
Birds which have arrived in the Canaries from the south

Temperatura ANUAL 1944-2019 sector T (Pb1970-1999) [ajuste a bandas]

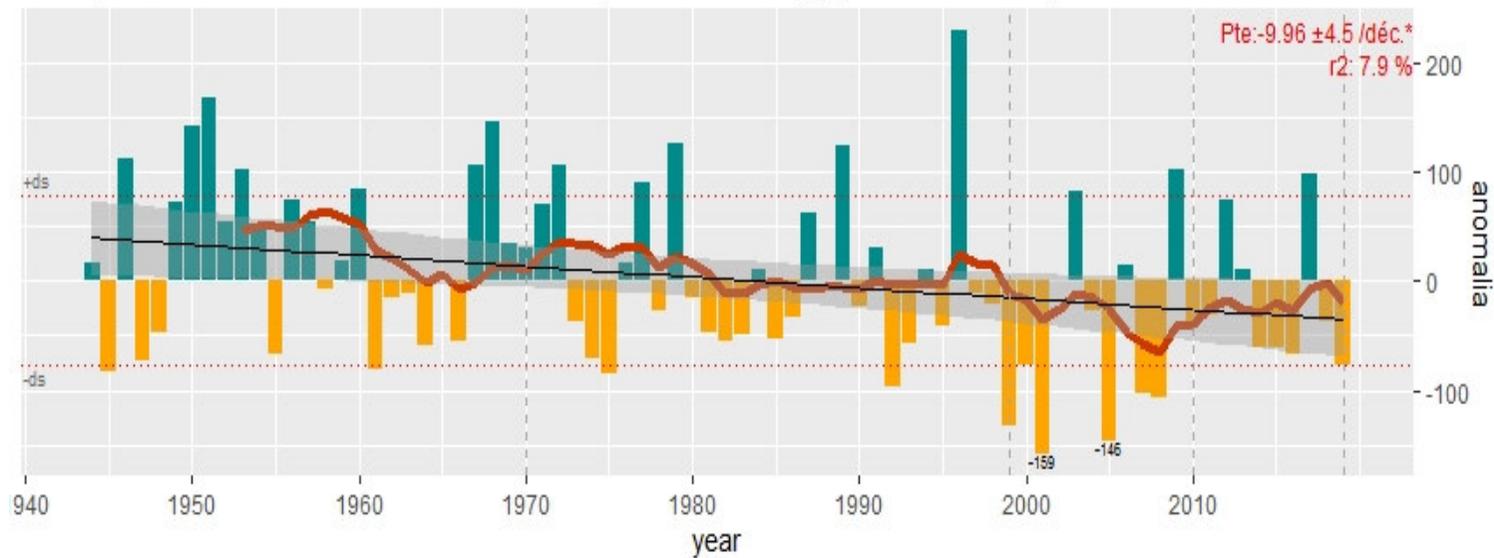


r.climaserie, Martin-Esquivel 2020

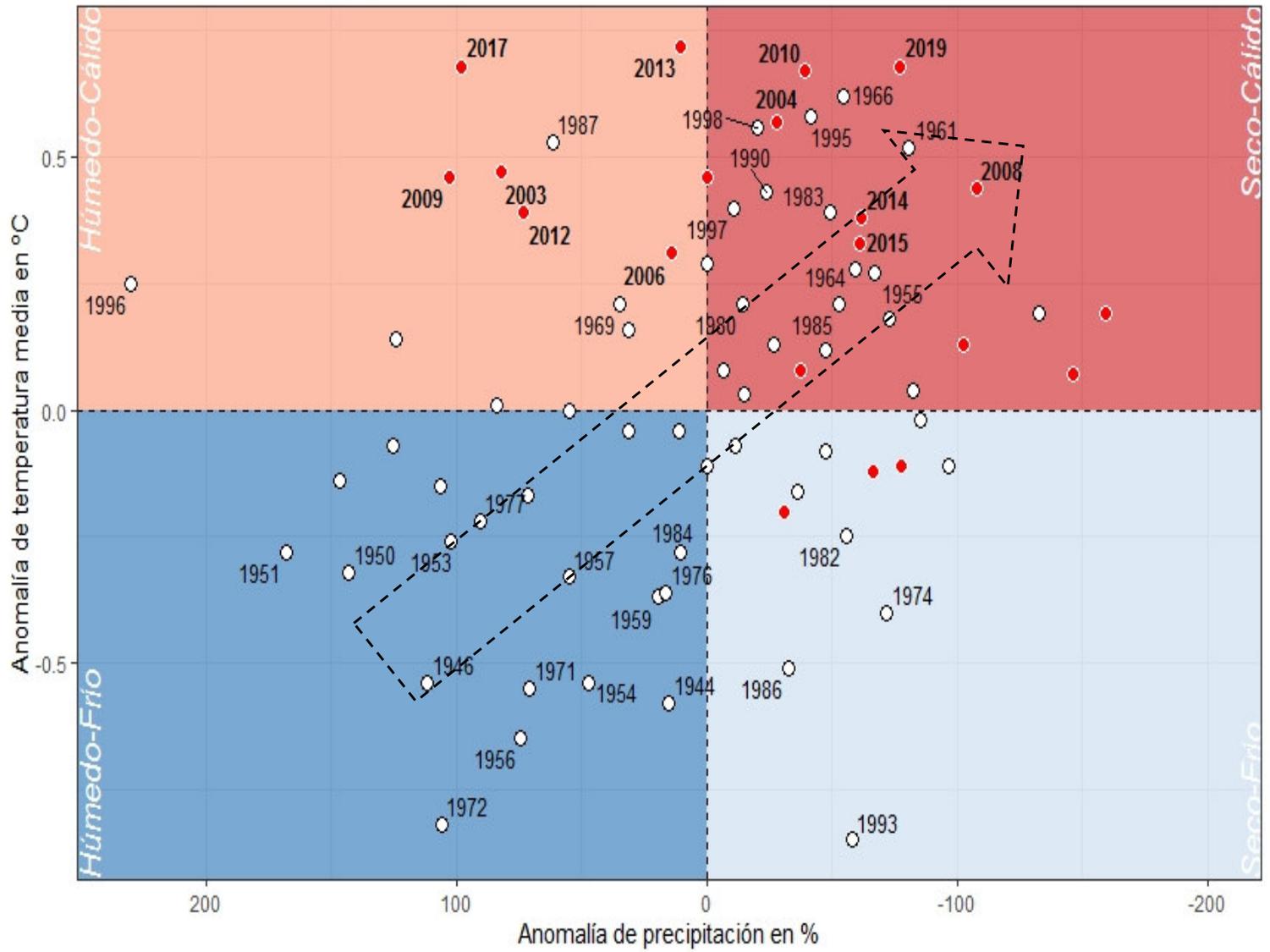
Temperatura ANUAL 1944-2019 sector T (Pb1970-1999) [ajuste a bandas]



Precipitación ANUAL 1944-2019 sector T (Pb1970-1999) [ajuste a bandas]



Anomalías de PRE-ANUAL



Datos: AEMET y PN Teide
Jose L Martin-Esquivel (inspired in D.Royé)

