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Invasive Species Management and Ecosystem Restoration – two sides of the same coin

Loralee Larios
University of California
Riverside

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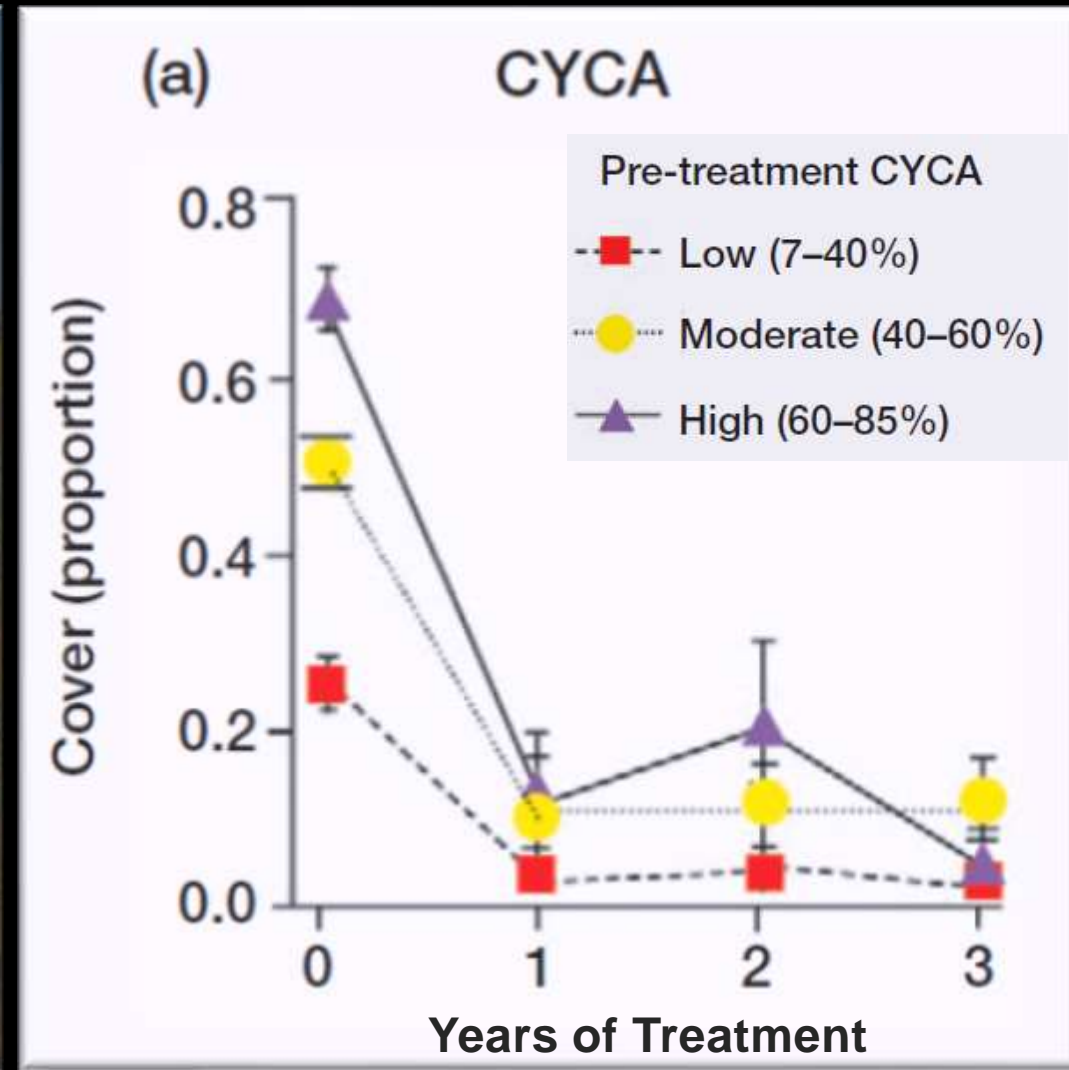
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Raul Arboleda

