# Long-term conservation responses in the face of climate change and deforestation

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Biodiversity is not just the number of species but also the differences between them. We must maximize the evolutionary divergence among species, to make sure to preserve the evolutionary richness.
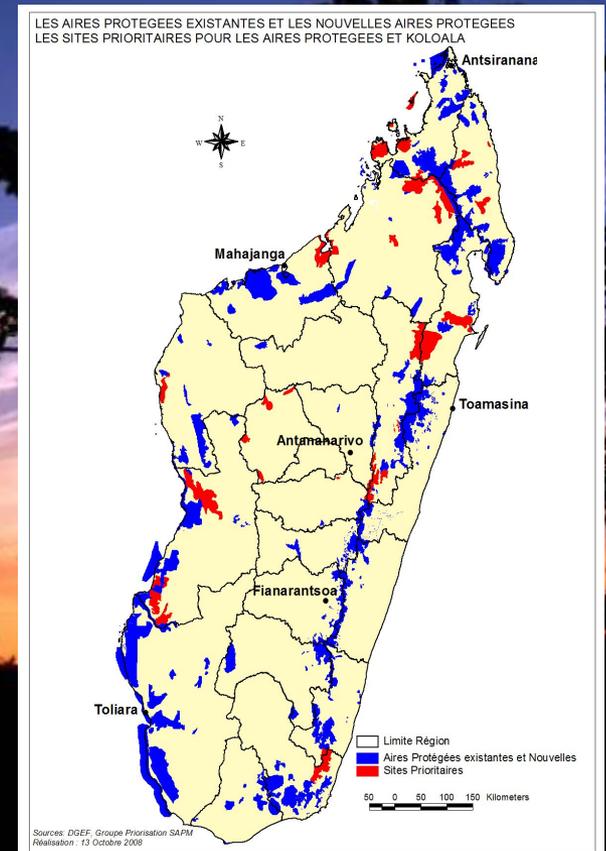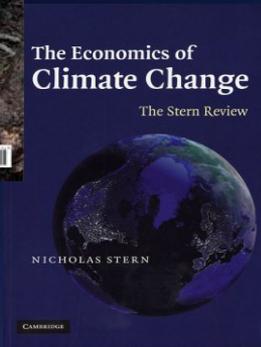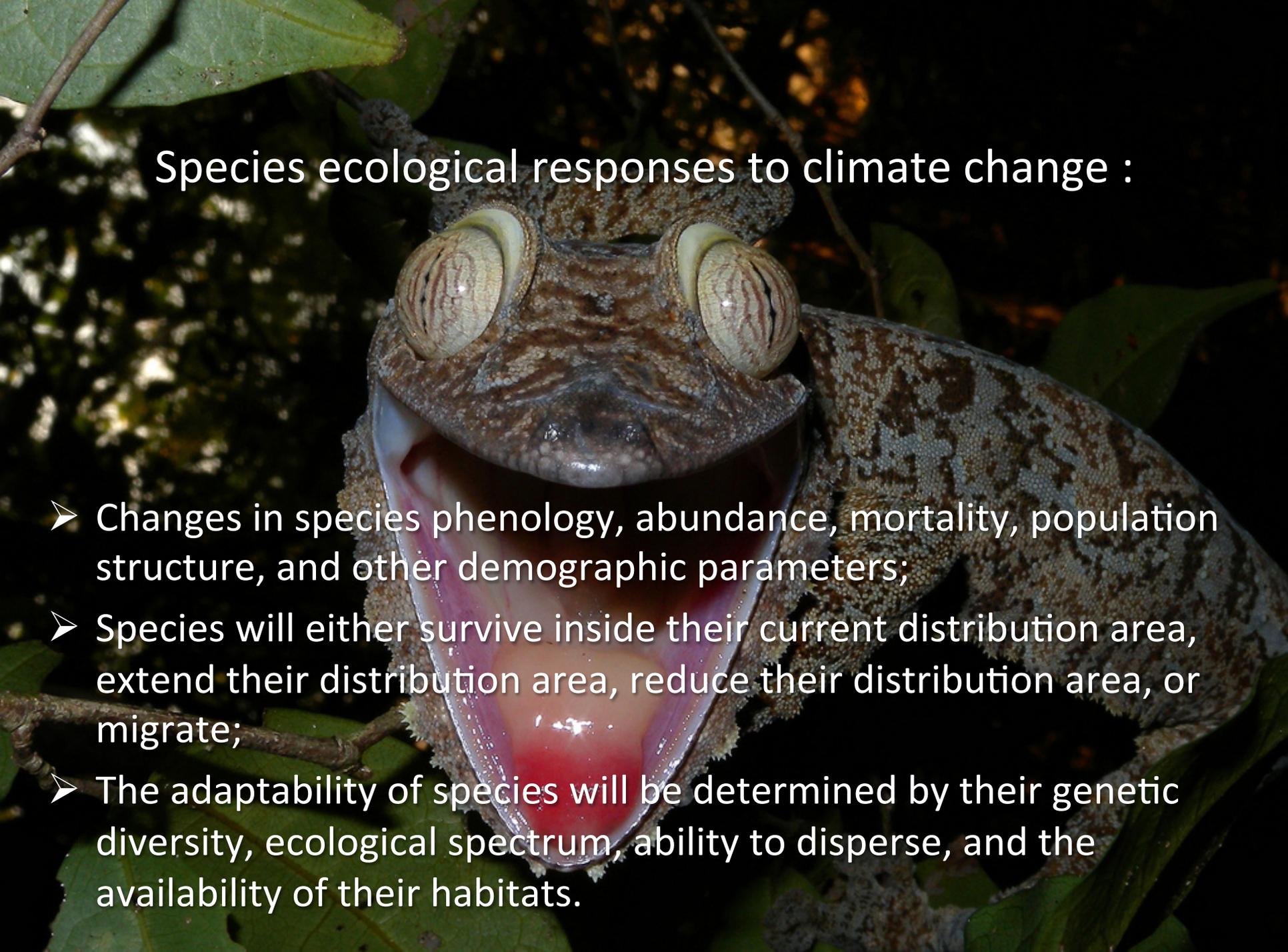
Species ecological responses to climate change :

