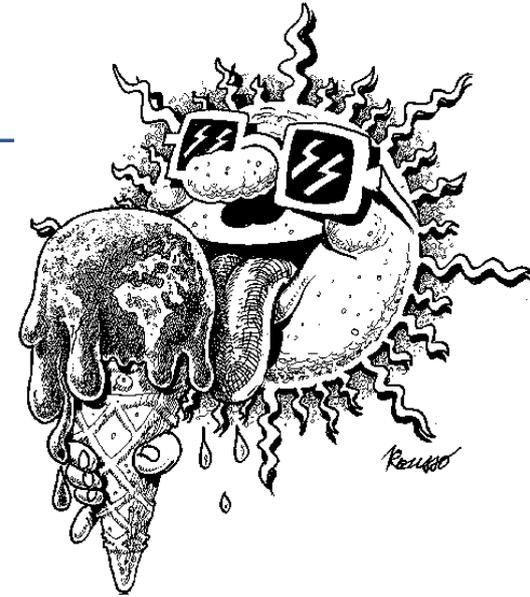


# Biodiversité et changement climatique



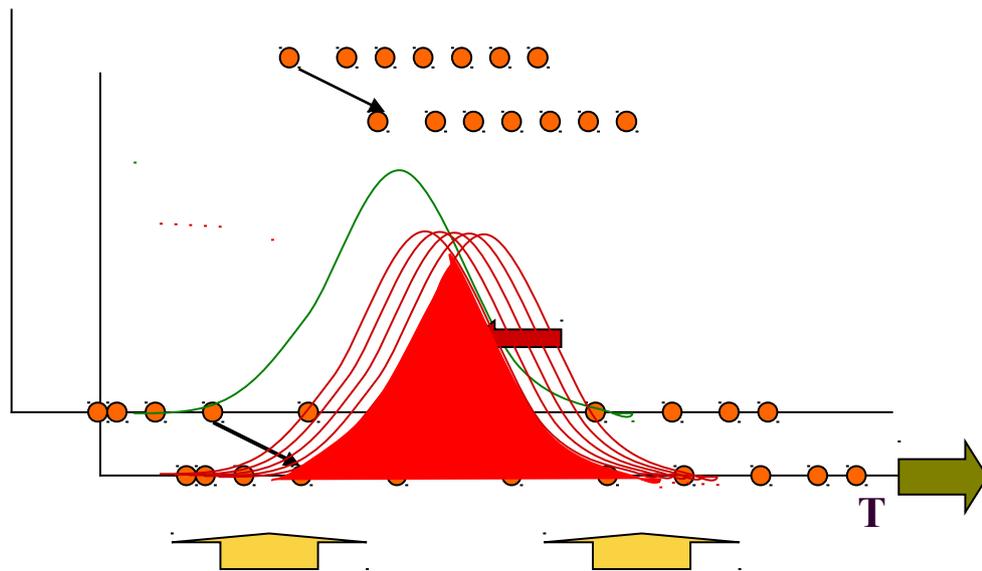
**Journée Régionale sur l'Adaptation  
au Changement Climatique**

**5 mars 2019**



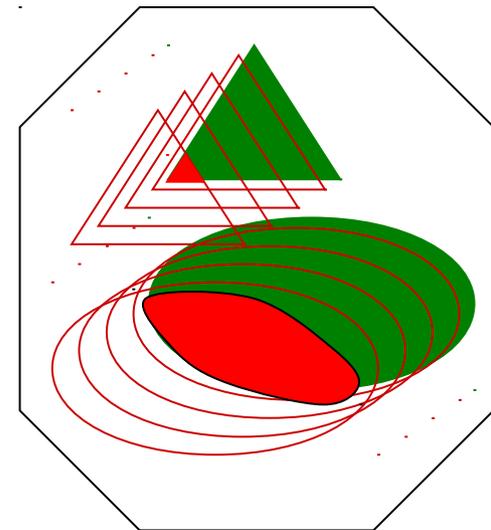
# D'abord, une question de **niche**...écologique