+1,7 °C/siglo

Diurnas: 1,1 °C/siglo

Nocturnas: +2,0 °C/siglo

+1,2 °C/siglo

Nocturnas: +2,6 °C/siglo

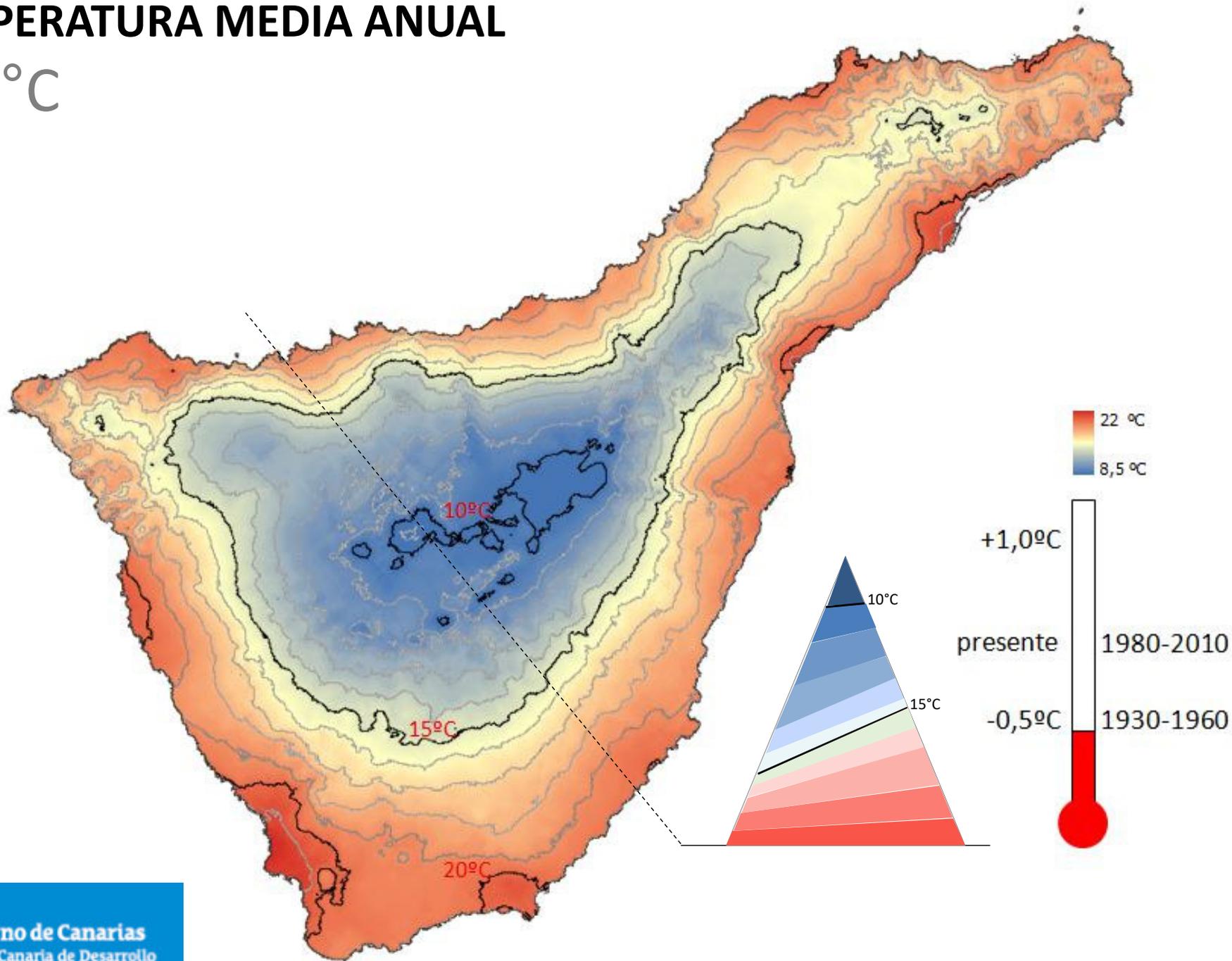
0,7 °C/siglo

Nocturnas: +1,2 °C/siglo



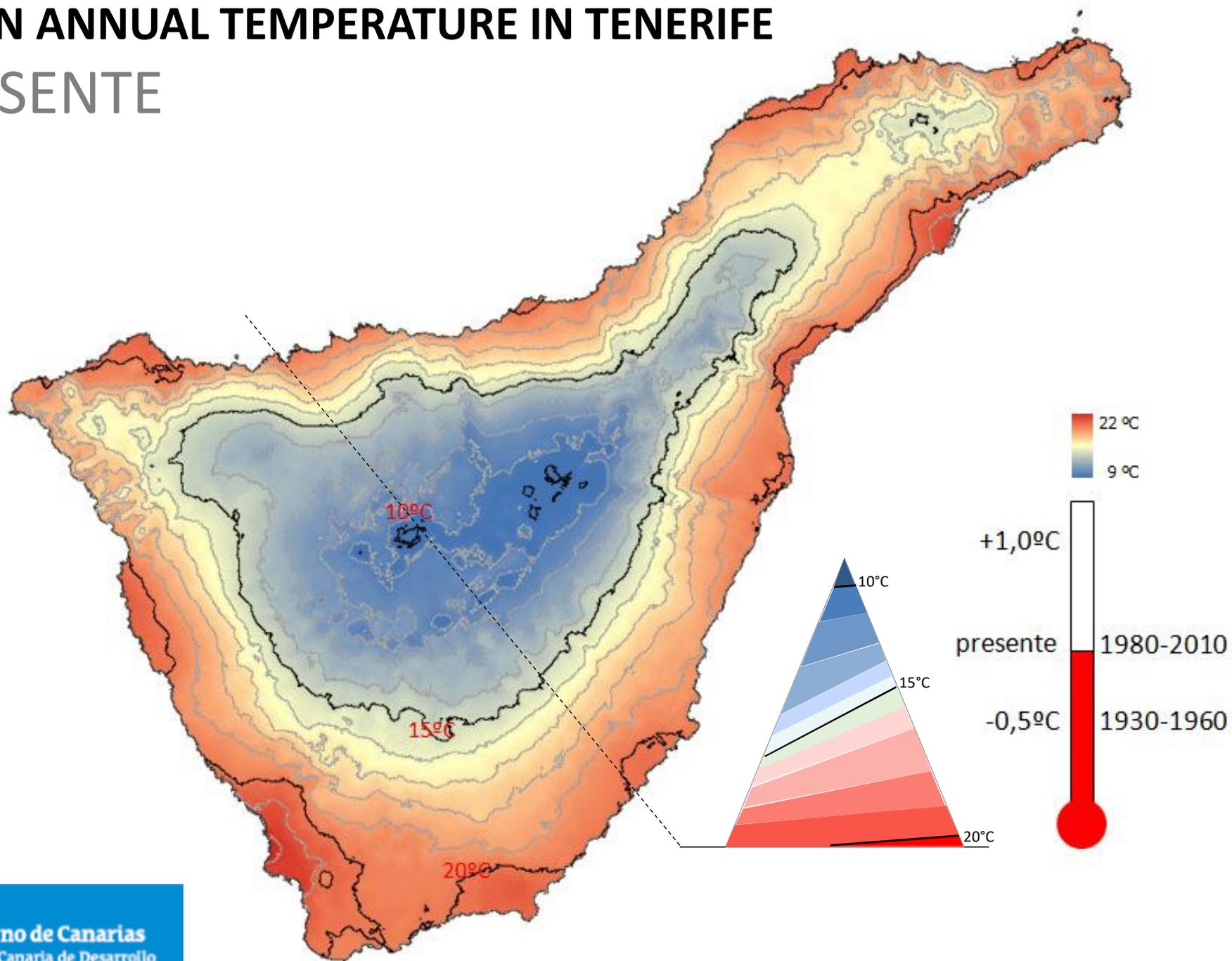
TEMPERATURA MEDIA ANUAL

-0,5°C



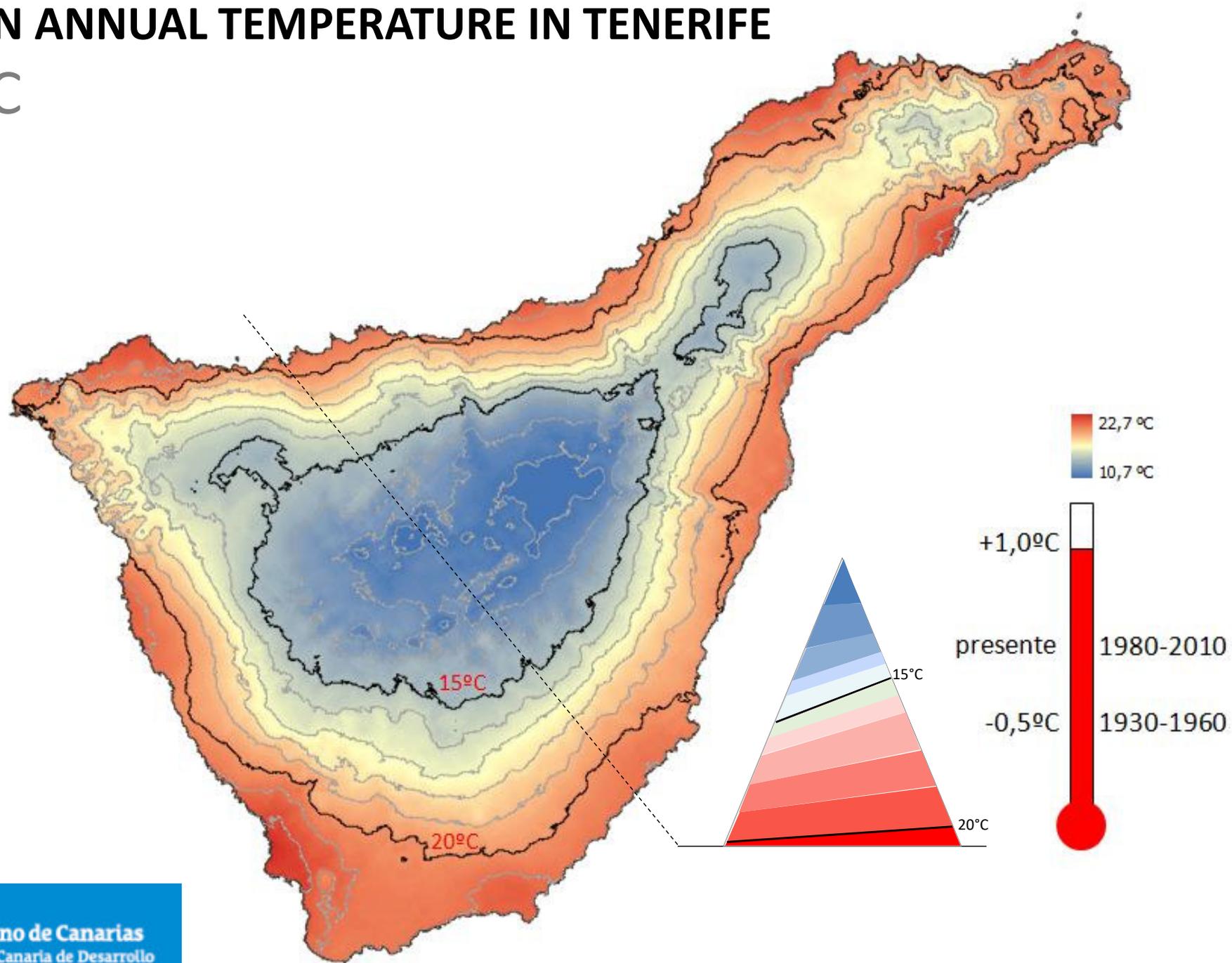
MEAN ANNUAL TEMPERATURE IN TENERIFE

