

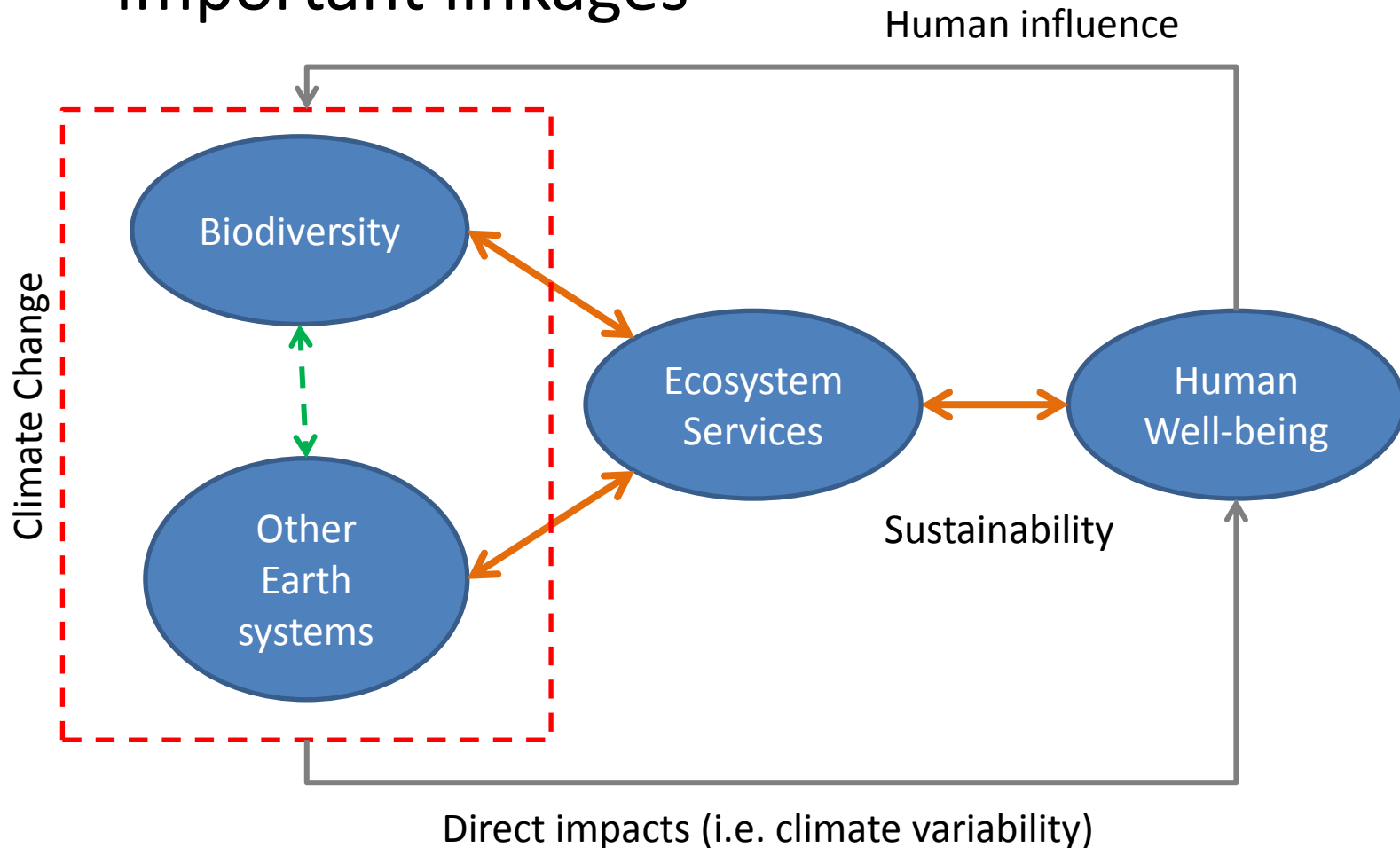
Biodiversity and Climate change: suggestions for a research agenda



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Biodiversity and Climate Change