Niche écologique



Territoire

Enveloppe climatique

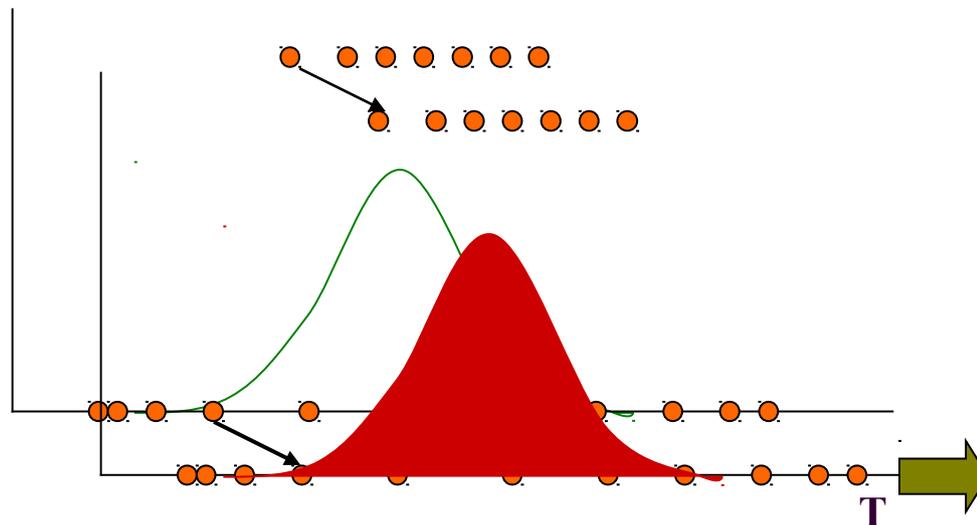


Pas de colonisation possible pour ces valeurs Extinction

**Haut risque d'extinction**

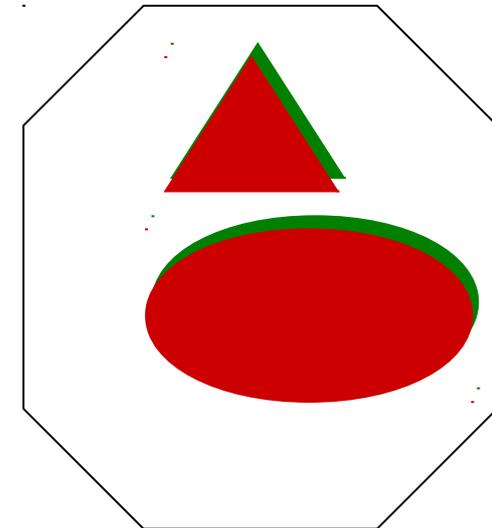
# D'abord, une question de **niche**...écologique