PRESENTE



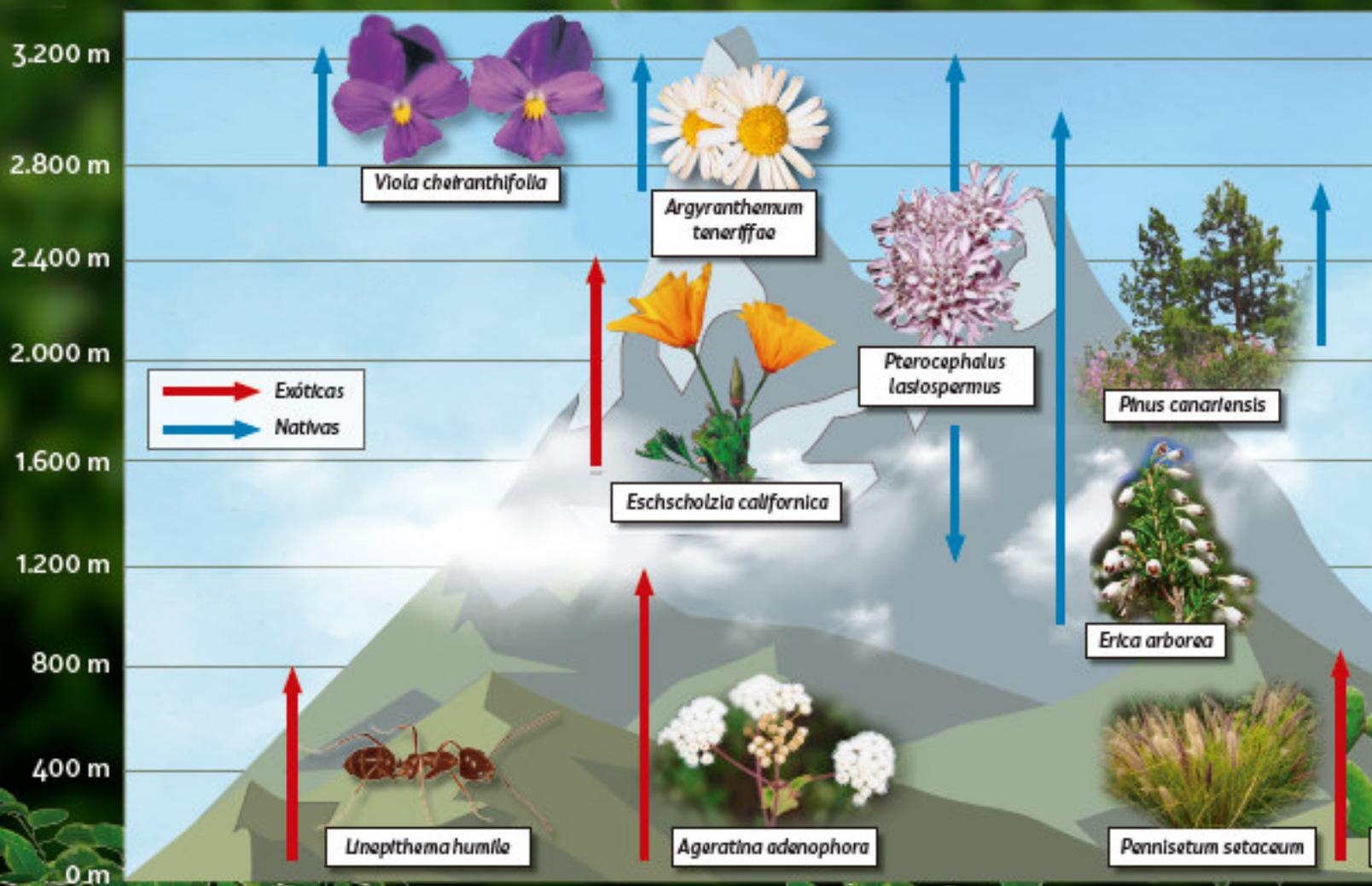
MEAN ANNUAL TEMPERATURE IN TENERIFE

+1°C

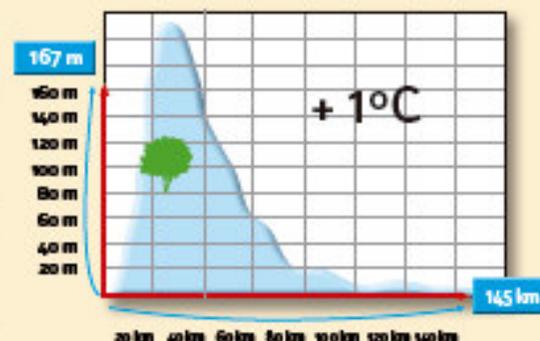


Expansión altitudinal de las especies al cambio climático

Por cada grado que aumente la temperatura, las especies tienden a **aumentar 167 m de altitud, de media**, en su rango de distribución