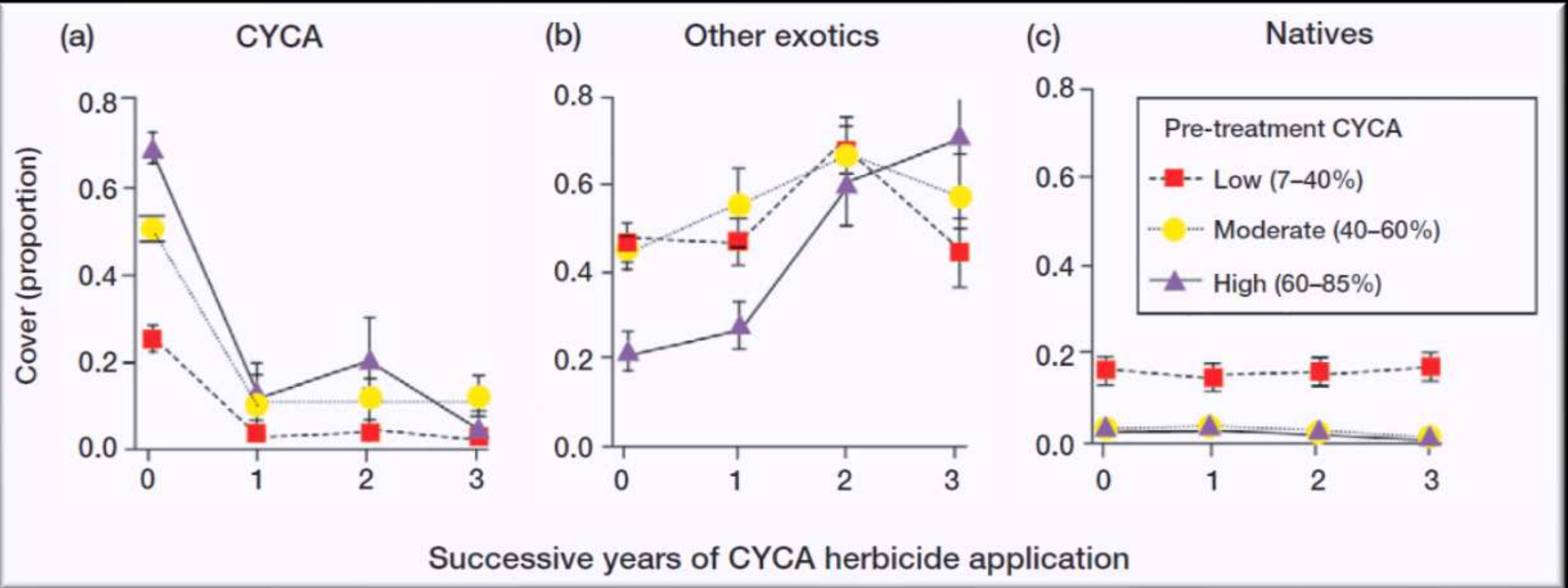
Artichoke Thistle: A *Love* Story



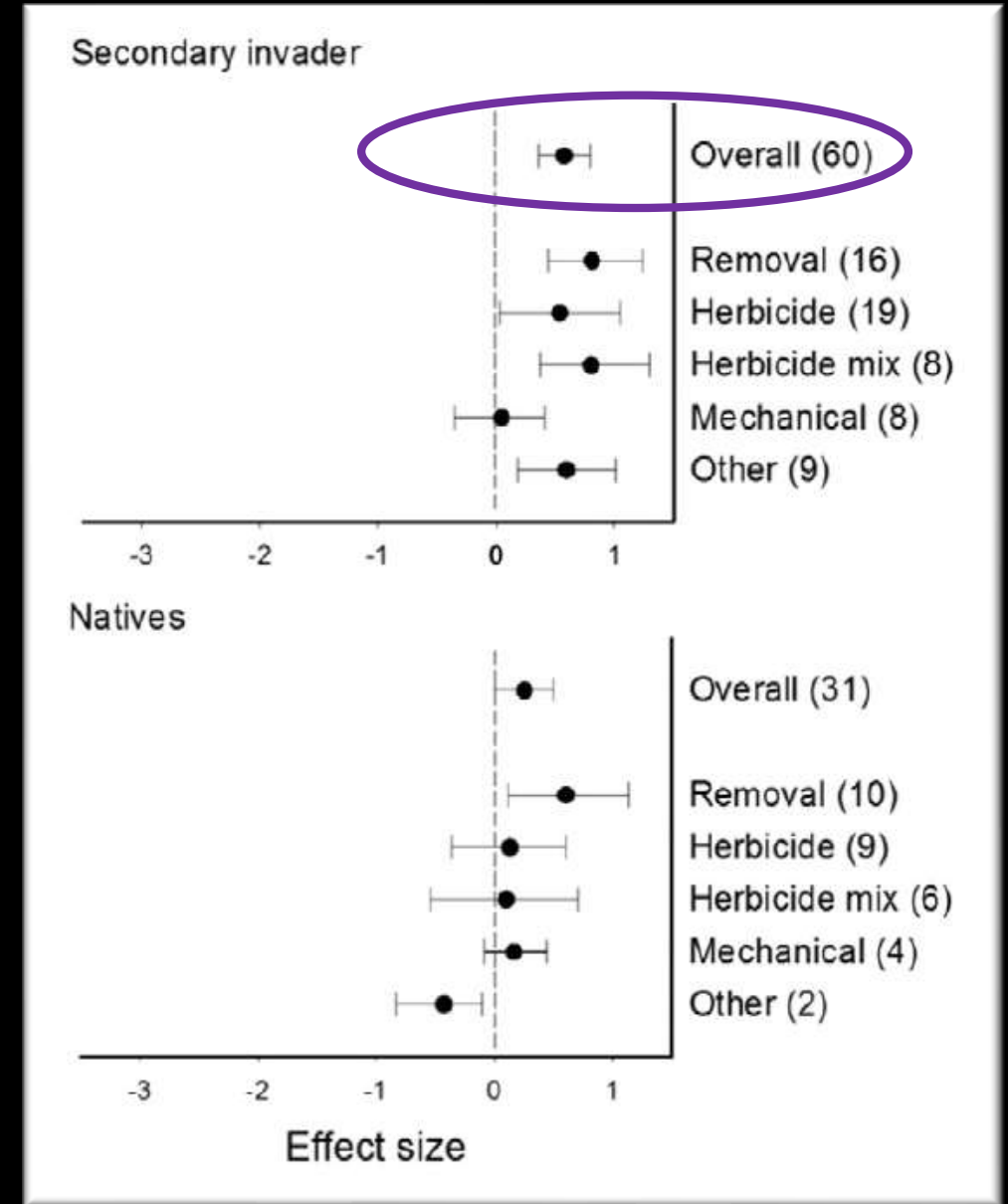
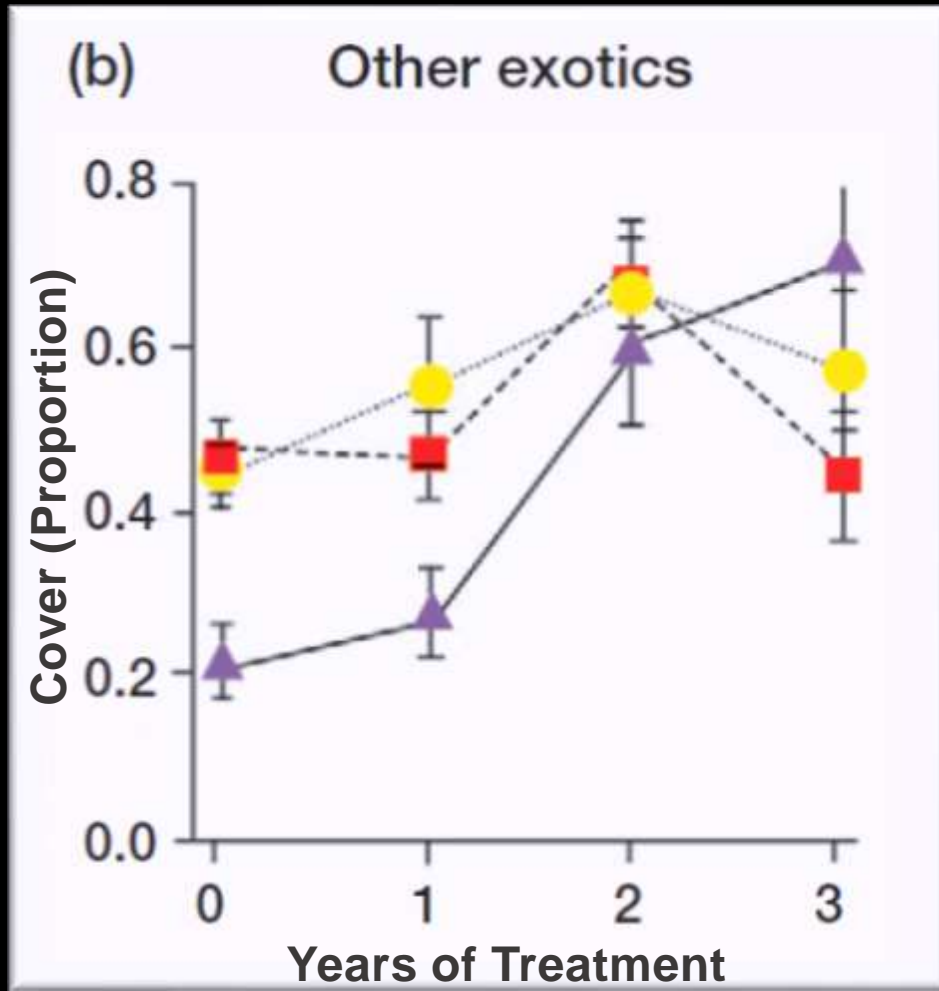


Sustainability of Artichoke Thistle Management

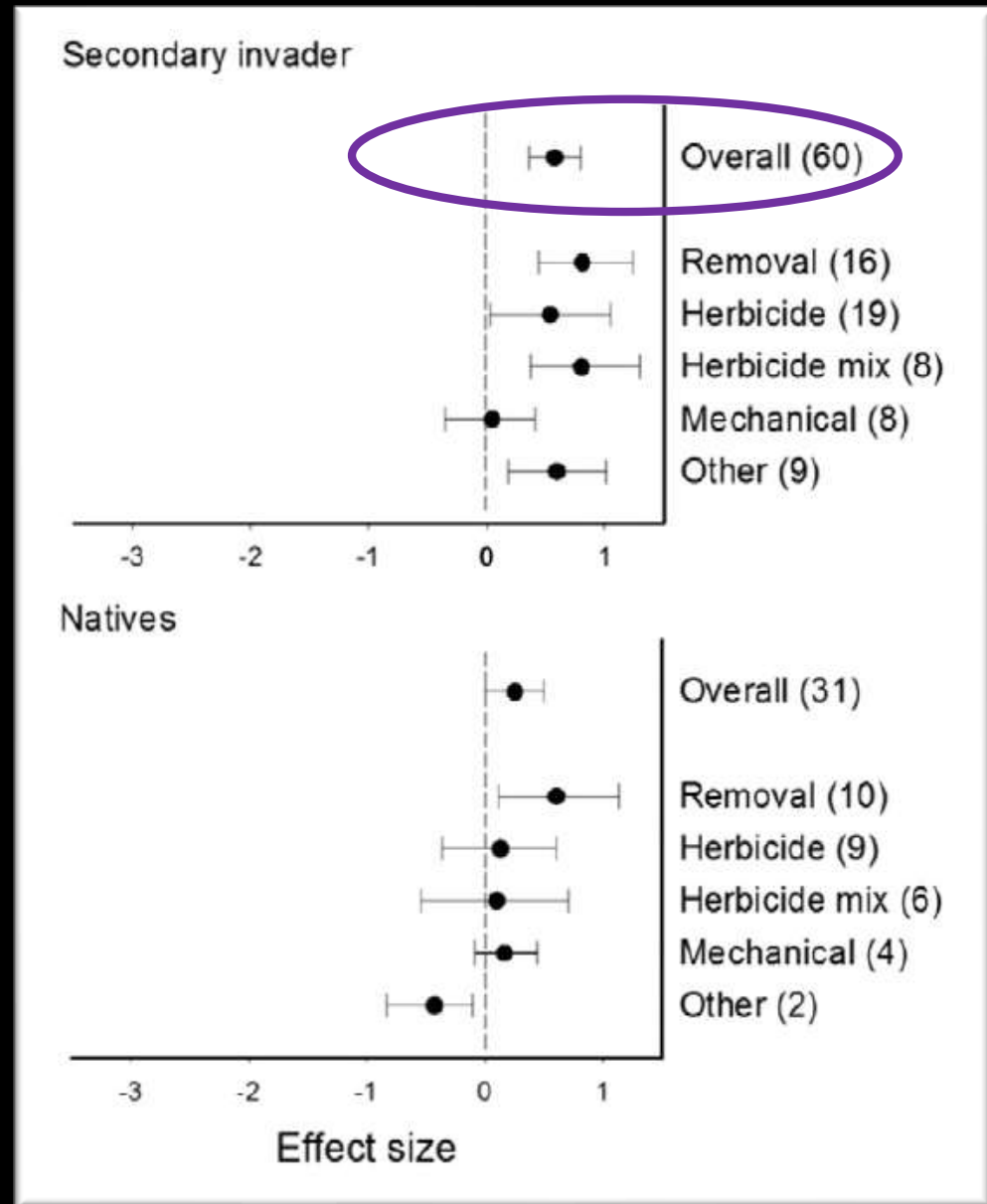
Sustainability of Artichoke Thistle Management




Secondary Invasion



Secondary Invasion



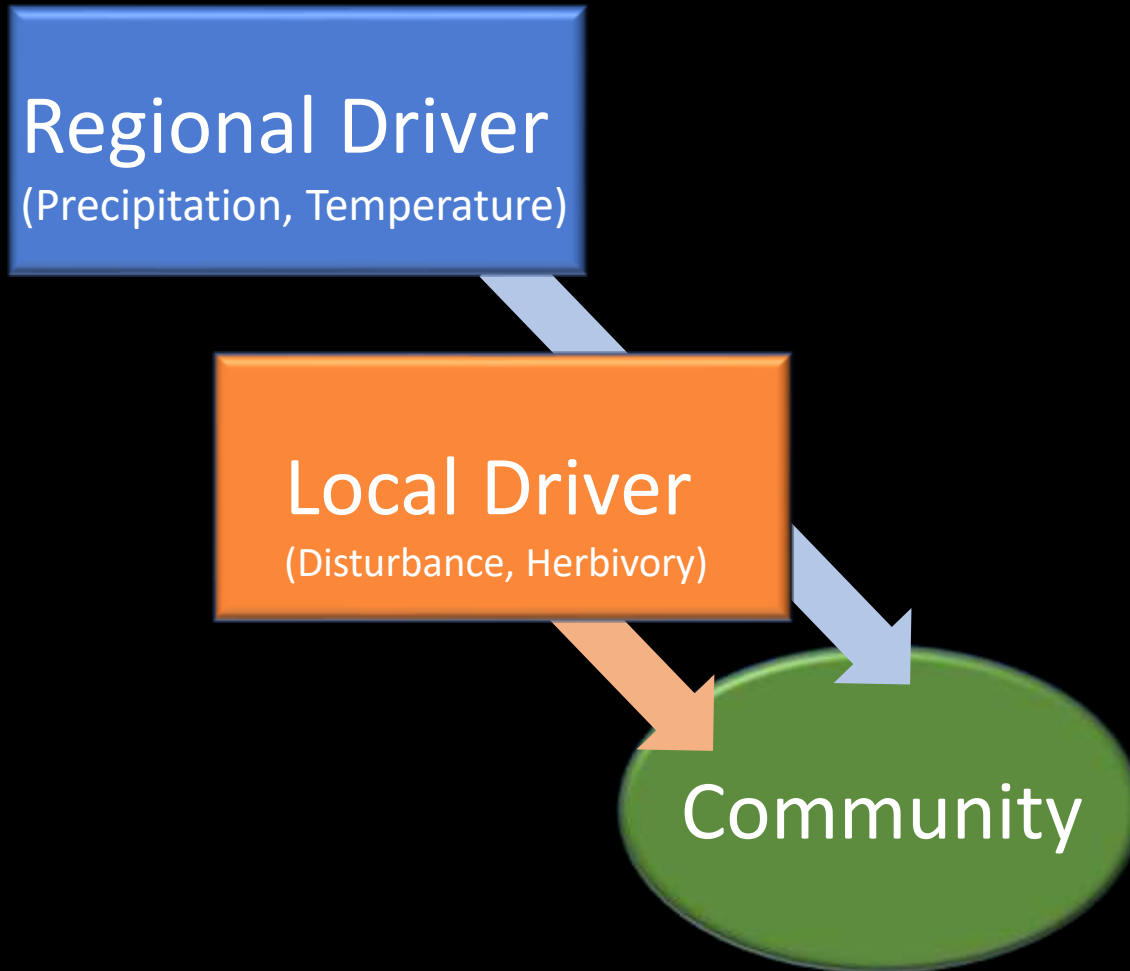
When and how to intervene?