Niche écologique



Territoire

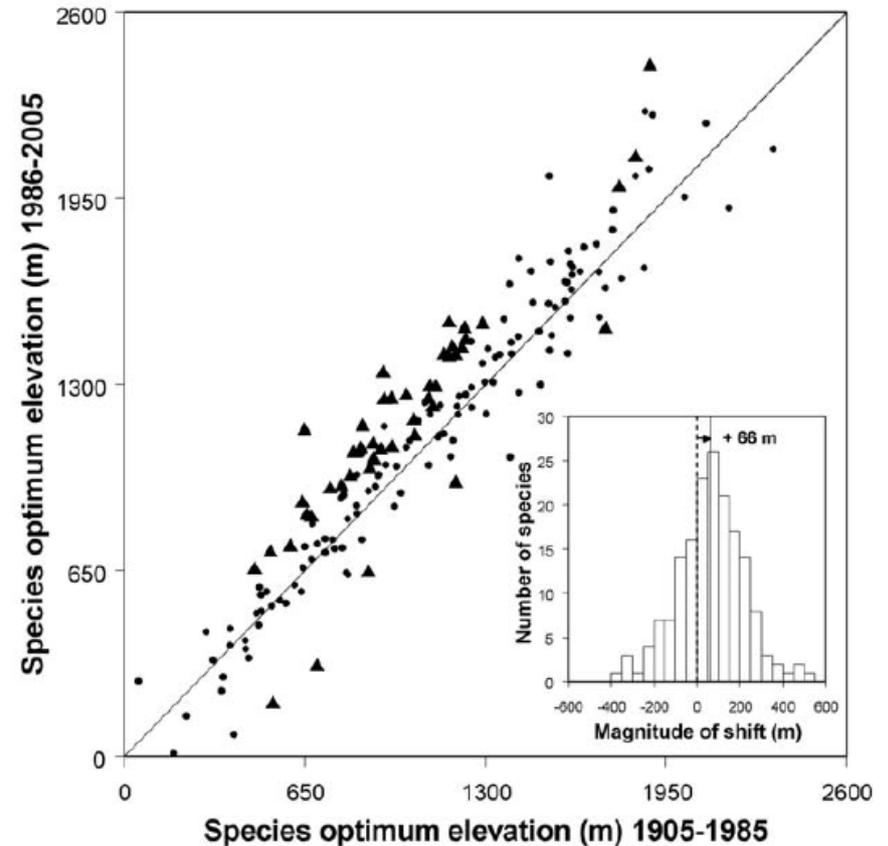
Enveloppe climatique



**Adaptation**

# Entre “Should I stay or should are go?” ... **I go !**

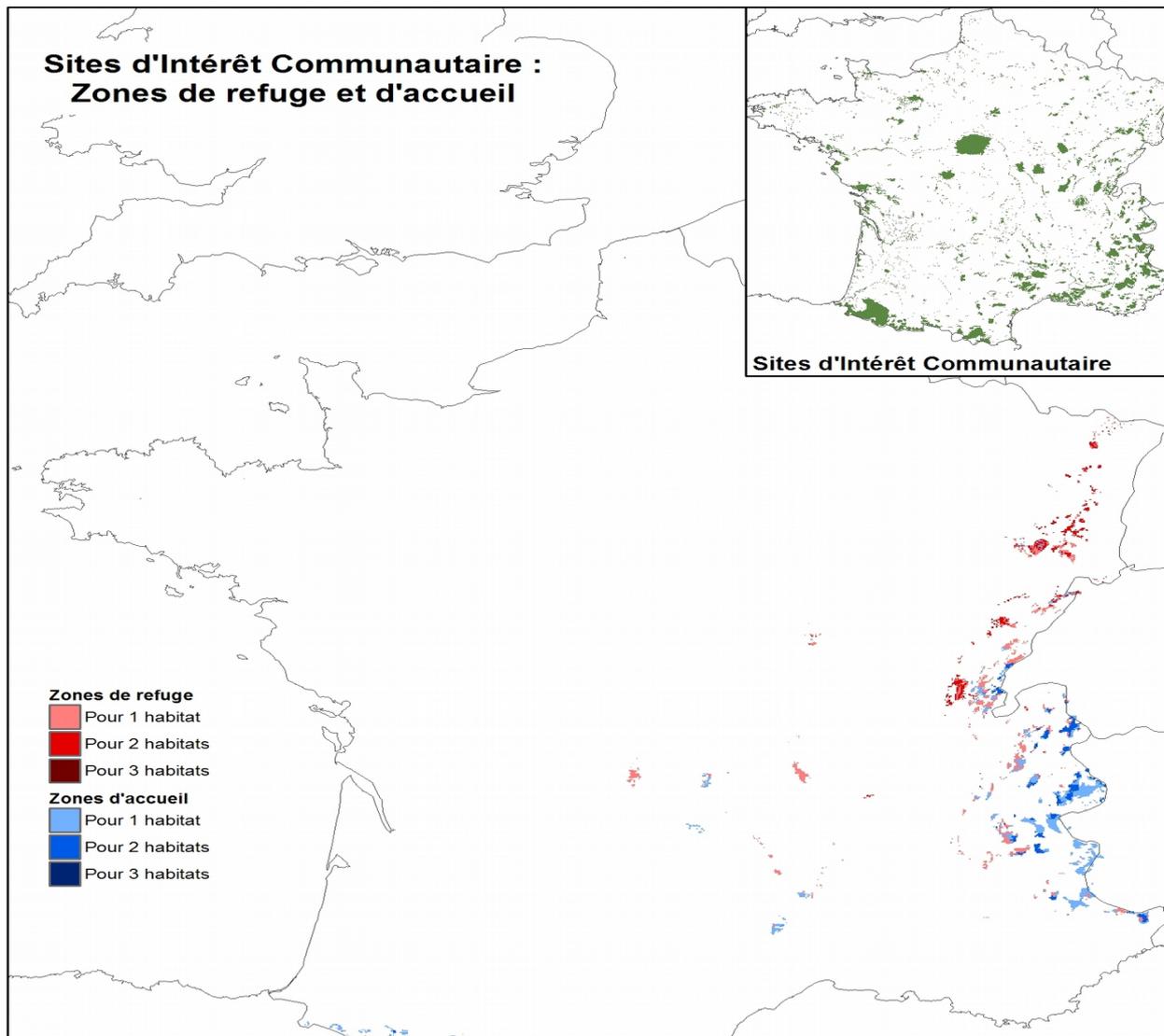
**+ 29 m tous les 10 ans**



**A Significant Upward Shift in Plant Species  
Optimum Elevation During the 20th Century**  
J. Lenoir, *et al.*  
*Science* 320, 1768 (2008);