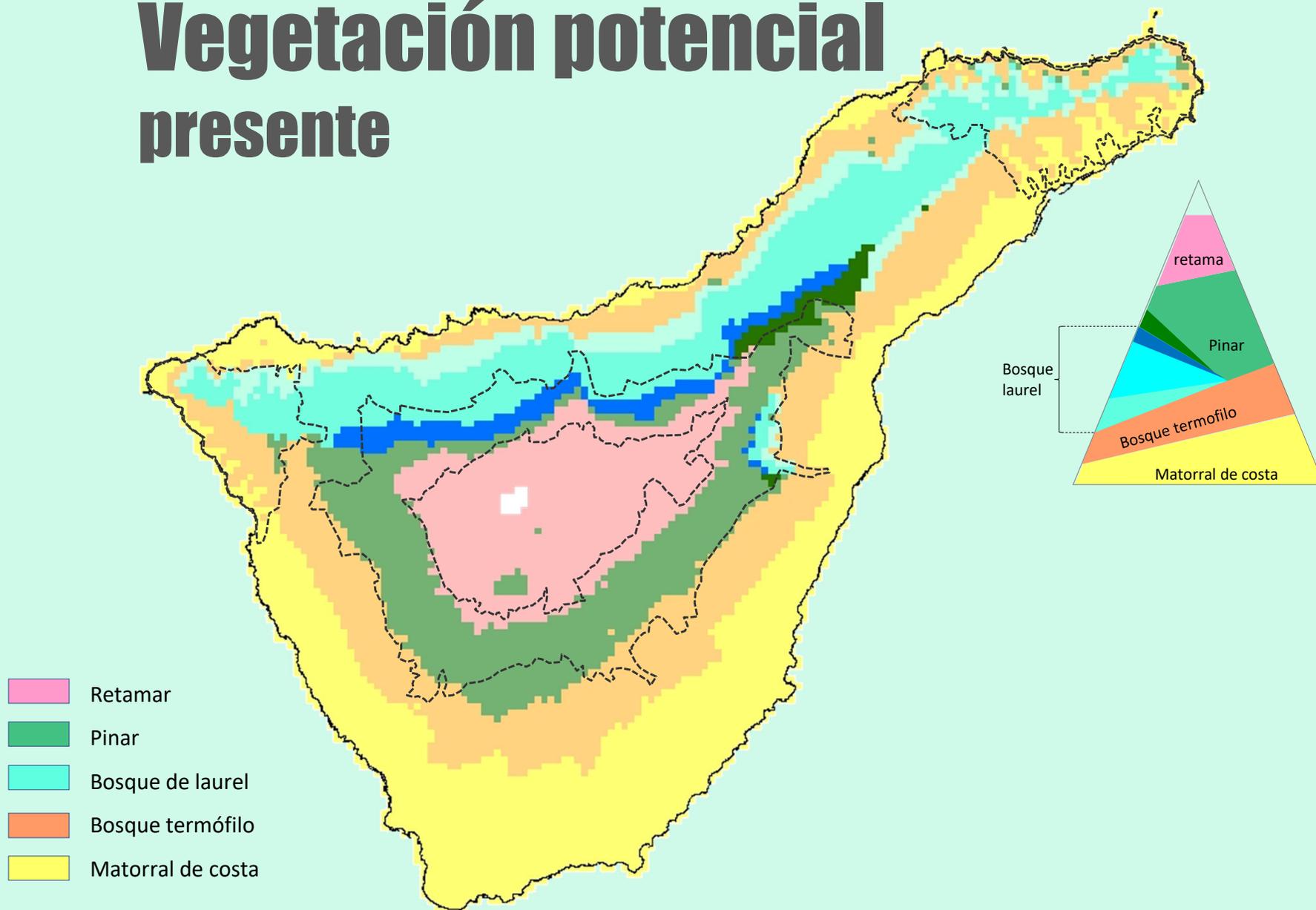


Según el modelo altitud/latitud/temperatura de Jump et al. (2009) por cada grado de incremento de temperatura, las plantas de montaña tenderán a expandirse hasta 167 m en altitud y 145 km en latitud hacia los polos, en respuesta a las nuevas condiciones climáticas

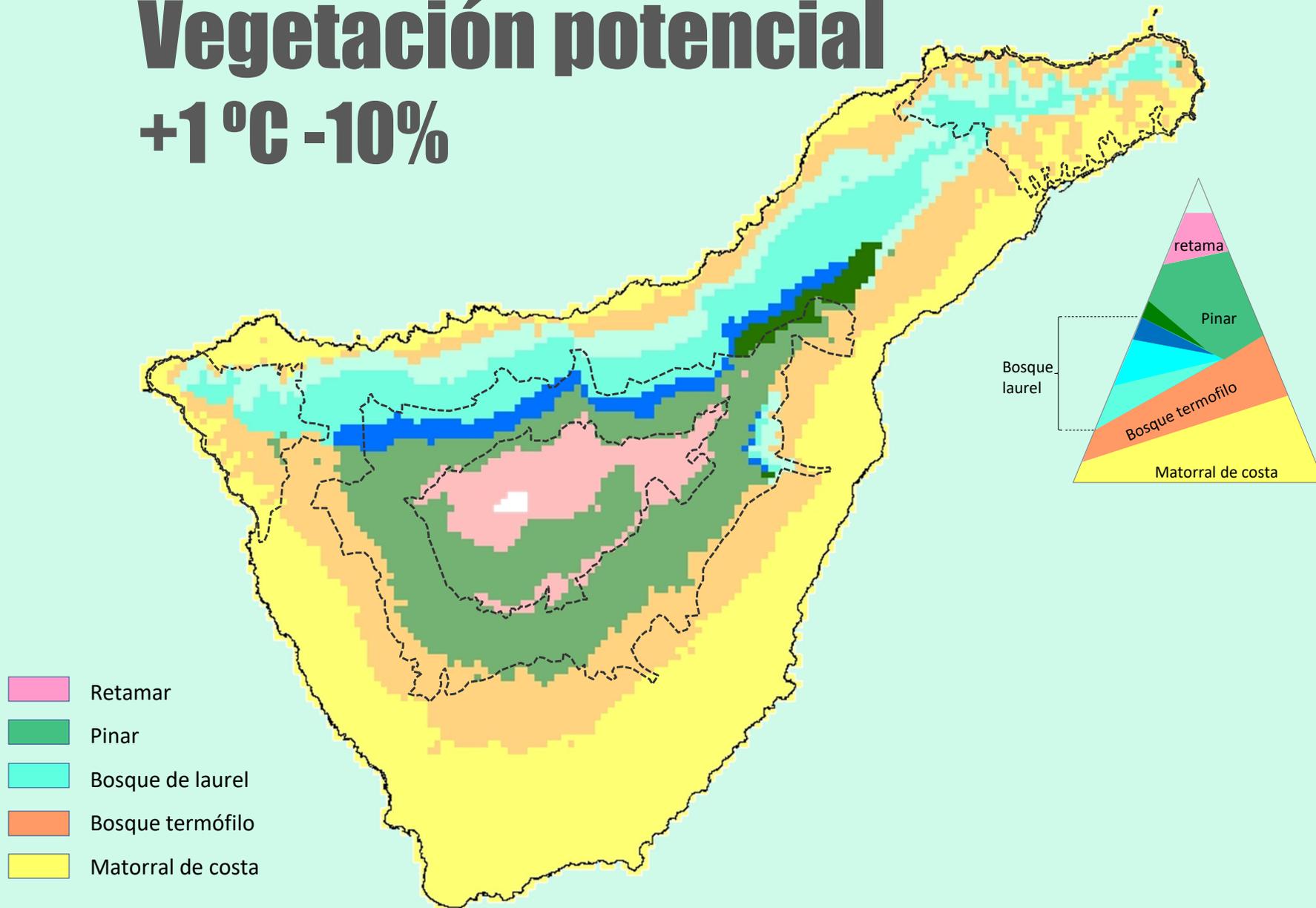


El problema de expandirse en altura es que la superficie disponible es menor, dada la estructura piramidal de las islas, de modo que a menudo entraña una contracción del rango de distribución