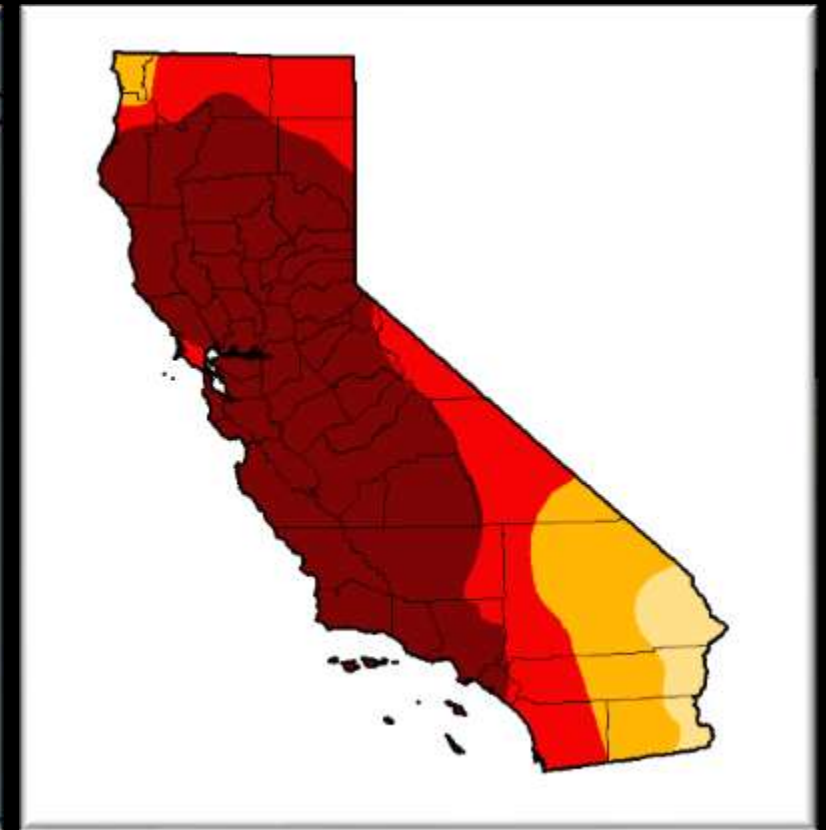
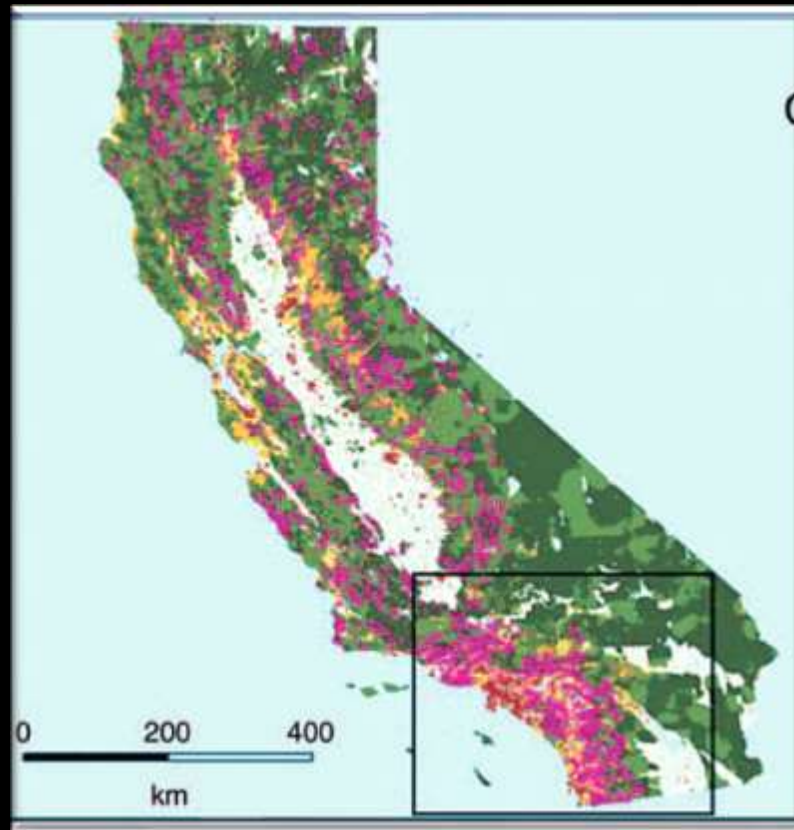
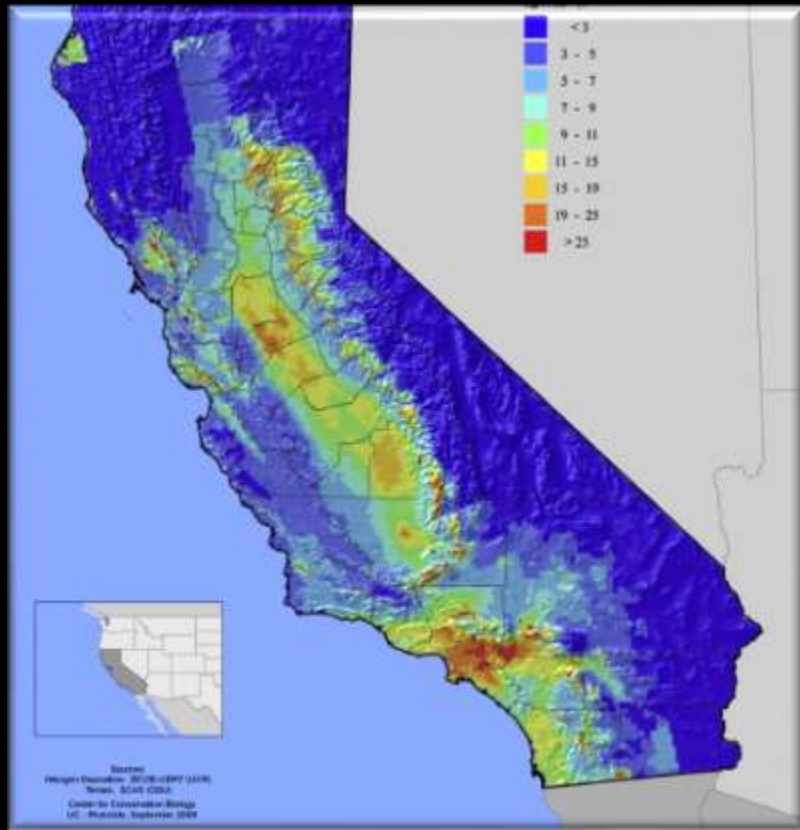


When and how to
intervene?