# de helles

## Sites d'Intérêt Communautaire : Zones de refuge et d'accueil

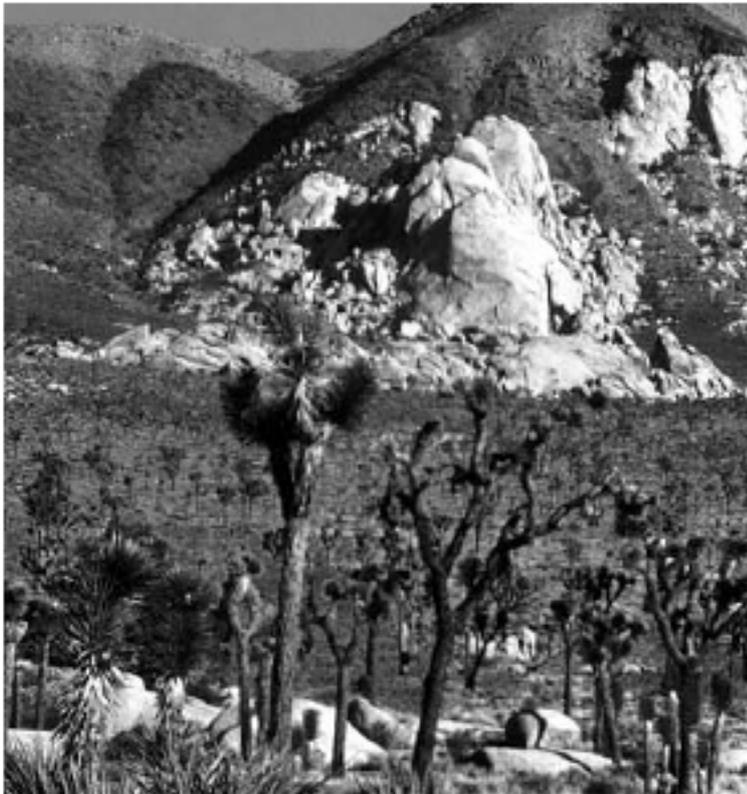


Importance des massifs du Jura, des Vosges et du sommet du Morvan  
comme zone de refuge et/ou d'accueil climatique pour les espèces  
forestières



# Enfin, une question de perception et d'**acceptabilité**

Un paysage « remarquable » privé de ses attributs sera-t-il toujours aussi « remarqué » ?