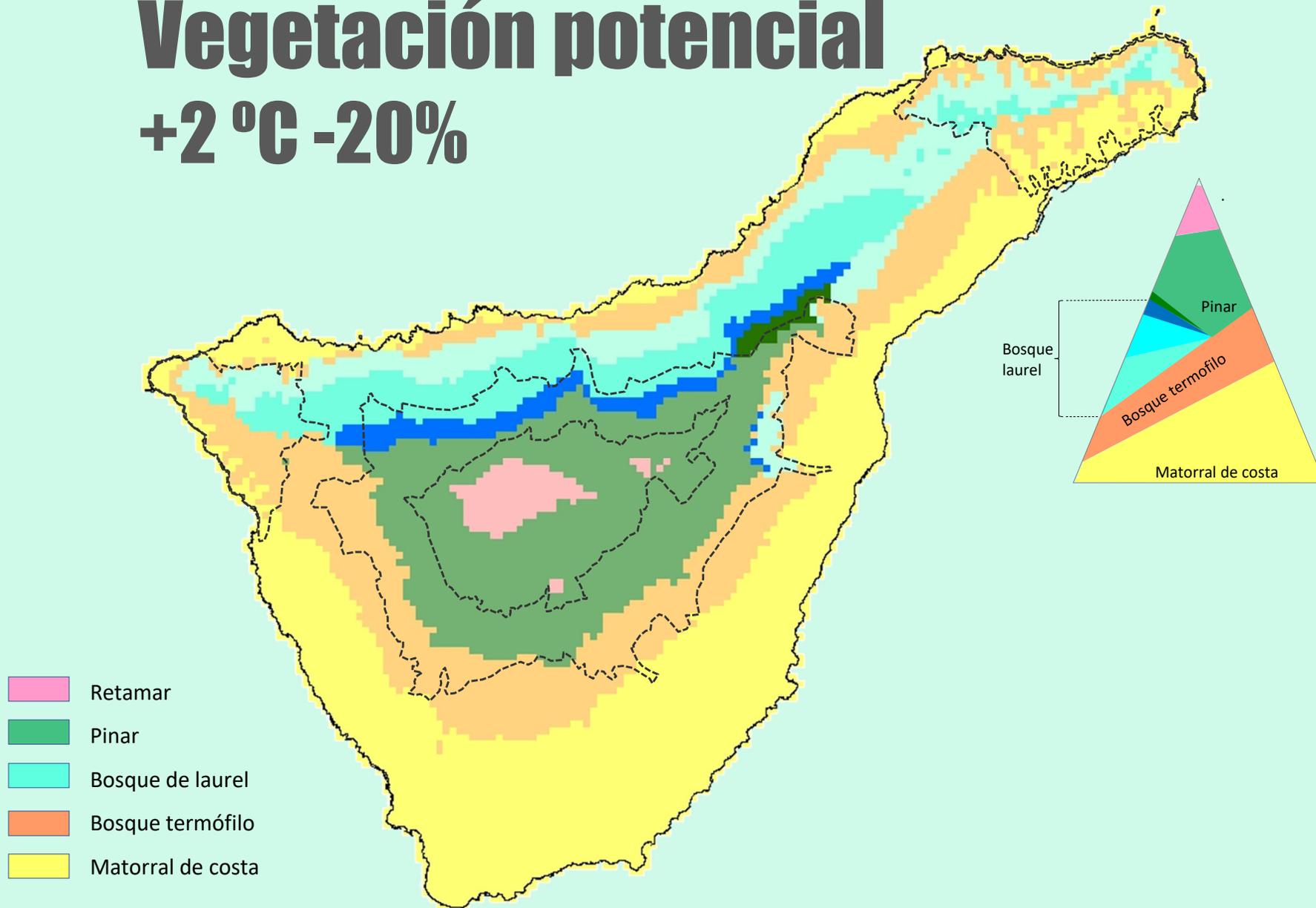
Vegetación potencial presente



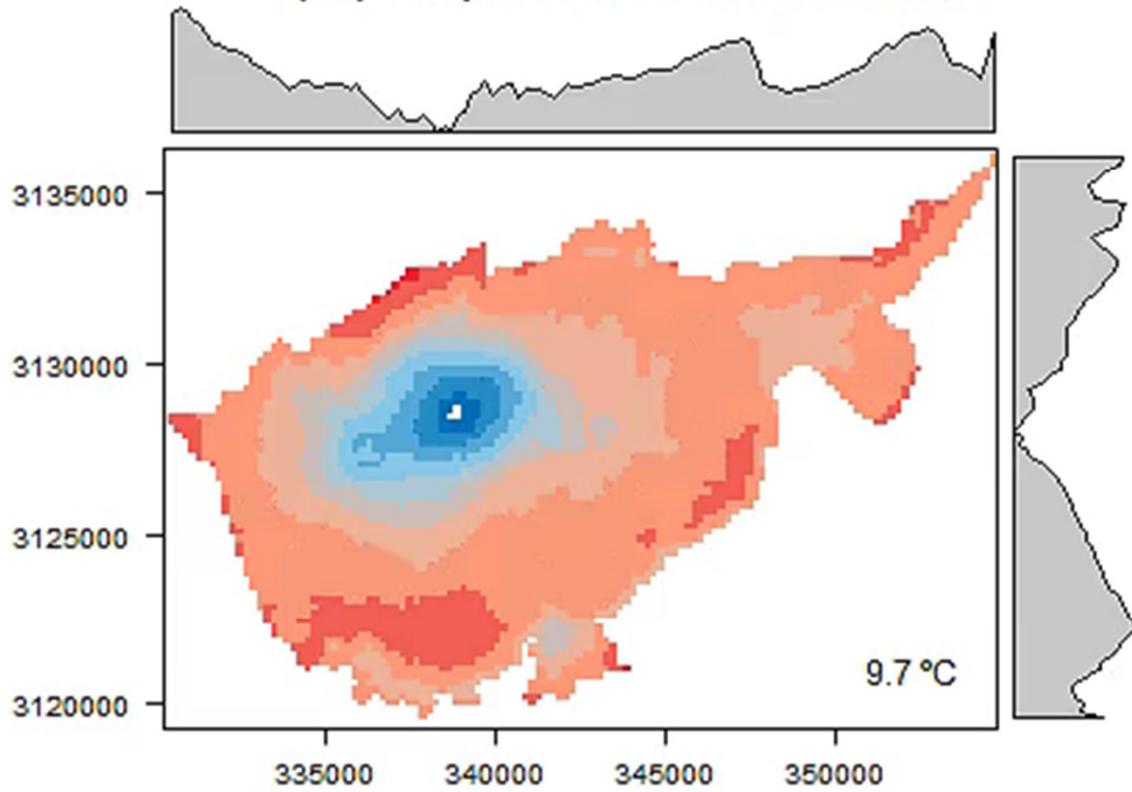
Vegetación potencial +1°C -10%



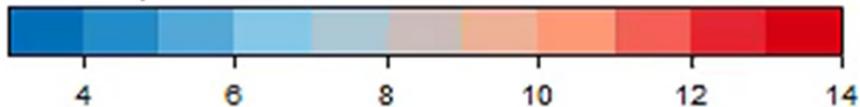
Vegetación potencial +2 °C -20%



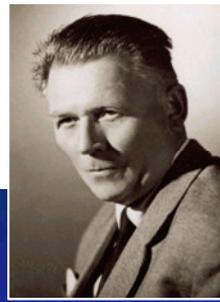
PARQUE NACIONAL DEL TEIDE (TX) Temperatura ANUAL 1960-1989



