

Managing for RADical Ecosystem Change

Applying the Resist-Accept-Direct (RAD) Framework

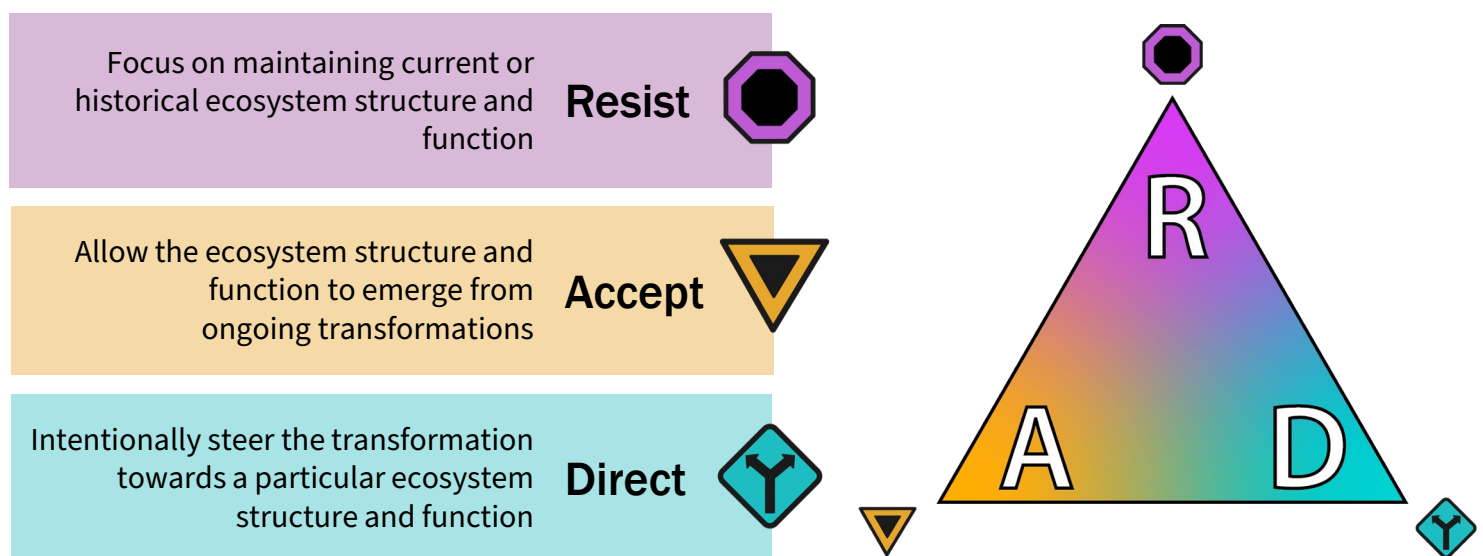


What happens when the future does not reflect the past?

Intensifying global change is propelling ecosystems towards irreversible transformations.

When ecosystem restoration, rehabilitation, or other ongoing practices are increasingly untenable, the **Resist-Accept-Direct (RAD)** framework can help start constructive conversations about what comes next.

The Framework



RAD Case Study

Kenai Peninsula, Alaska

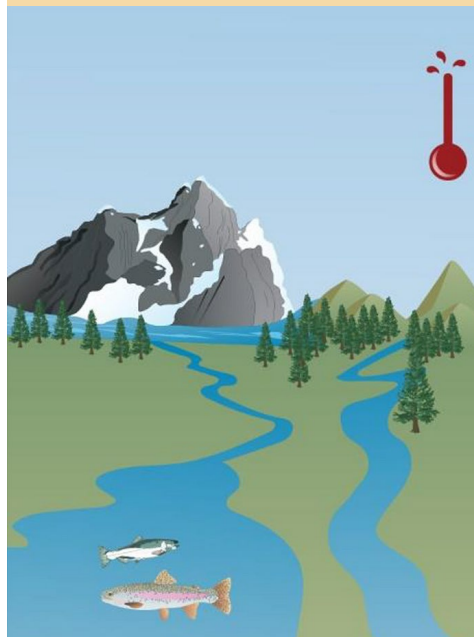
Spanning 24,300-km² and encompassing boreal and coastal rainforest biomes, three icefields, and an elevation range from sea level to >1,600 m, the Kenai Peninsula—home to the celebrated Kenai River, Kenai National Wildlife Refuge, Kenai Fjords National park, and Chugach National Forest—is undergoing marked ecosystem transformation due to climate change. Most changes have been **accepted** by practitioners, either because they are infeasible to manage (e.g., changes in bird migration, glacial ablation) or are not impactful enough to warrant a management response (e.g., afforestation, American marten establishment). Some changes have been **resisted**, for example by reforesting areas affected by beetle-induced tree mortality, protecting riparian parcels that harbor cold-water refugia for salmon, and eradicating invasive plants. Elsewhere, change is being **directed**, for example by planting exotic tree species for landscaping and fruit production as the growing season increases. Change could also be directed by introducing a nonnative grazer, like bison, to steward the system towards a richer grassland.



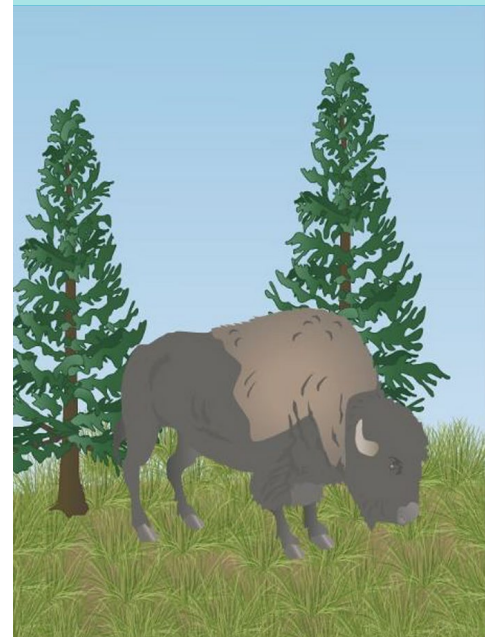
Resist



Accept



Direct



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