Invader Legacies

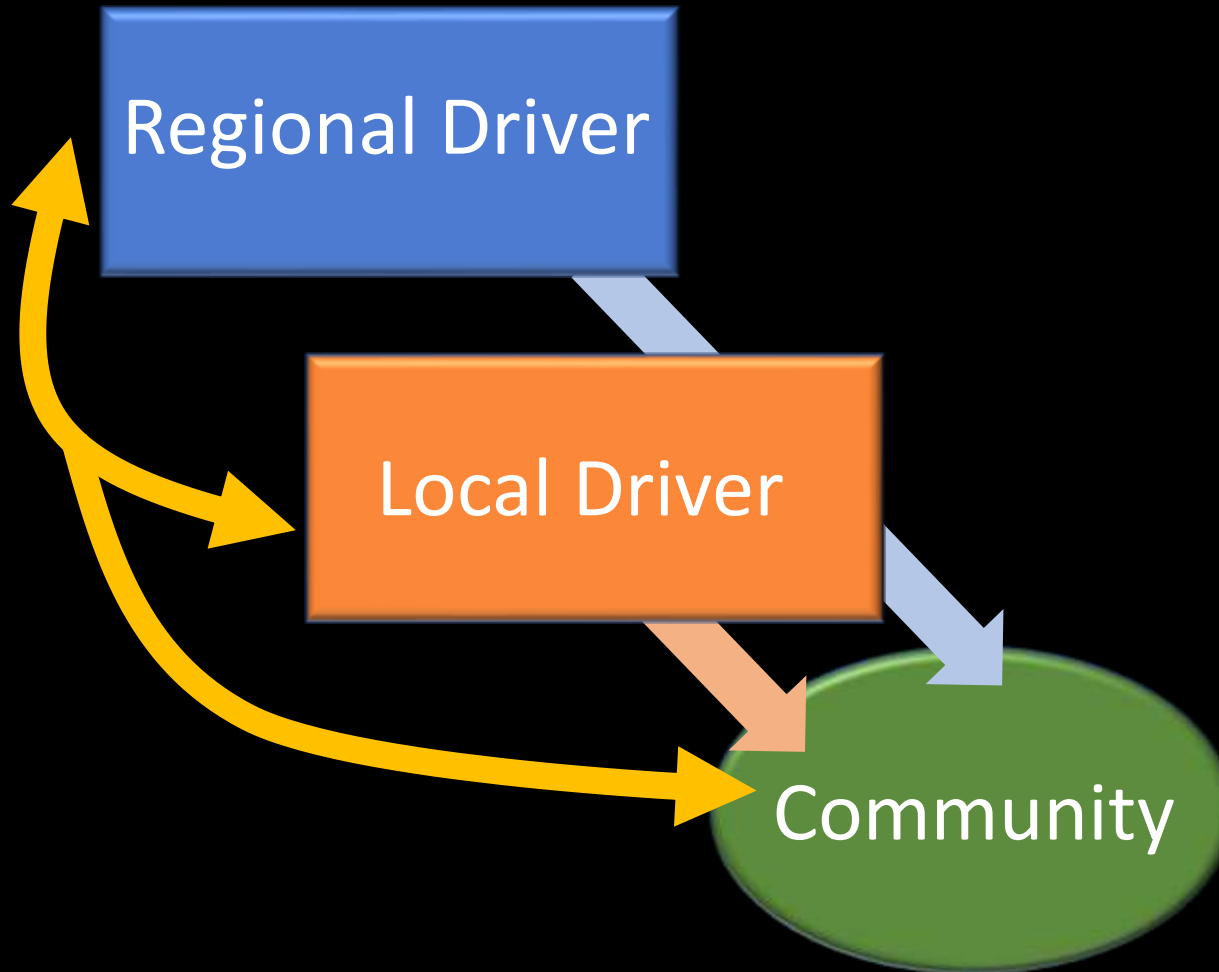
How communities are structured?



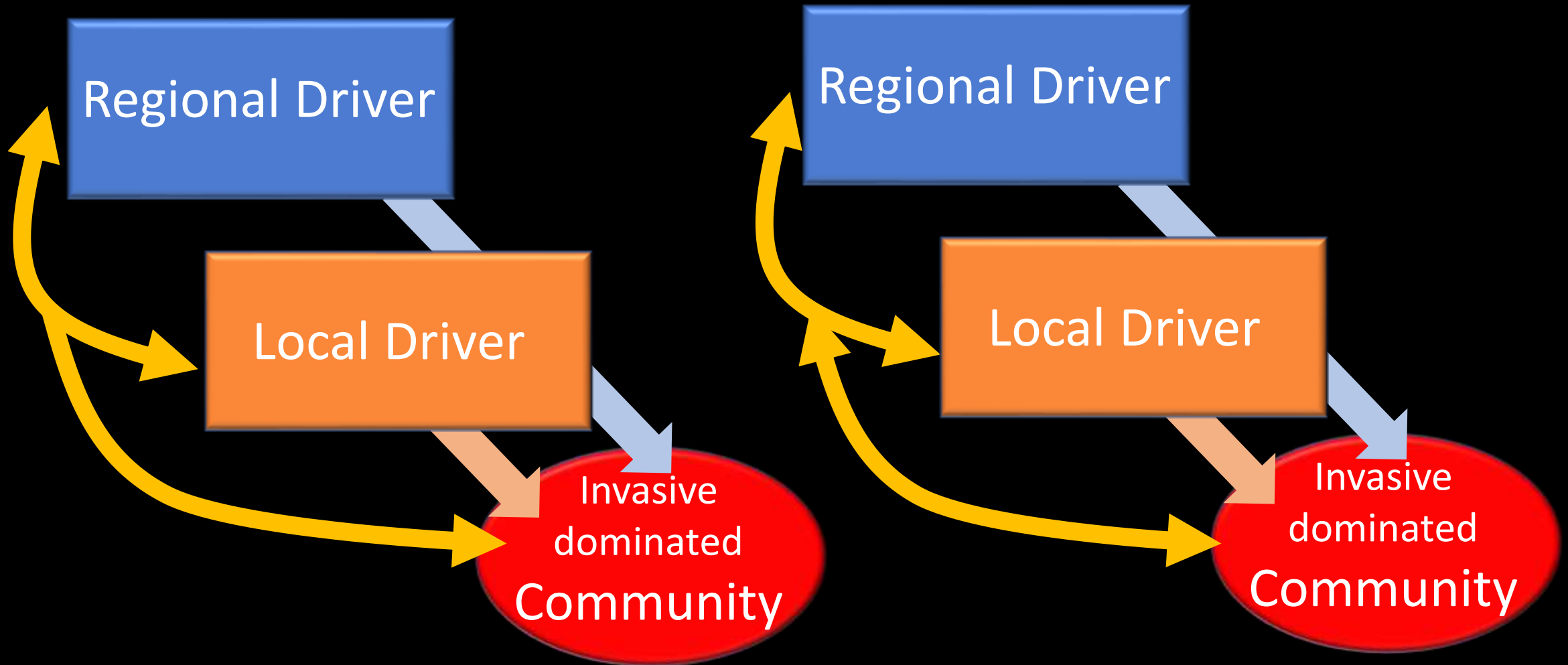


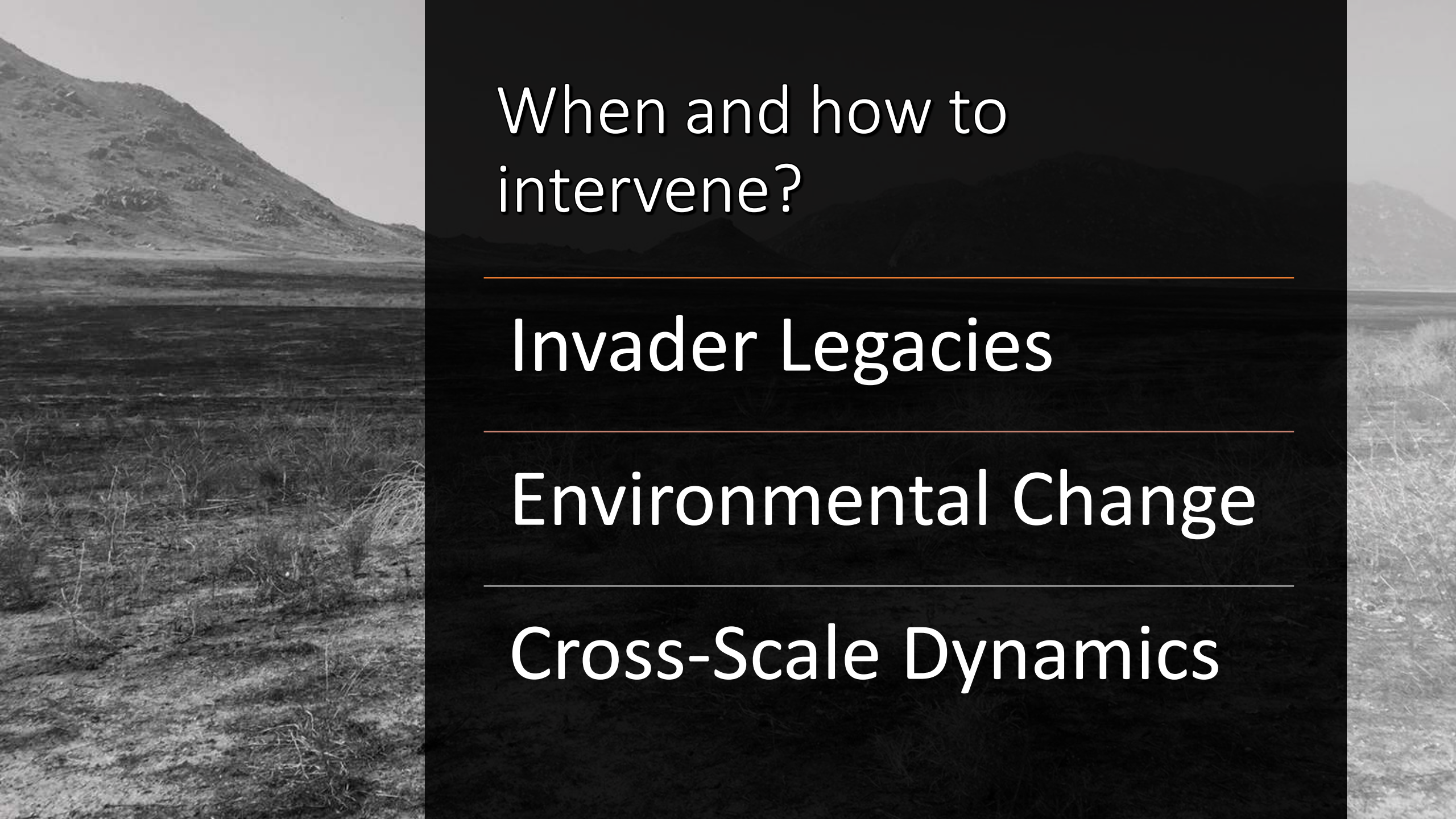
Changes in Environmental Drivers

Cross-Scale Interactions



Cross-Scale Interactions





When and how to
intervene?

Invader Legacies

Environmental Change

Cross-Scale Dynamics

1.