Martín-Esquivel 2020

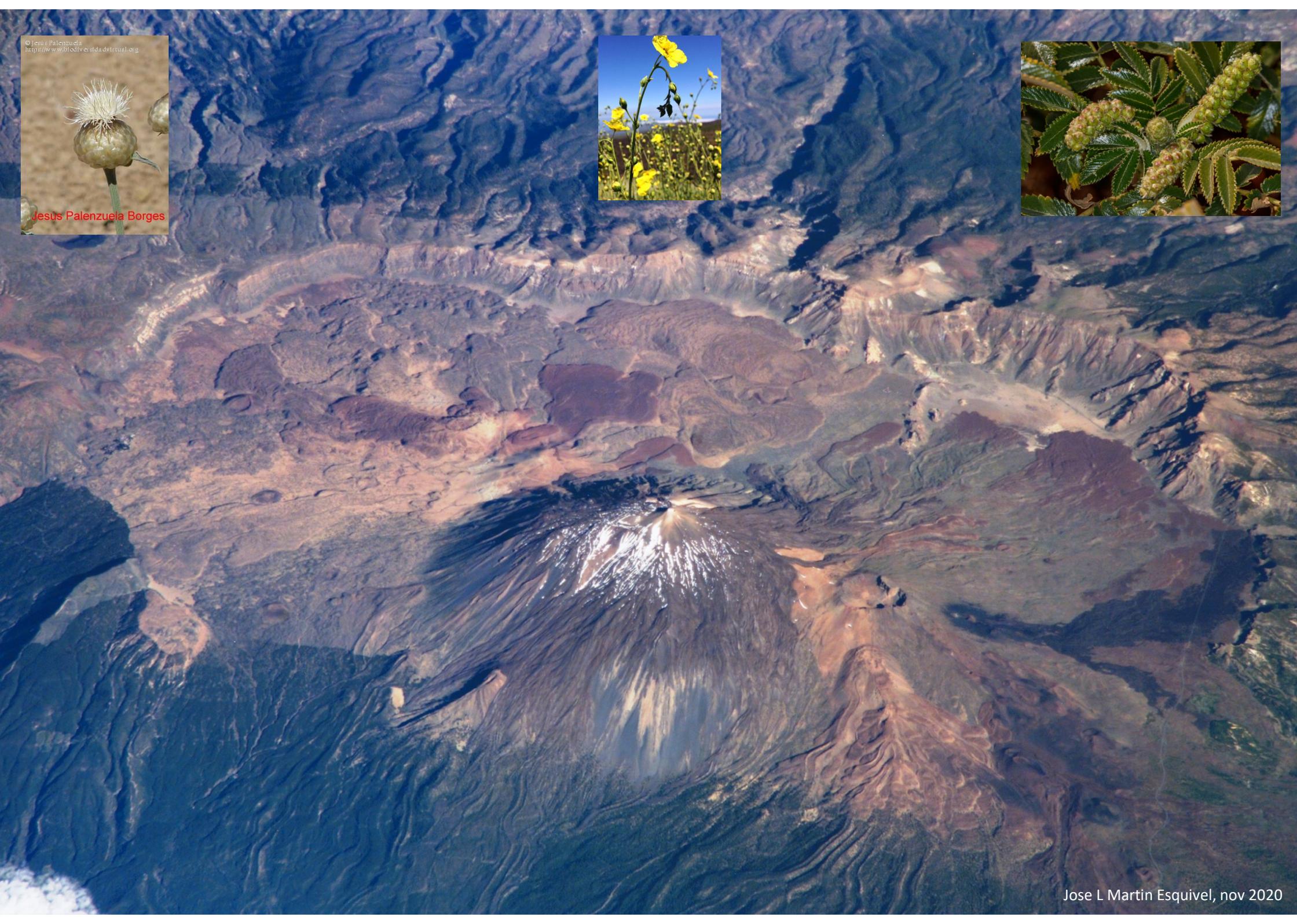


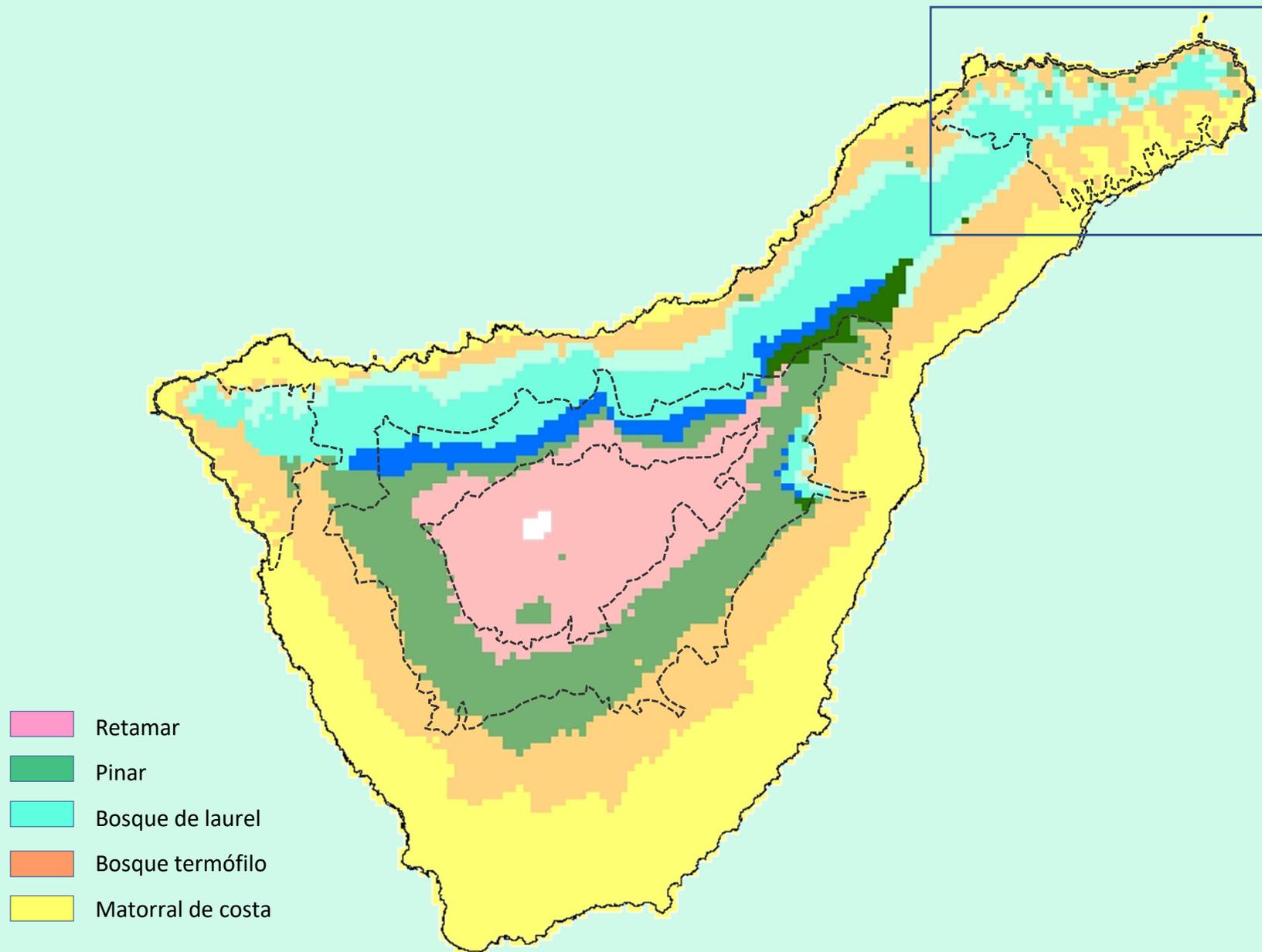
“especie rara y con tendencia a ser muy escasa, localidad única...”