- Important linkages



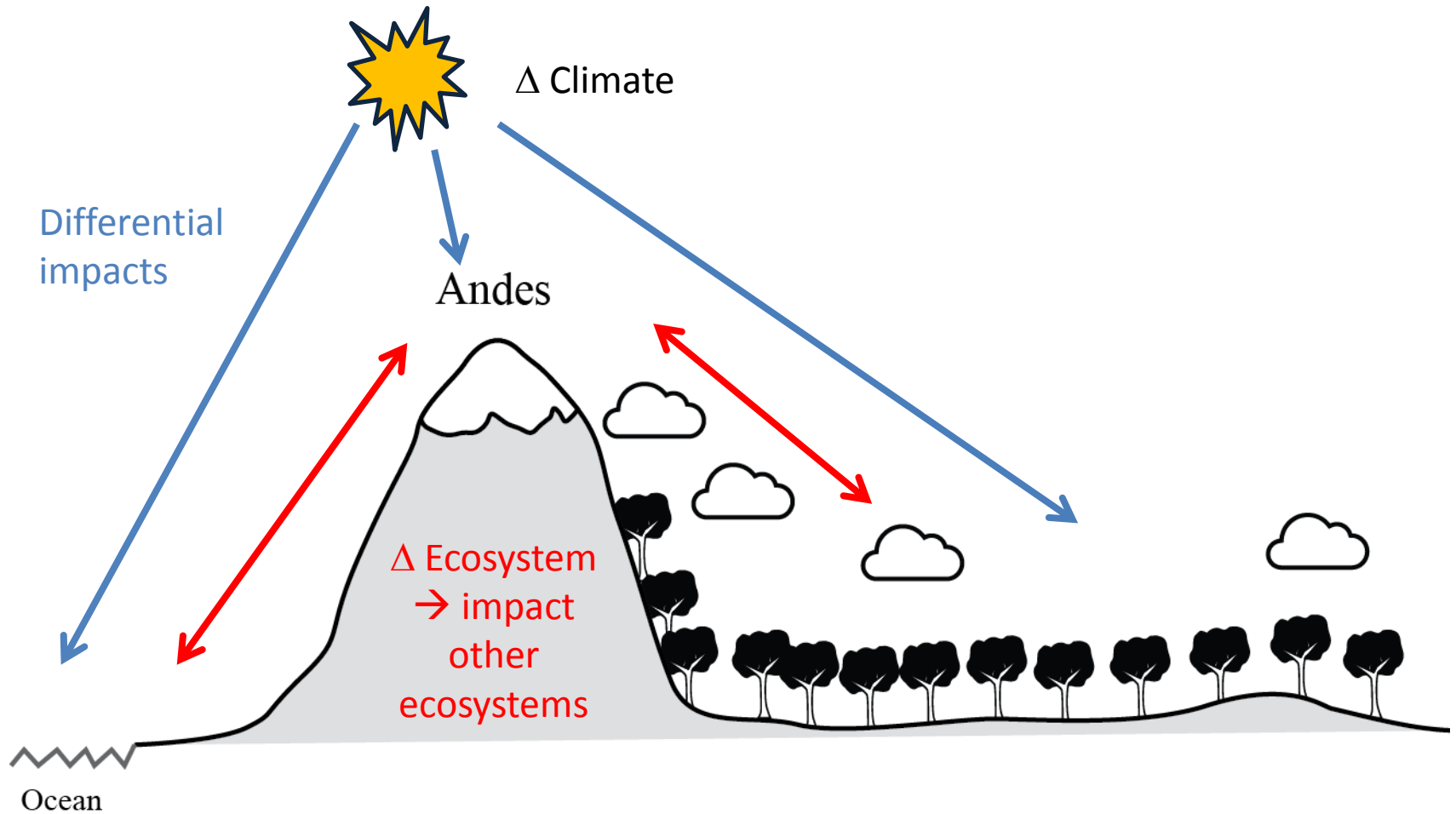
Preliminary remarks

- Given our current understanding of the linkages between climate change and biodiversity, it is important to acknowledge
 - It is not necessarily easy to carry out research in the themes presented here
 - They are not necessarily limited to the LAC region
 - In order to be effective, these research topics need a strong link to public policy.
 - “Ecosystem approach” is essential

Cross-cutting themes: Spatial ecosystem interactions

- Changes in one ecosystem lead to changes in another (“spatial” ecosystem interactions)
 - Climate change → ocean acidification → changes in marine and coastal ecosystems
 - Provisioning (i.e. fisheries, mangroves)
 - Regulating (i.e. mangroves as ocean erosion barriers)
 - How impacts “upstream” influence biodiversity “downstream”.
 - Climate change triggers changes in ecosystems in other locations → effects are felt in coastal areas
 - Andes ⇔ Coast (Peru and Chile)
 - Species distribution changes
 - Upslope migration as temperatures ↑

Spatial ecosystem interactions



Cross-cutting themes: Biodiversity and Climate change

- How climate change threats create synergies with other biodiversity threats
- How organism interactions/ecosystem processes change as climate changes
 - Are there any changes in fire regimes, weather patterns that alter ecosystem composition?
 - Winners and losers?
- Neo-ecosystems generated by climate change
 - Are there any new ecosystems emerging as a result of changes in climatic conditions?