➢ Changes in species phenology, abundance, mortality, population structure, and other demographic parameters;

➢ Species will either survive inside their current distribution area, extend their distribution area, reduce their distribution area, or migrate;

➢ The adaptability of species will be determined by their genetic diversity, ecological spectrum, ability to disperse, and the availability of their habitats.

New ecosystems and species communities are being created. As well as focusing on maintaining diversity, adaptation strategies should recognize the dynamic nature of ecosystems and focus on the preservation of *ecological process*.

It is important to move forward to define and optimize what is possible in terms of adaptation of the SAPM. Delaying integration of climate change in the management of the SAPM result in significant financial costs. Currently, very little adaptation or monitoring of the impact of climate change exists within the SAPM.

Generate robust biodiversity scenarios with endemic lineages =>
Selection of priority PAs for conservation, including core areas of
conservation, stepping stones, and corridors.
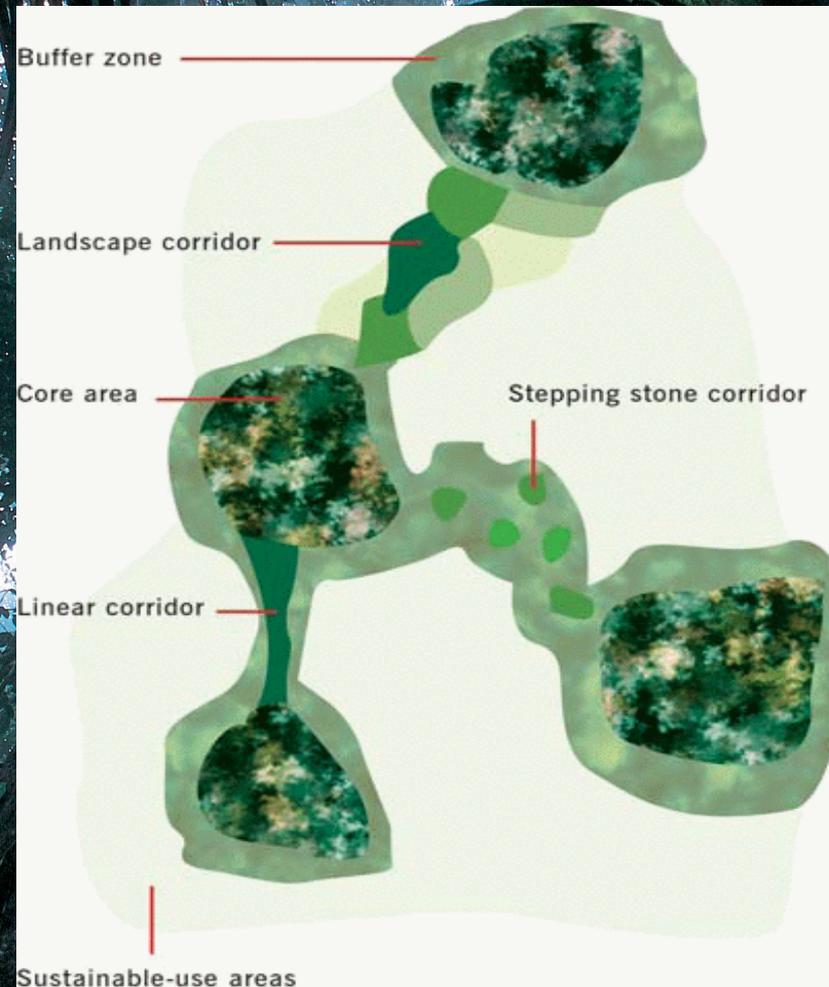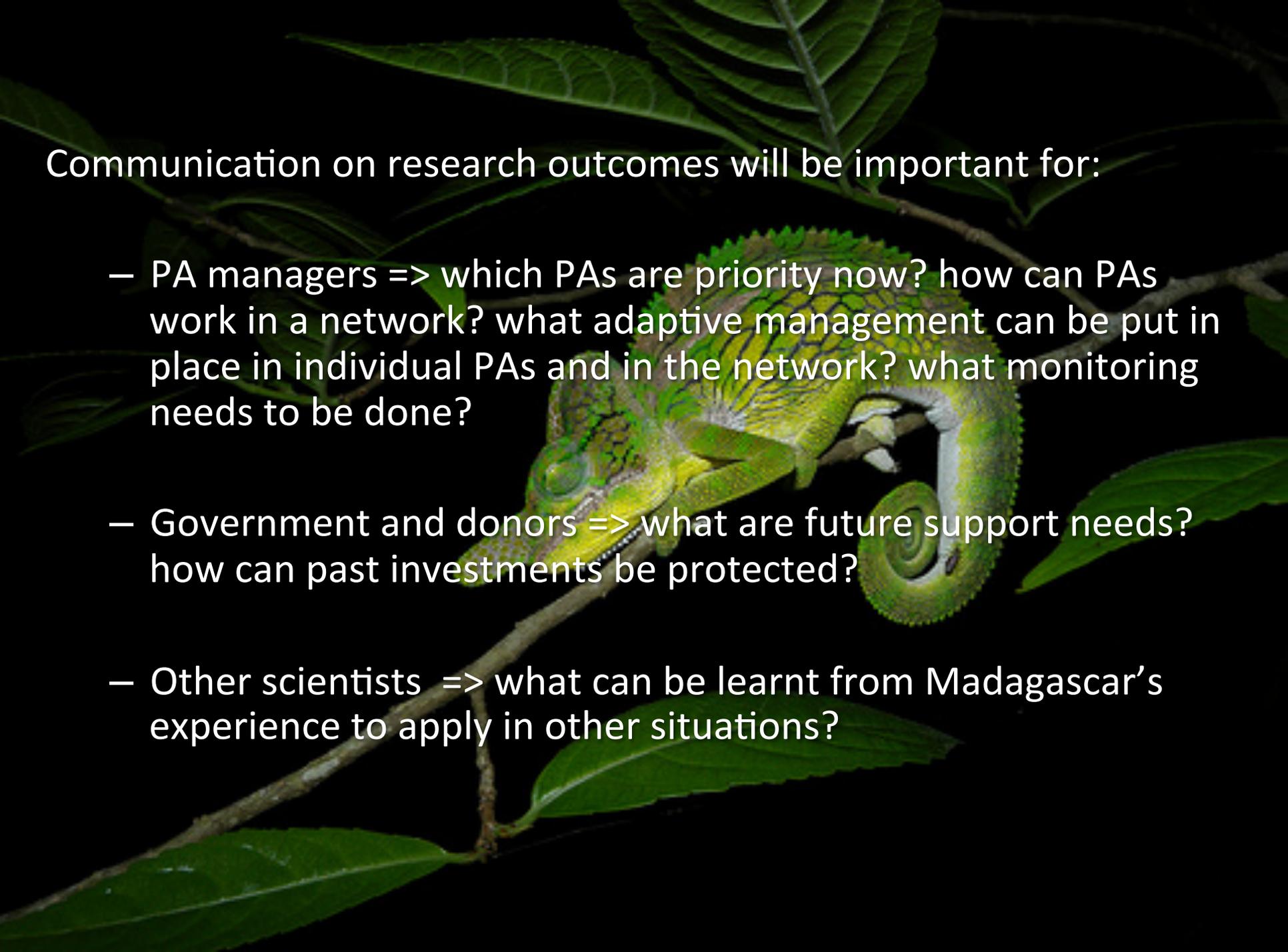
Communication on research outcomes will be important for:

- PA managers => which PAs are priority now? how can PAs work in a network? what adaptive management can be put in place in individual PAs and in the network? what monitoring needs to be done?

- Government and donors => what are future support needs? how can past investments be protected?

- Other scientists => what can be learnt from Madagascar's experience to apply in other situations?