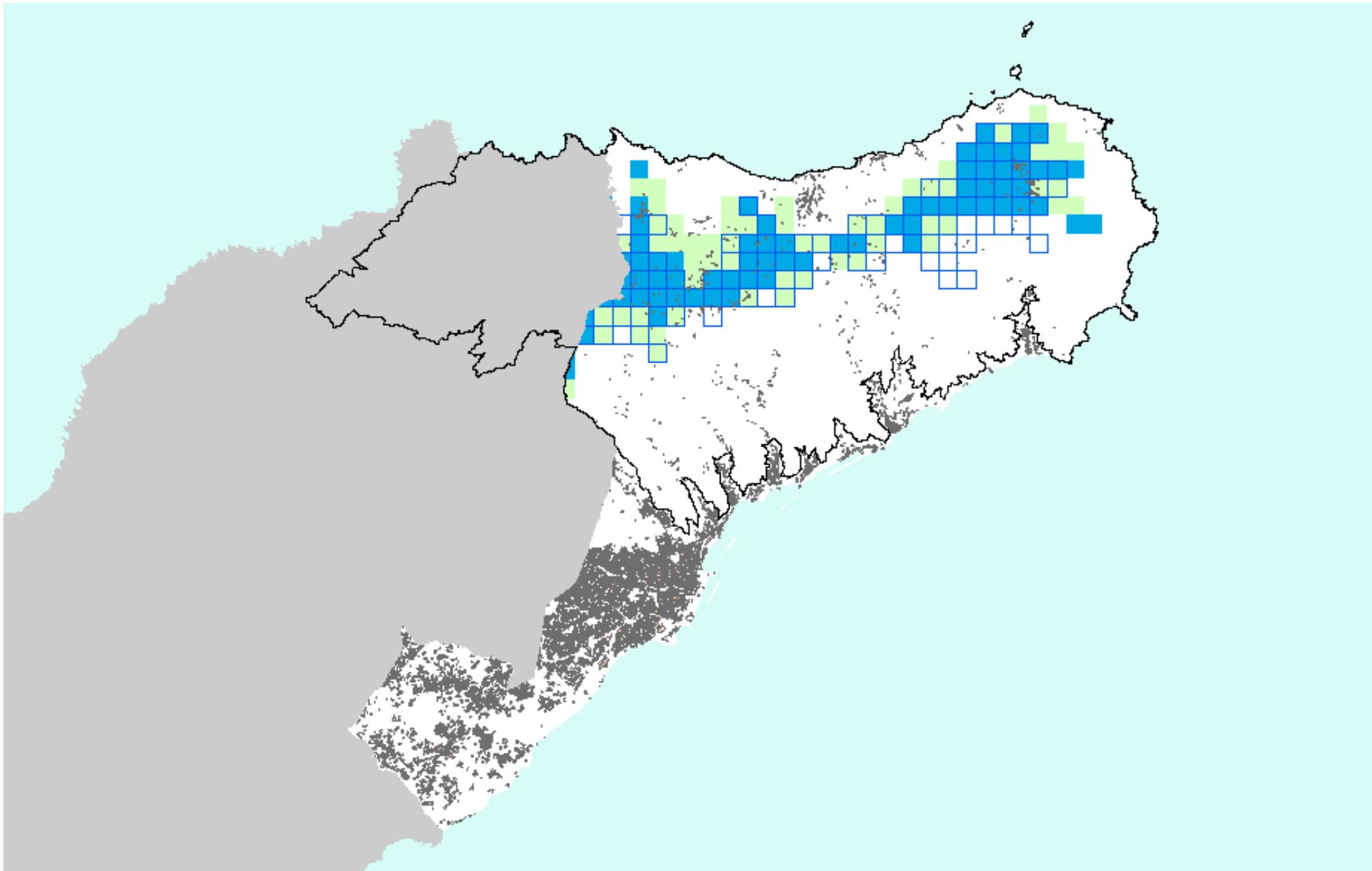


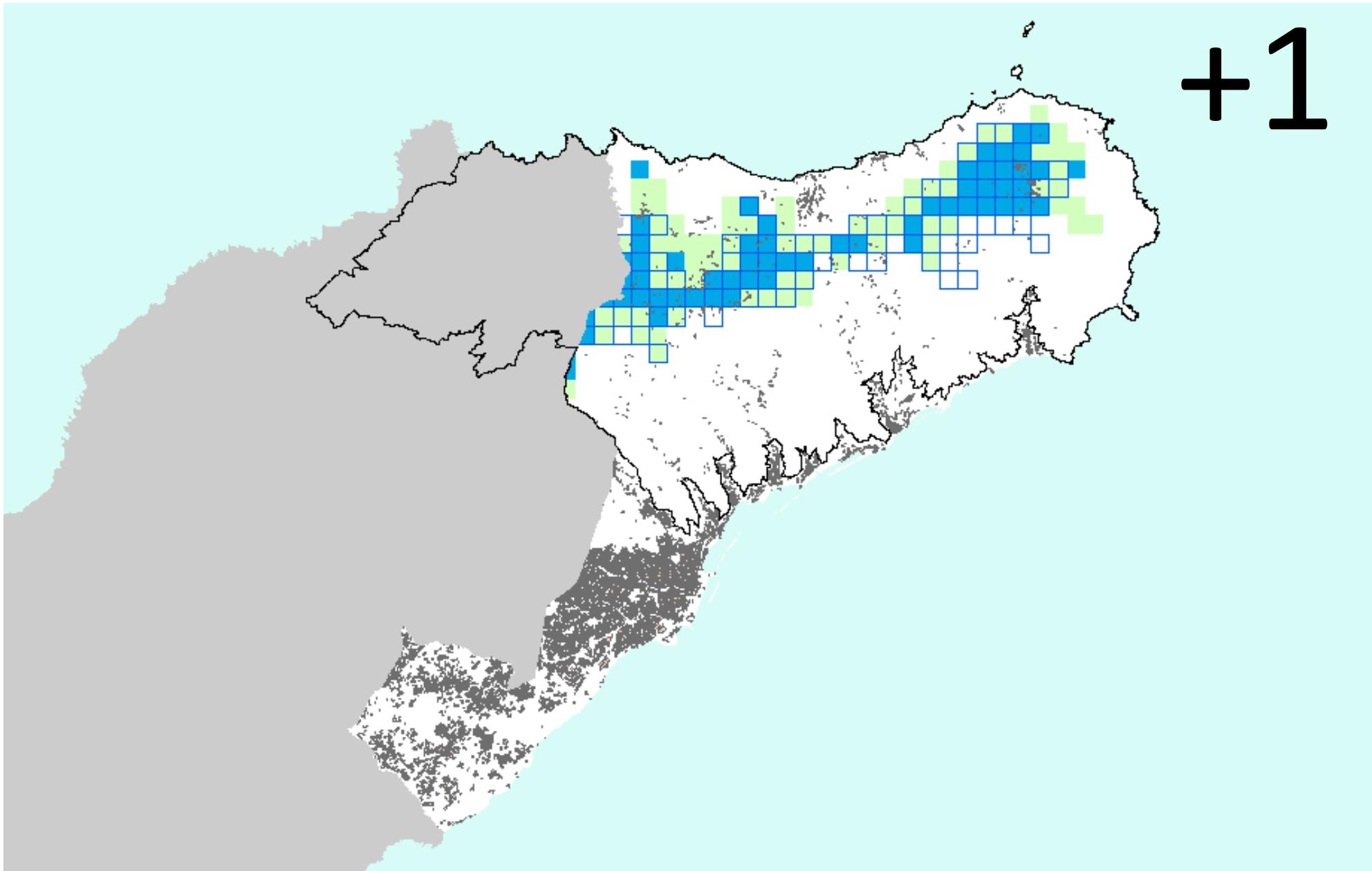
Sventenius, E.R.S. 1946. Nota sobre la Flora de las Cañadas de Tenerife. *Boletín del Instituto Nacional de Investigaciones Agronómicas* 15(78): 149-171