Assess management opportunities: Landscape assessments of recovery potential



Photo: Sunny Saroa



Photo: Sunny Saroa

1.

Assess management opportunities: Landscape assessments of recovery potential



Photo: Sunny Saroa

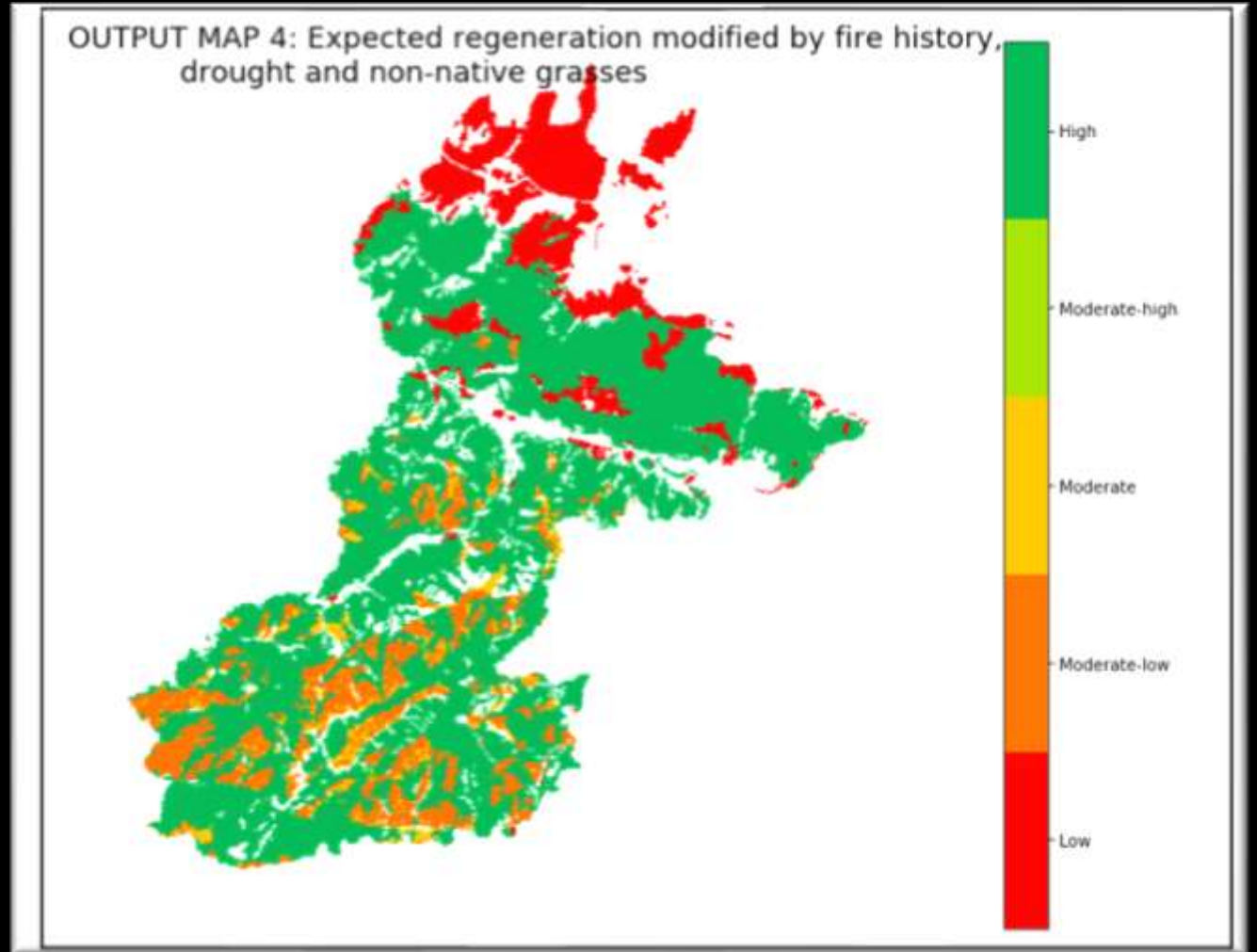
- Landscape units: vegetation communities by topography
- Identify proportions of resprouters vs seeders
- Fire History
- Invasion Risk
- Drought Patterns

1.

Assess management opportunities: Landscape assessments of recovery potential



Photo: Sunny Saroa

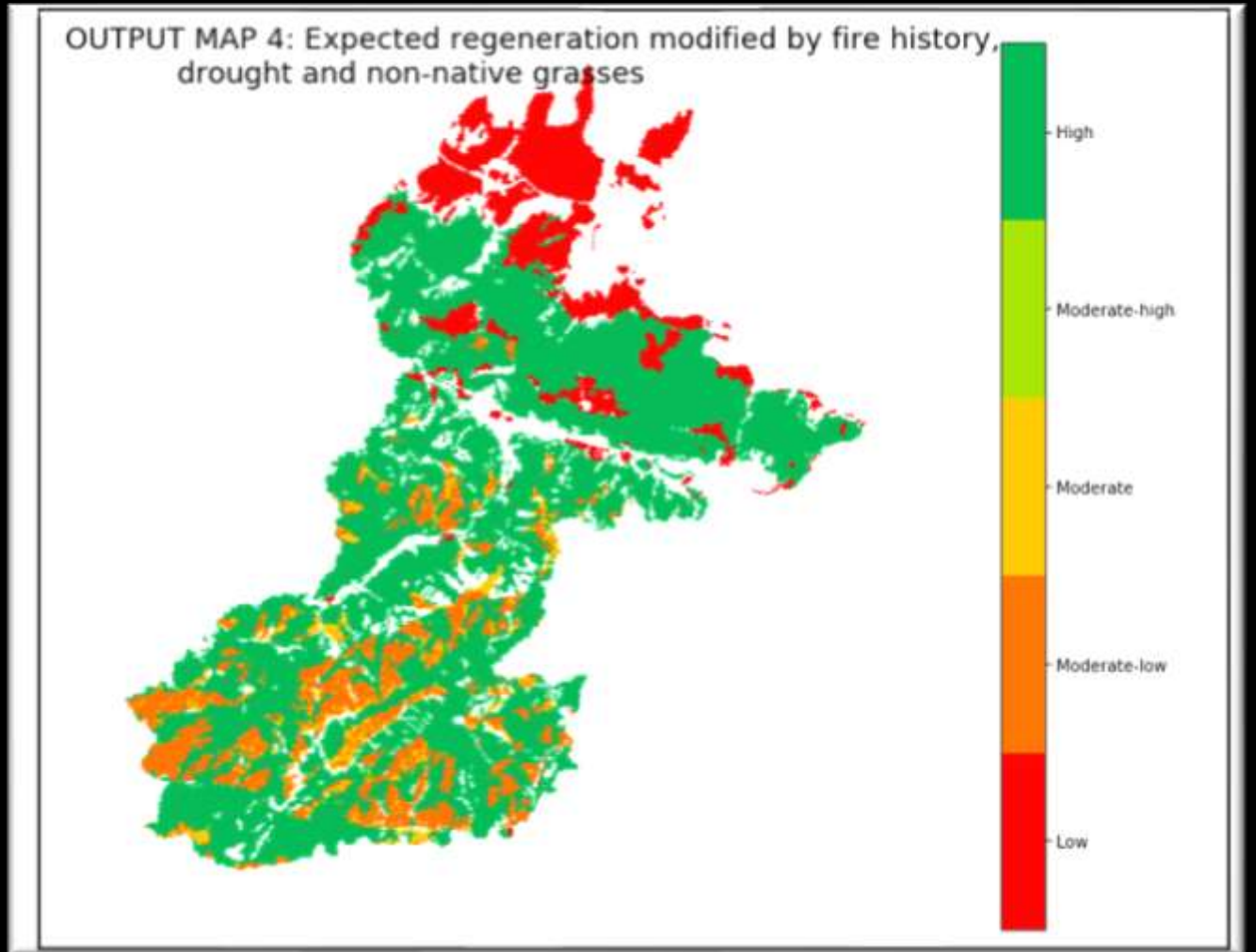


1.

Assess management opportunities: Landscape assessments of recovery potential



Photo: Sunny Saroa

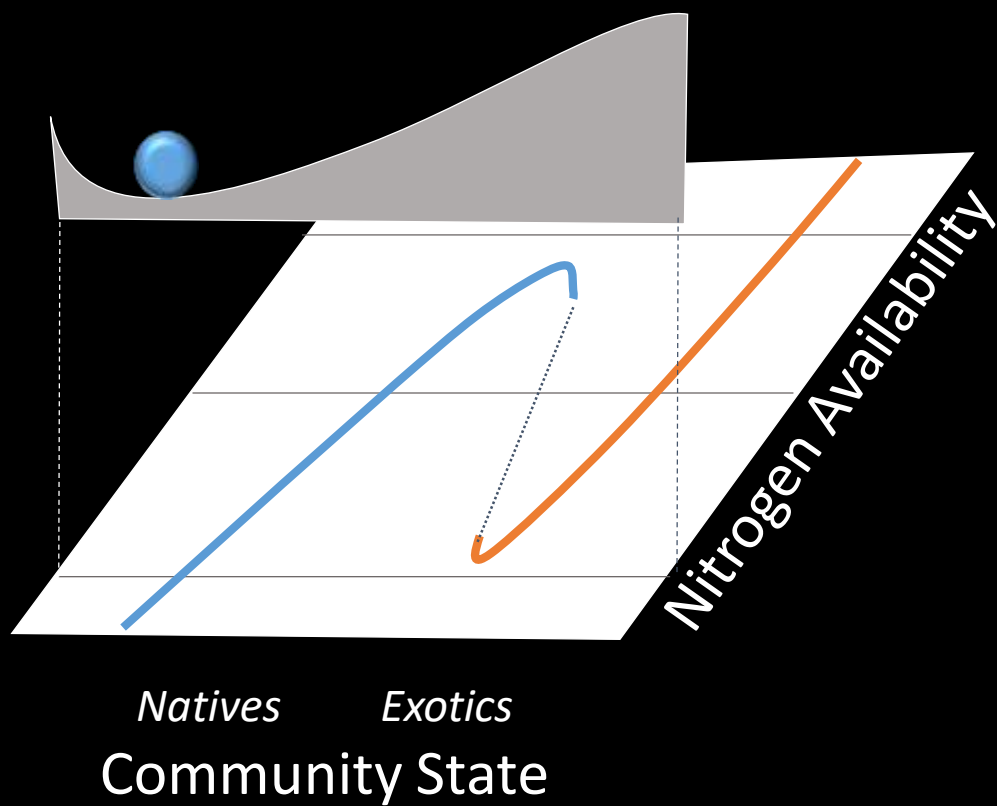


2.