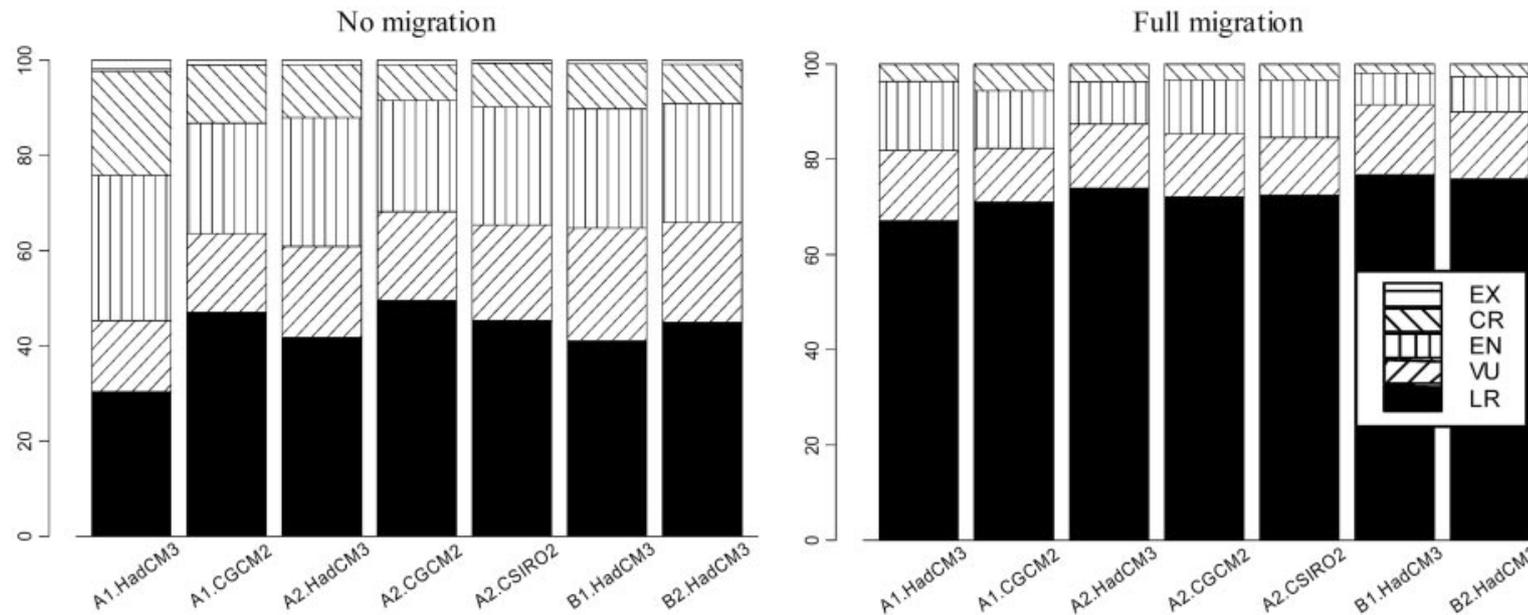
Liberté • Égalité • Fraternité  
RÉPUBLIQUE FRANÇAISE

DIRECTION RÉGIONALE  
DE L'ENVIRONNEMENT,  
DE L'AMÉNAGEMENT  
ET DU LOGEMENT  
BOURGOGNE-  
FRANCHE-COMTÉ



# Extinction risk for plant species in Europe

1350 species, data from Flora europae atlas, pixels of 50\*50 km, predictions for 2080, distribution modelled with temperature and moisture variables