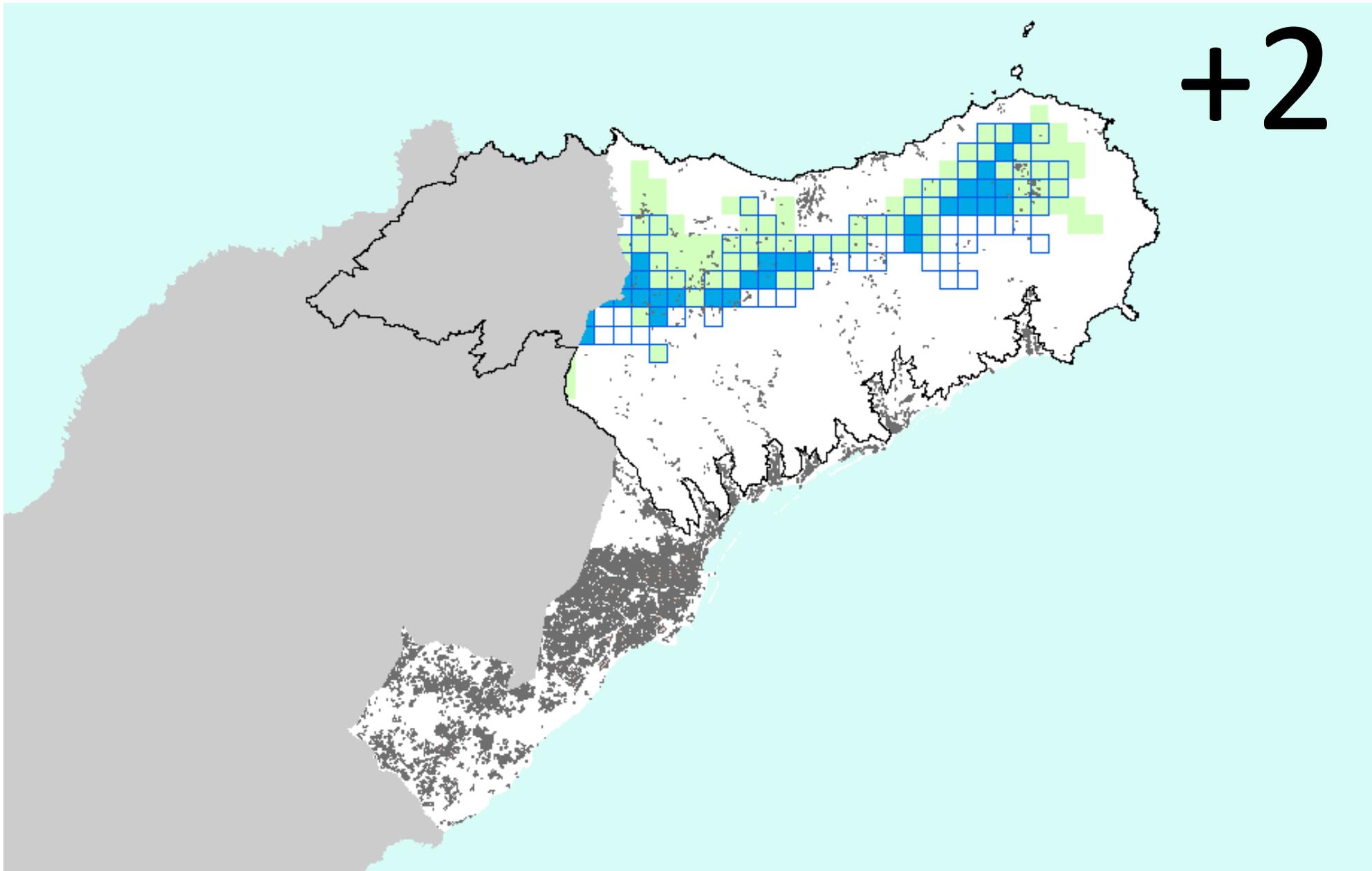


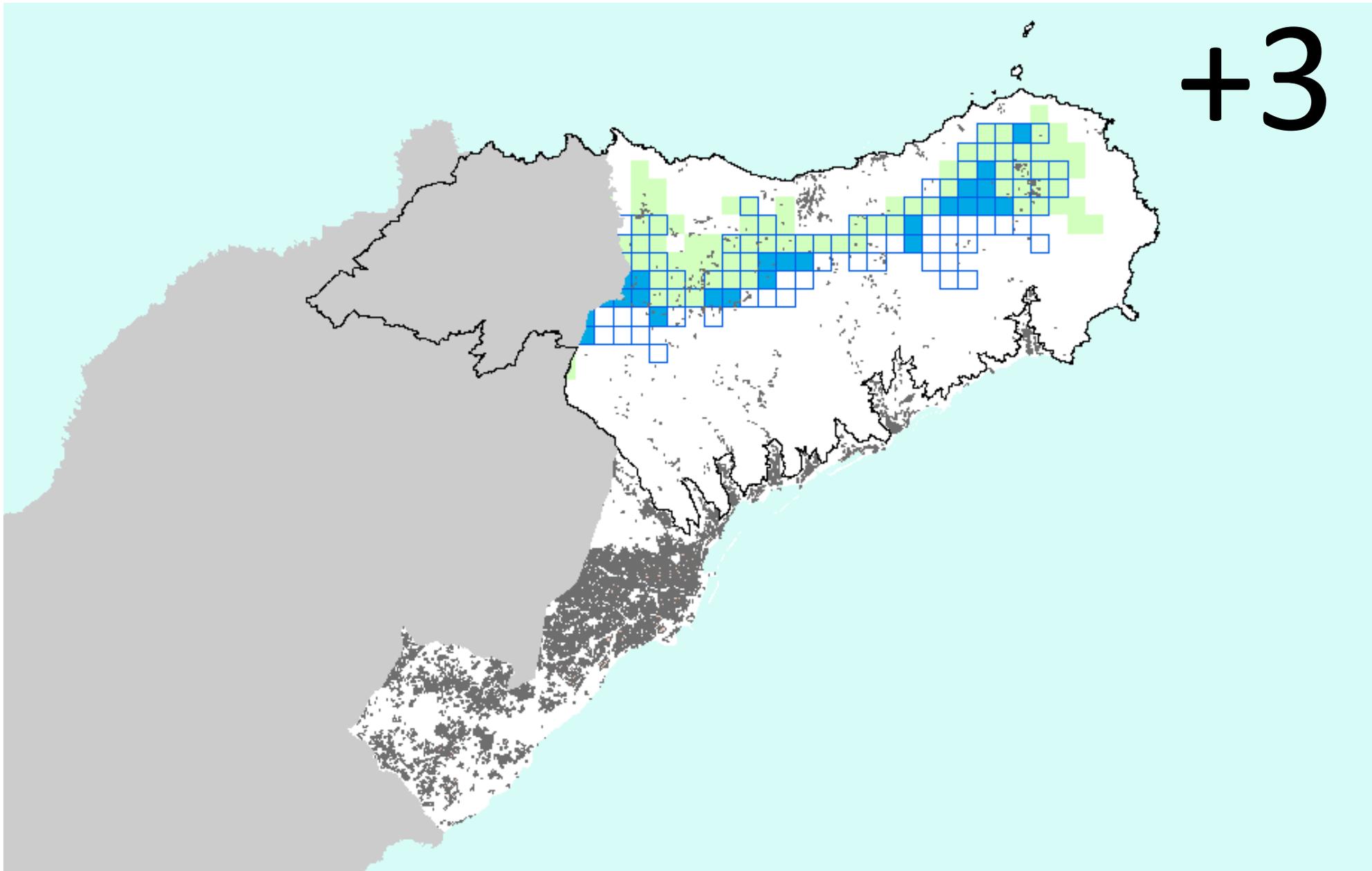


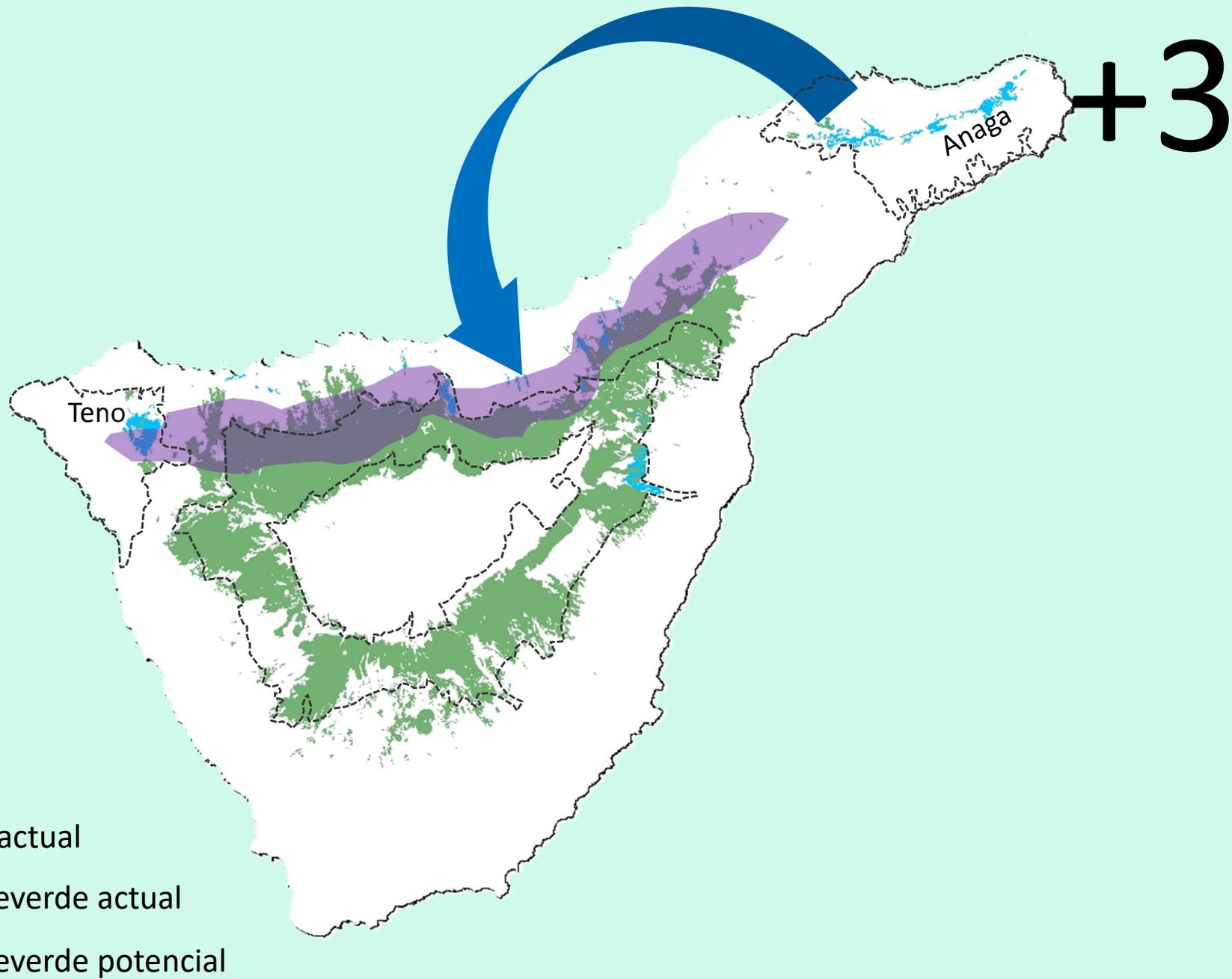












- Pinar actual
- Monteverde actual
- Monteverde potencial



La migración asistida como respuesta al cambio climático

¿Conviene hacerla, hay alternativa?

¿Cómo habría que hacerla?

¿Bajo qué condiciones?