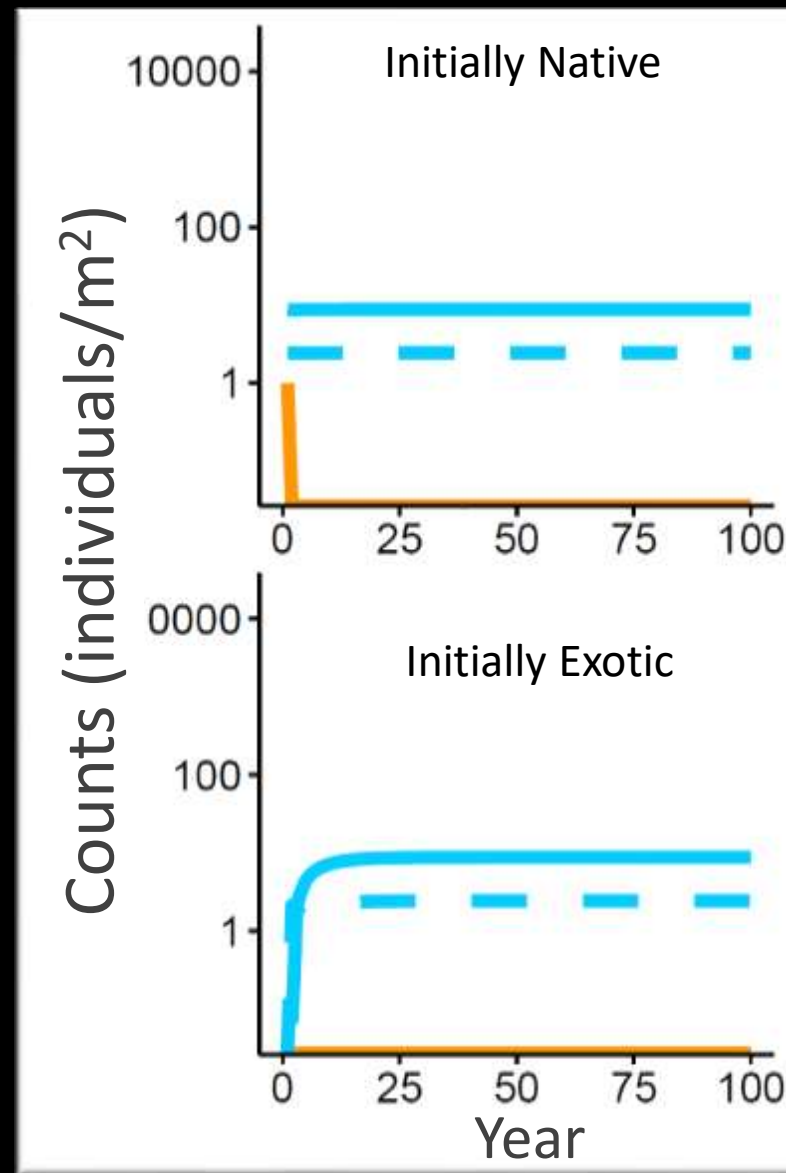
Assess management opportunities: Integrate local scale experiments with modeling



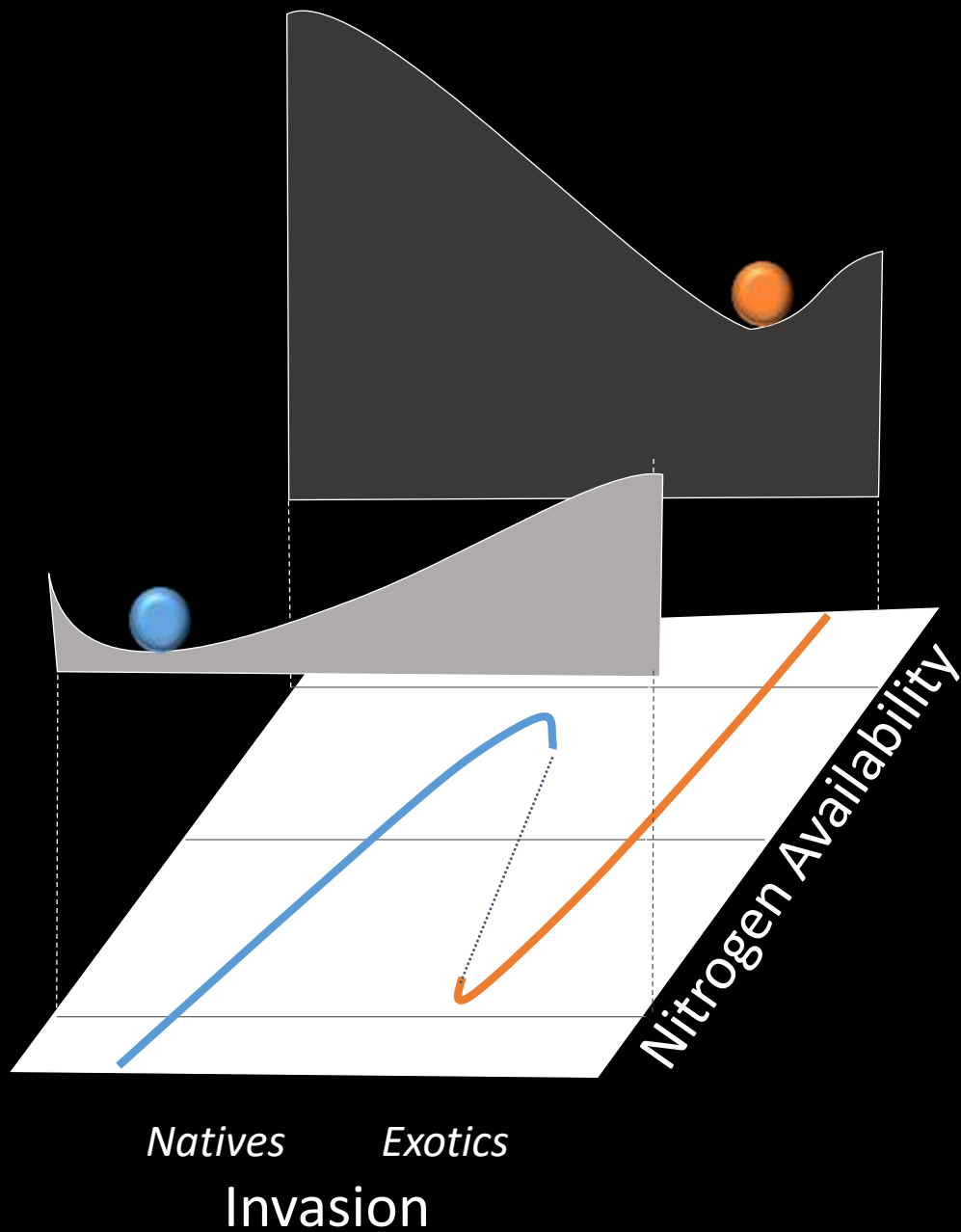
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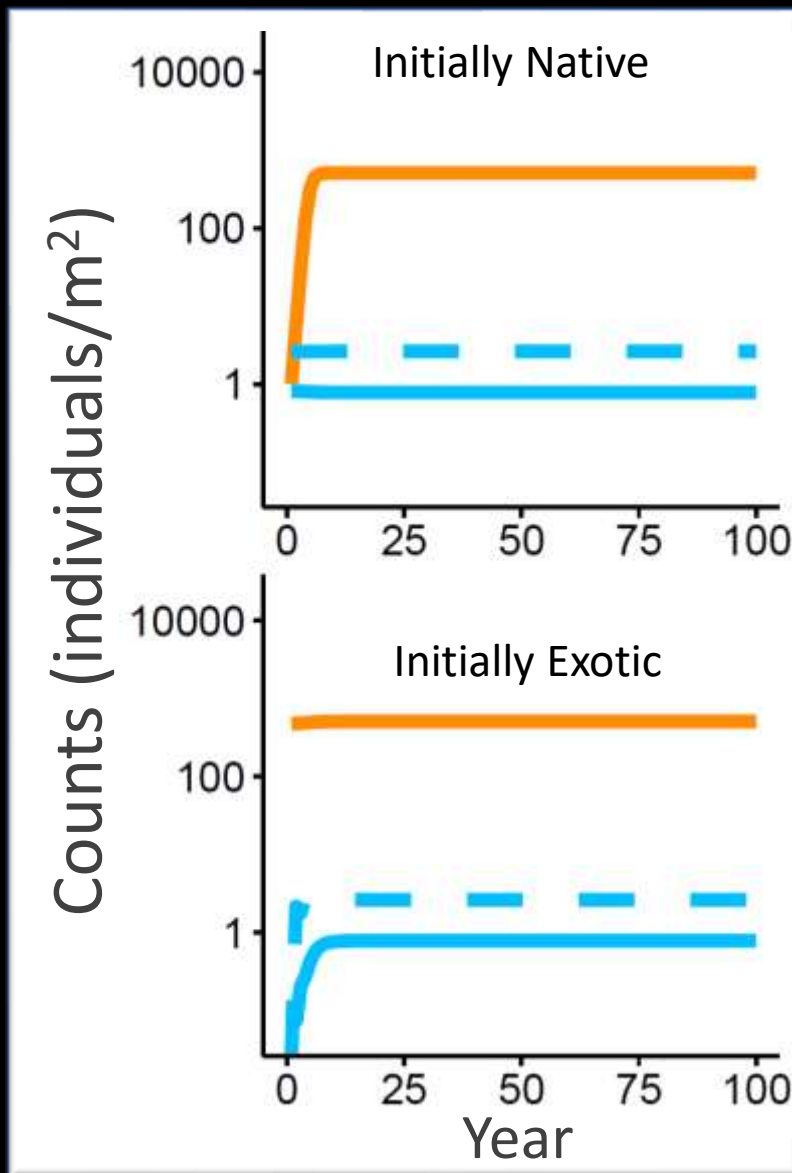
Low N