**Extinction : range loss = 100 %**

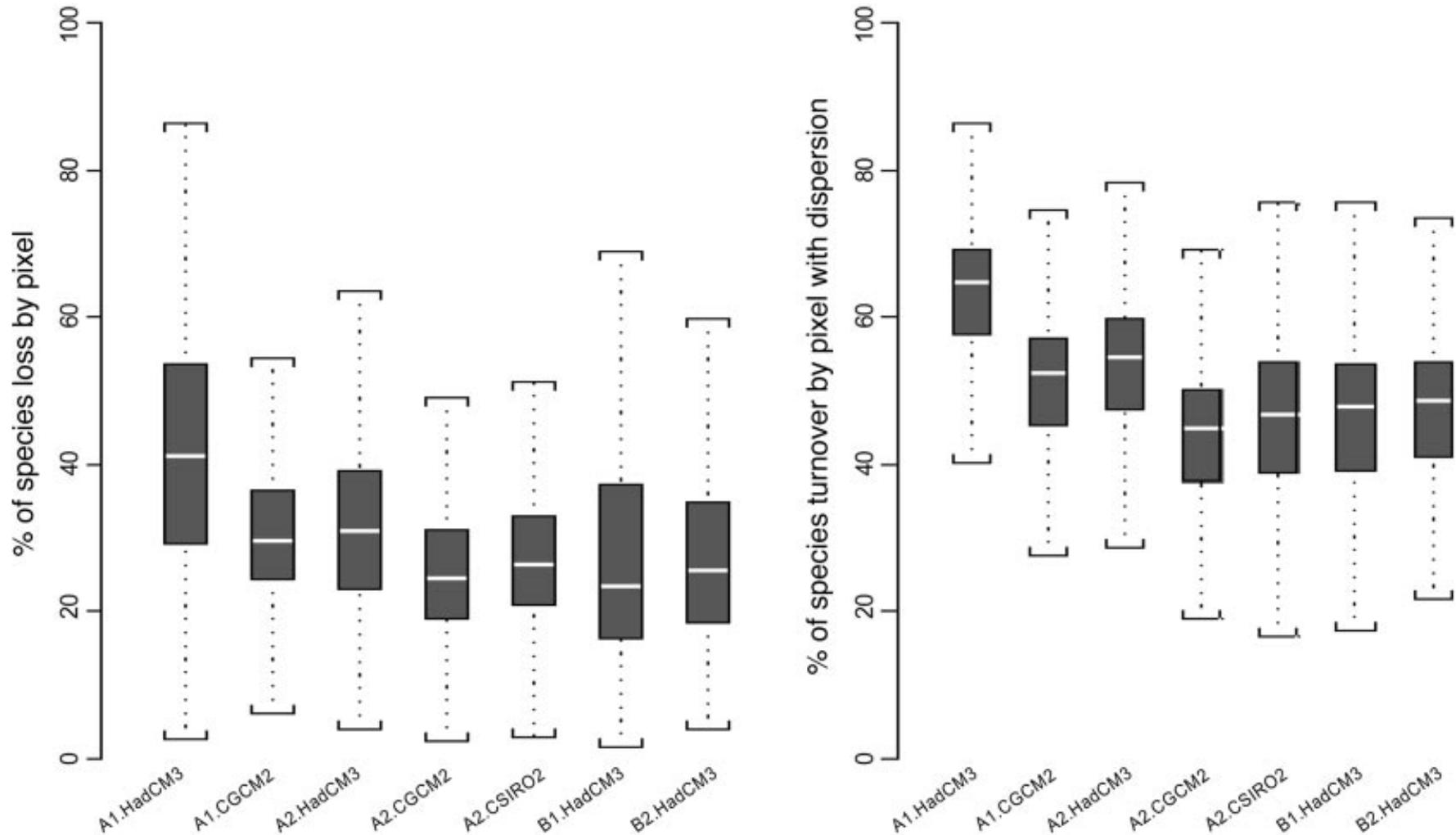
**Critically endangered : projected range loss >80 %**

**Endangered : range loss > 50 %**

**Vulnerable : range loss > 30 %**

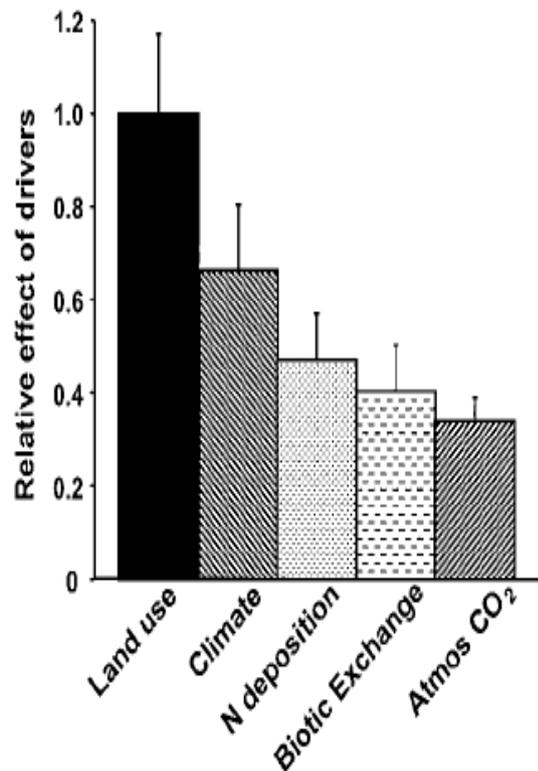
**Not vulnerable**

# Extinction risk for plant species



Loss of species by pixel : number of species lost/current number of species

Turn over by pixel : number of species lost + gained/future nb of species



**Fig. 1.** Relative effect of major drivers of changes on biodiversity. Expected biodiversity change for each biome for the year 2100 was calculated as the product of the expected change in drivers times the impact of each driver on biodiversity for each biome. Values are averages of the estimates for each biome and they are made relative to the maximum change, which resulted from change in land use. Thin bars are standard errors and represent variability among biomes.