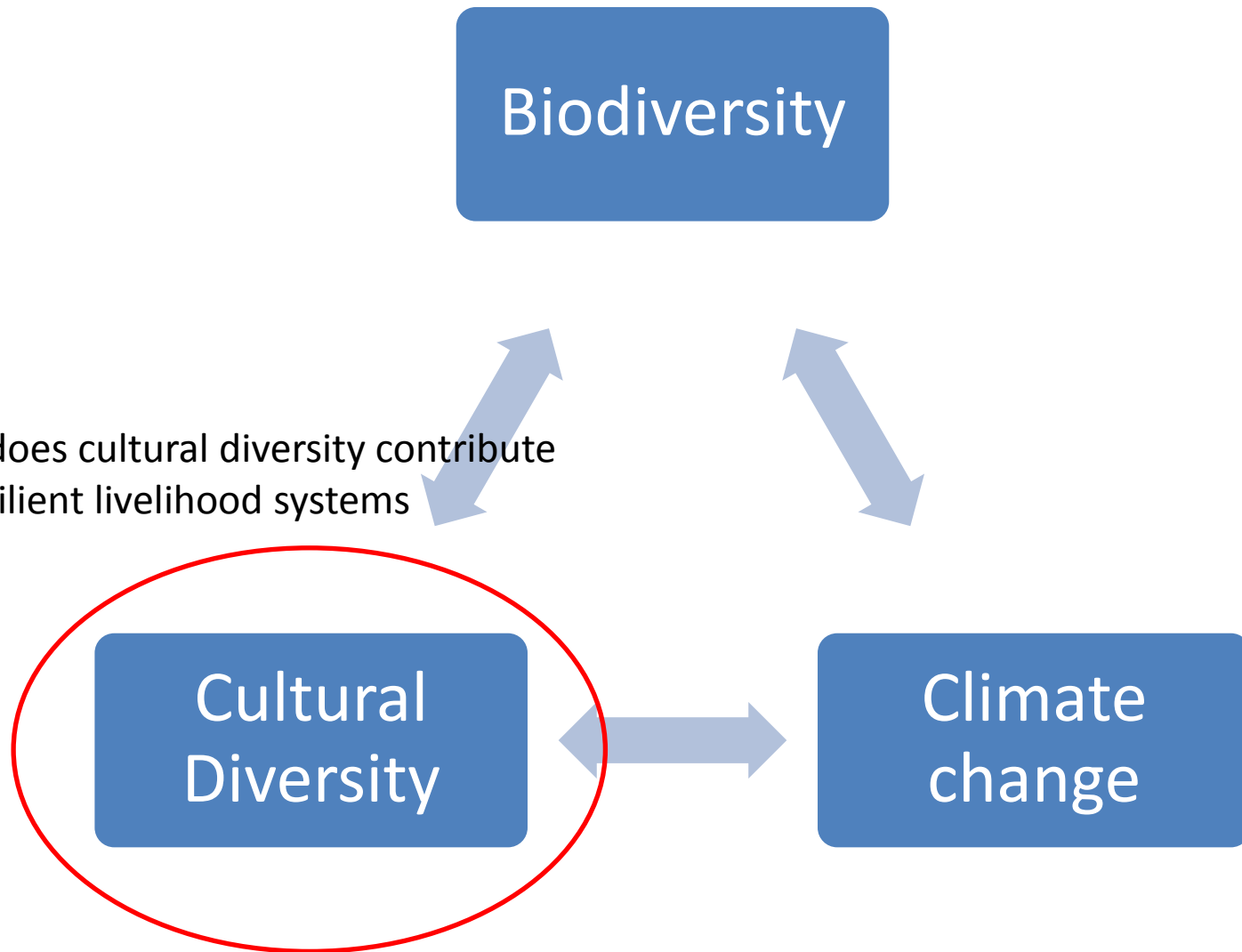
Cross-cutting themes: Biodiversity and climate change

Biodiversity

How does cultural diversity contribute
To resilient livelihood systems

Cultural
Diversity

Climate
change



Adaptation and mitigation strategies:

Biodiversity and climate change

- REDD and biodiversity
 - Assessment of REDD as a conservation tool
- Livelihoods, adaptation and the role of biodiversity
 - Enhancing resilience in agricultural systems
 - ↑ Supply of ecosystem services
 - How to integrate “ecosystem-based adaptation” with “community-based adaptation”
 - Social/political changes to improve resilience? (i.e. land reform, environmental justice)
- Is it possible to enhance the “adaptability” of ecosystems?
- Identify gaps in policies (CC & BD)
 - Area policies synchronized?

Conservation and valuation: Biodiversity and climate change

- Will protected areas networks be representative in the future?
 - Gaps?
 - Are ecosystems represented in different climate change scenarios?
- Valuation of ecosystem services
 - Synergistic effects climate change ↔ biodiversity
 - Mostly loss of services
 - Does climate change enhance certain ecosystem services?