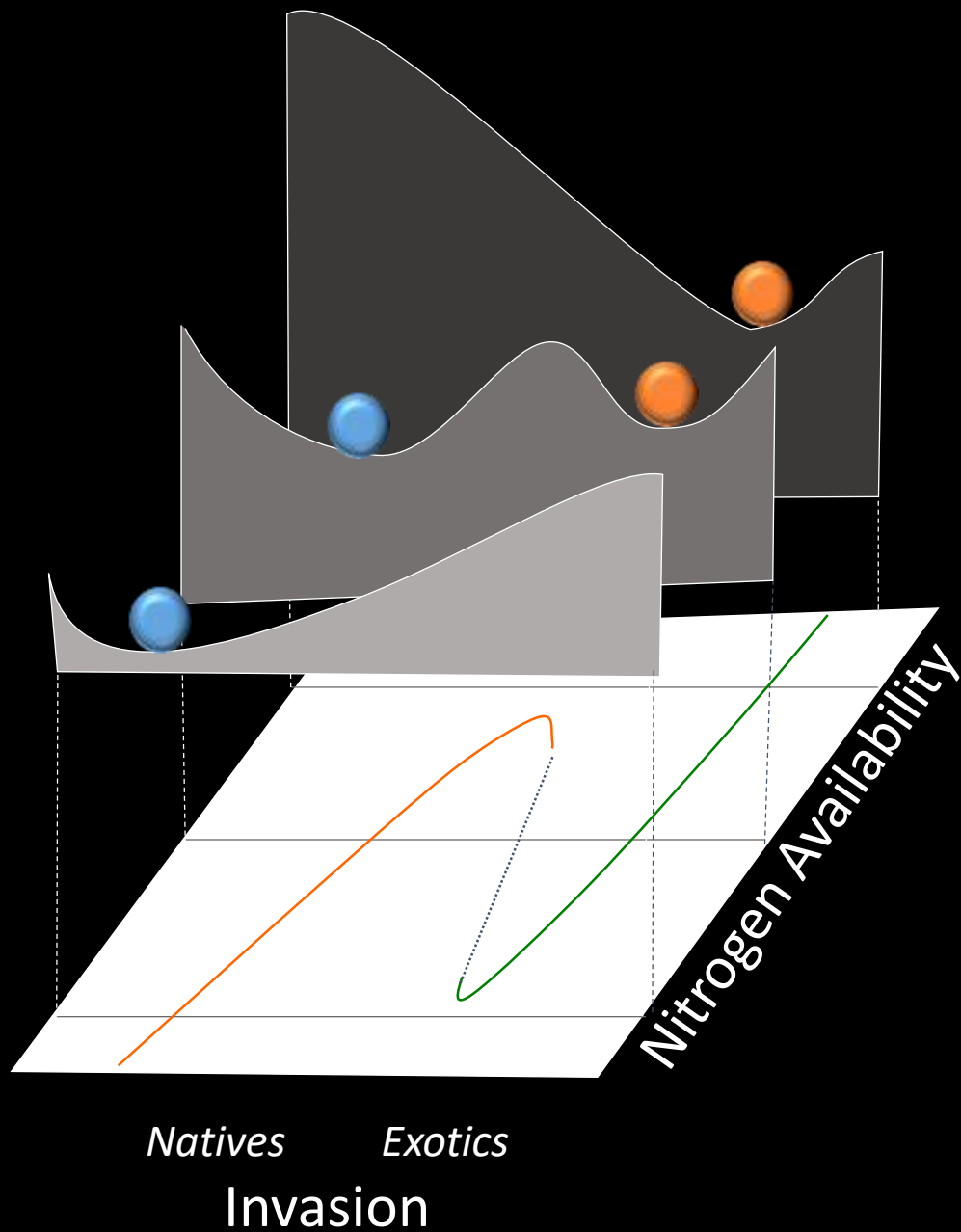
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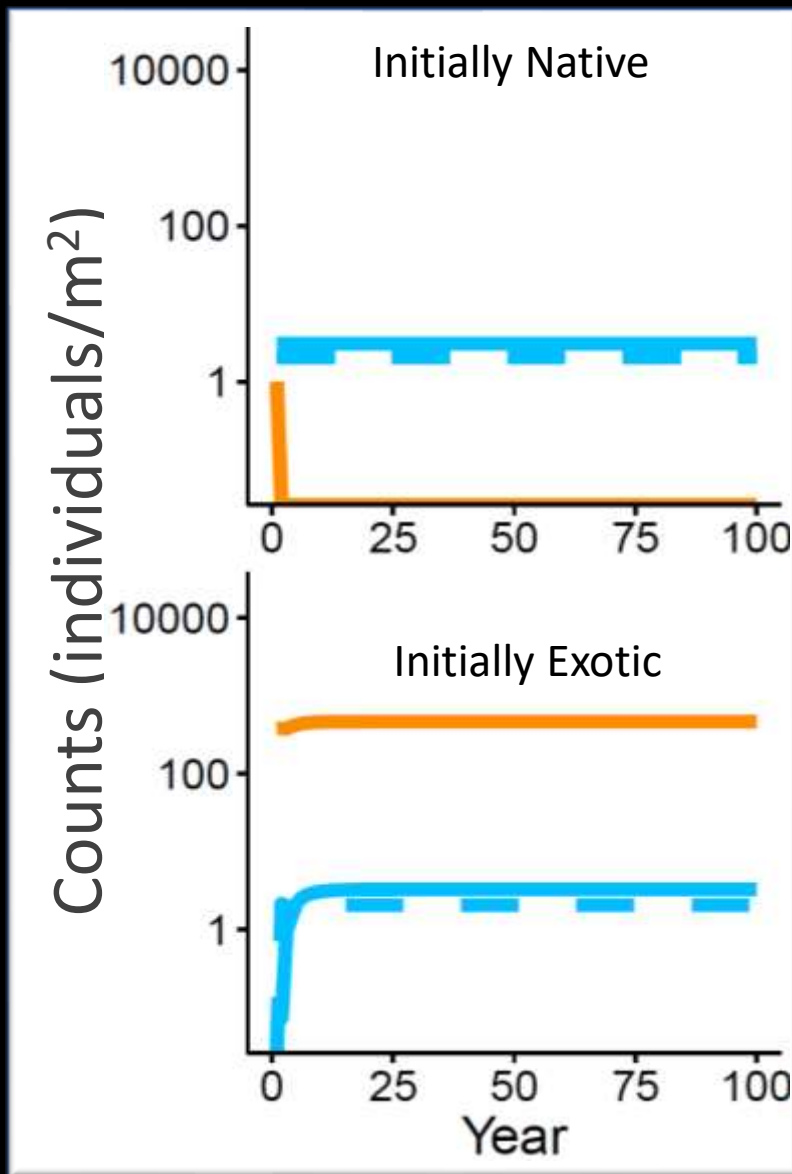
High N



