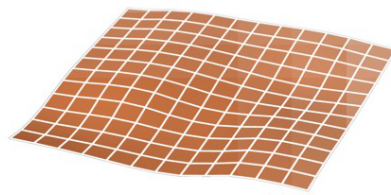## (a) Potential external drivers

Extreme temperature
Low spatial heterogeneity

Optimal temperature
High spatial heterogeneity
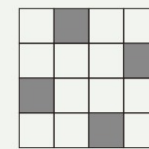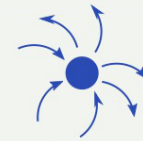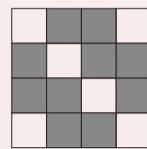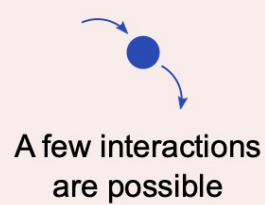
(b) Mechanism

Interaction capacity

$$2 \times \sum_{j=1}^{S} \sum_{i=1, j \neq i}^{S} |IS_{i \rightarrow j}|/S$$

A few interactions
are possible

Many interactions
are possible

Connectance

$$\frac{N_{link}}{S^2}$$

High connectance

Low connectance

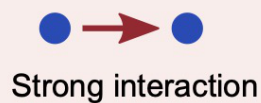## (c) Outcomes in ecological communities

Community diversity

Low diversity

High diversity
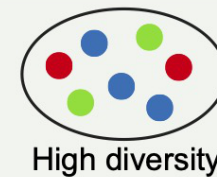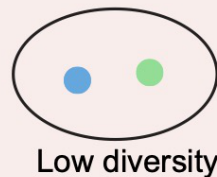
Interaction strength
per link

Strong interaction

Weak interaction

Temporal variability
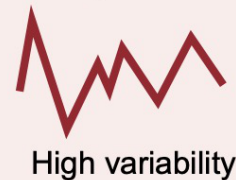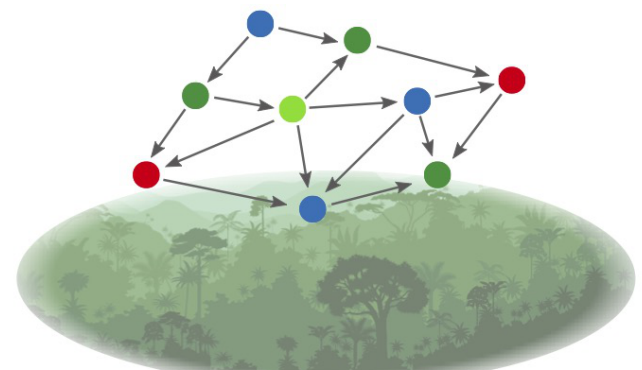
High variability

Low variability
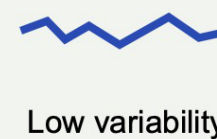
(d) Example communities
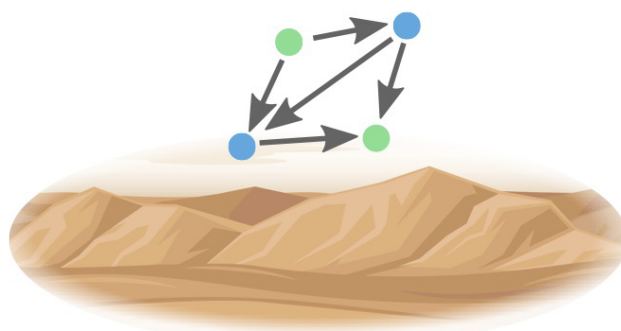
e.g., Desert

e.g., Tropical forest