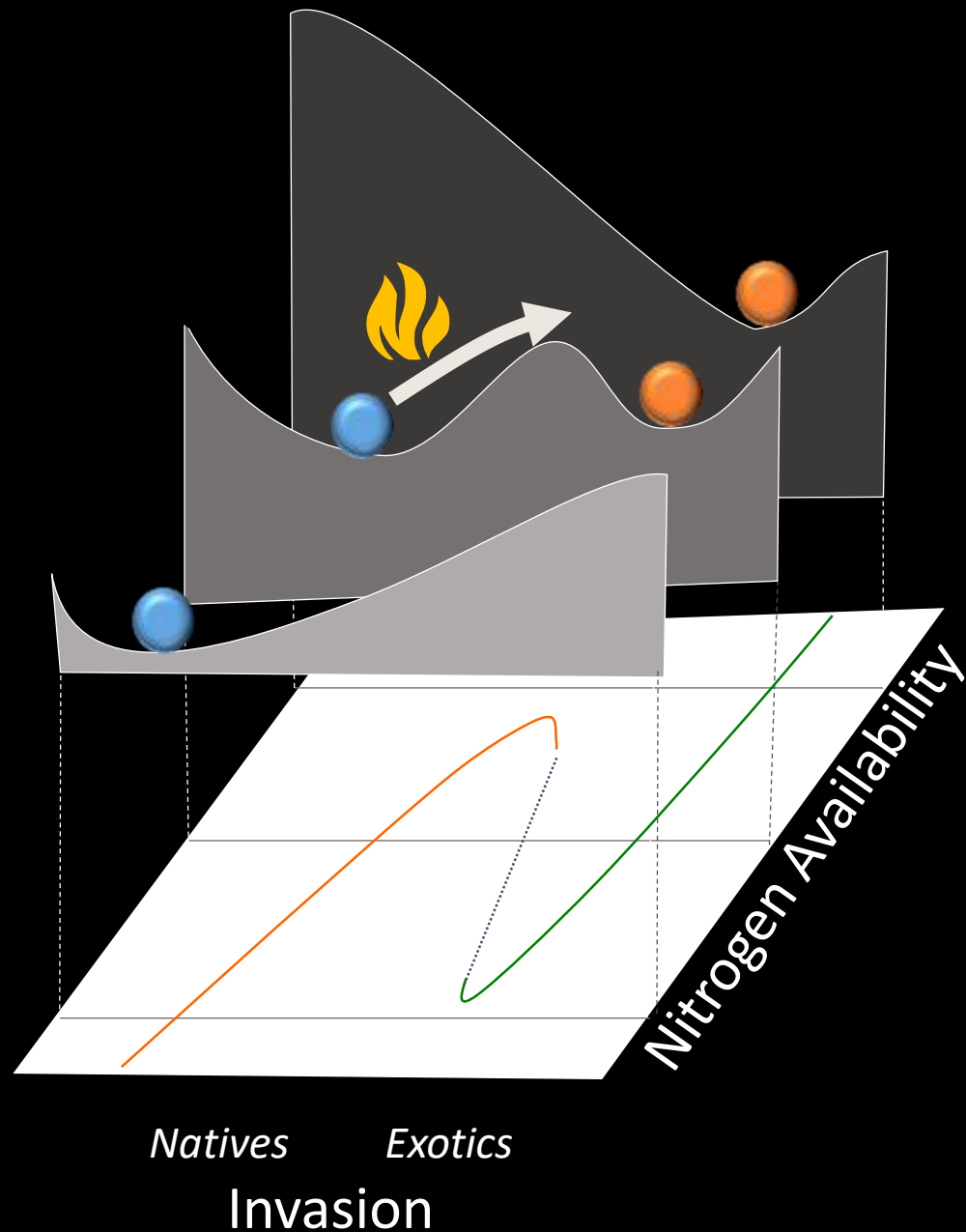
2.



Moderate N



2.

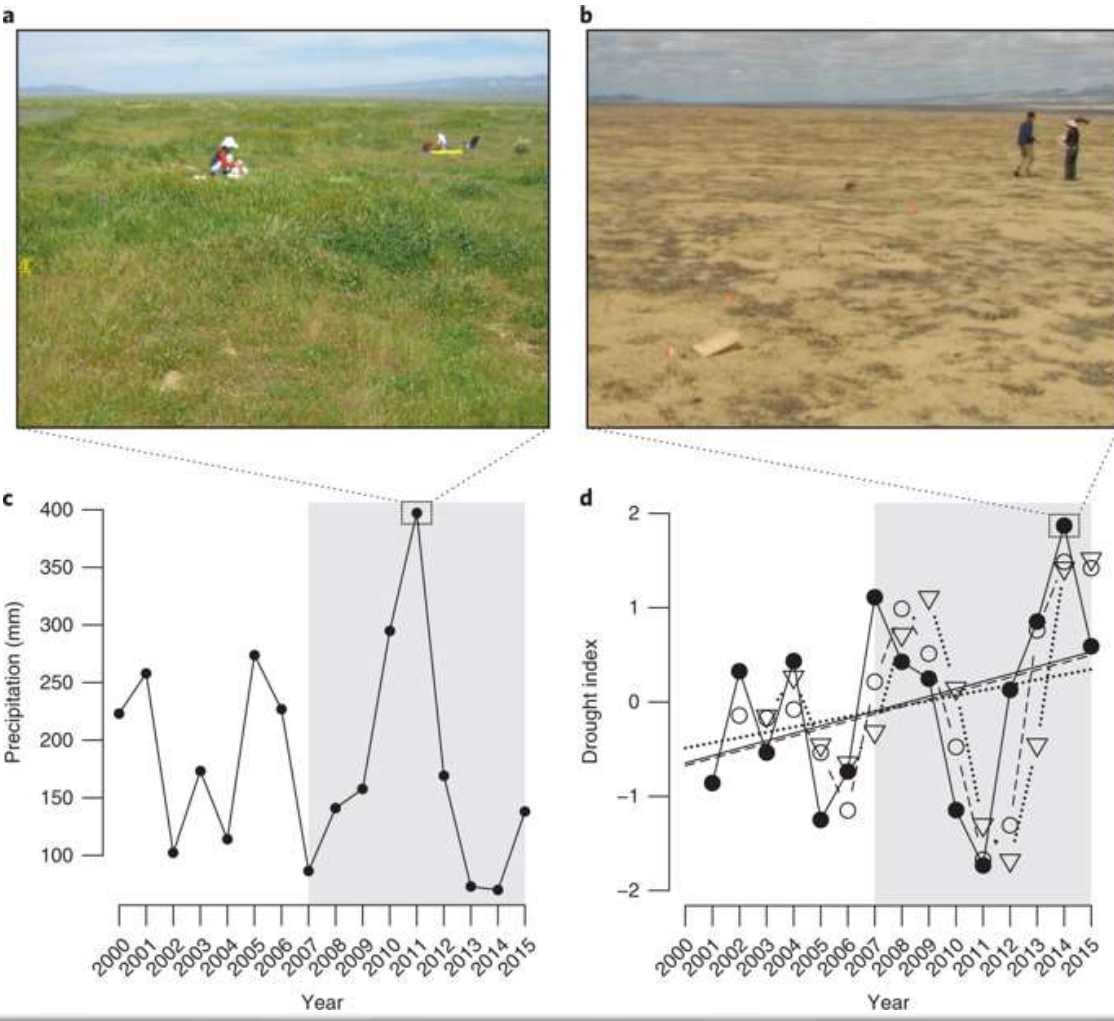


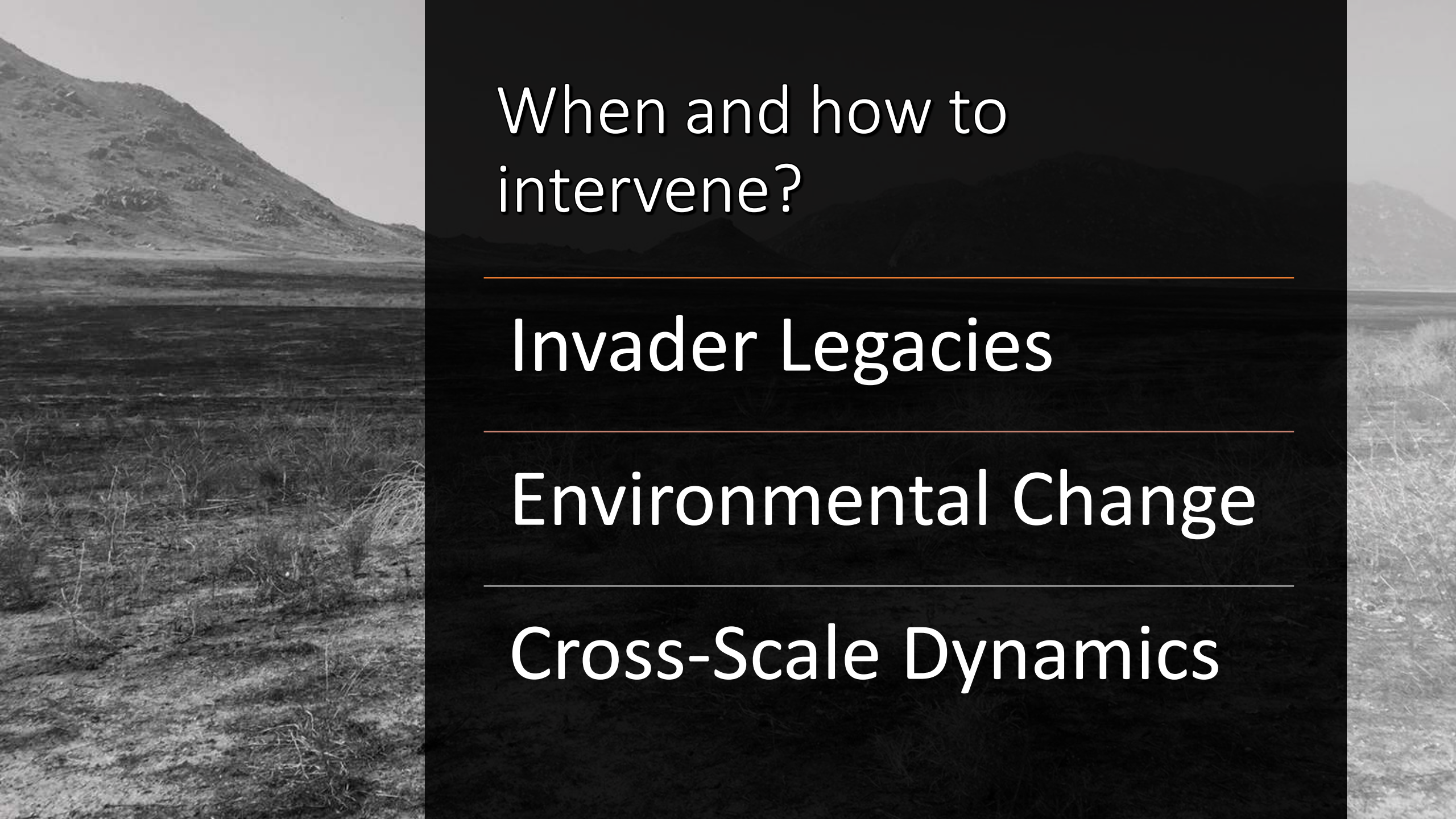
Management Guidelines

- Remnant areas approaching transitions need extra attention
- Active restoration is best employed selectively

3.

Evaluate synergies: Continue implementing local experiments





When and how to
intervene?

Local scale experiments

Landscape assessments

Model integrations

Acknowledgements



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