Marine protected areas and fisheries management in a changing environment

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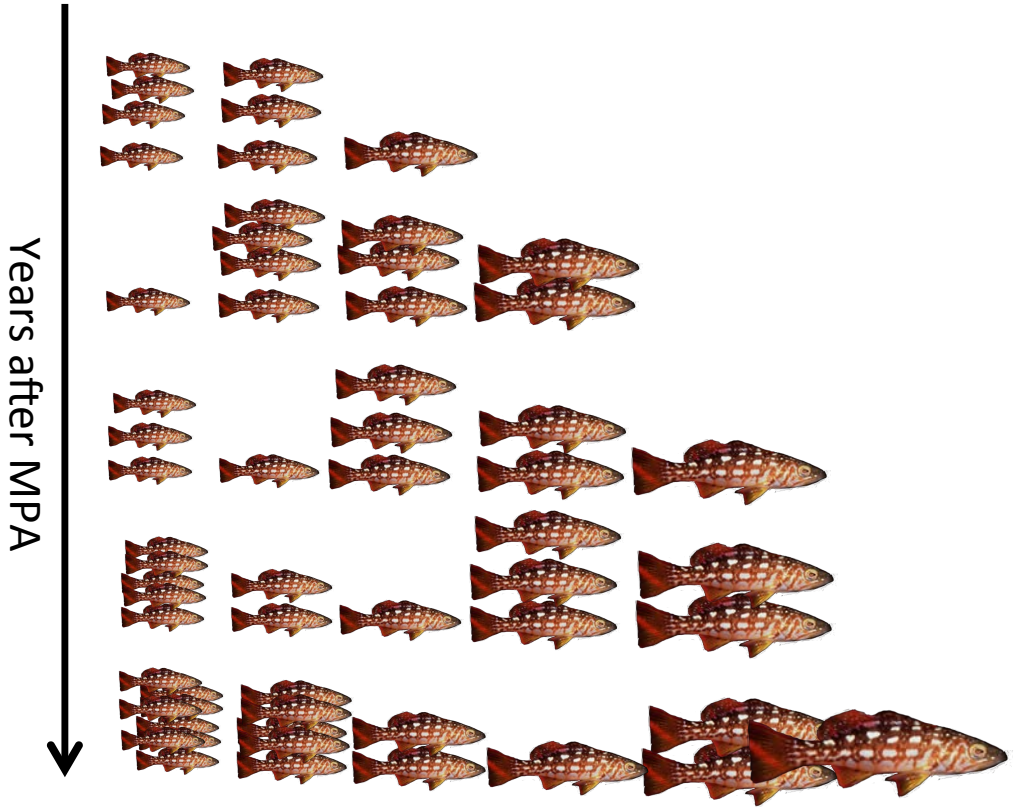
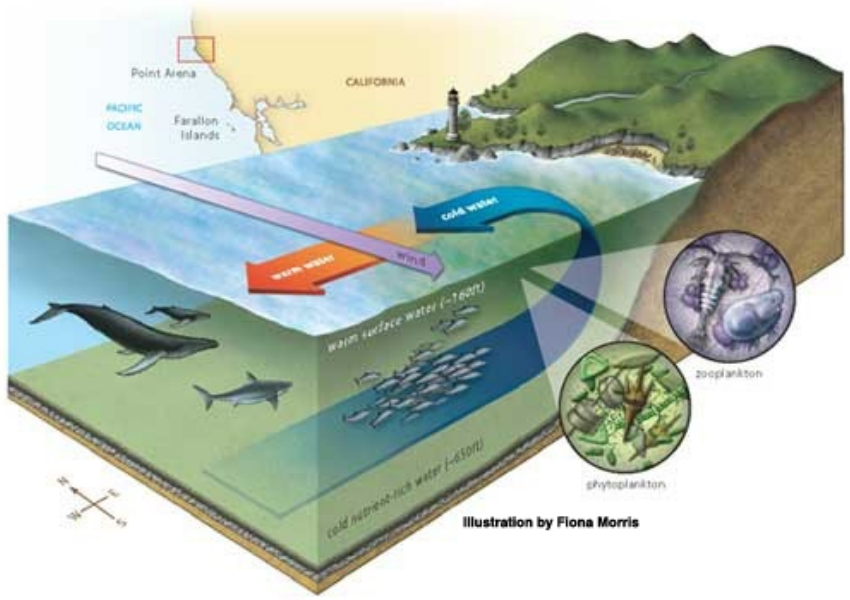
Photo: Sarah Wheeler

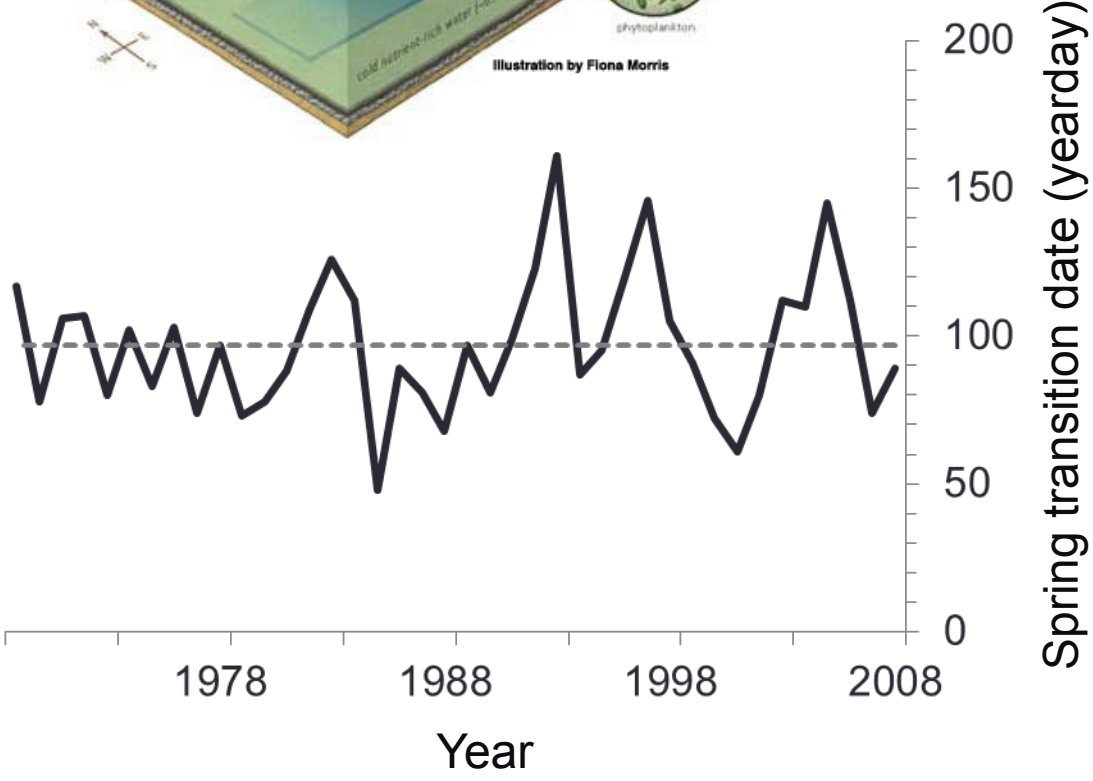
What can we expect from our MPAs?

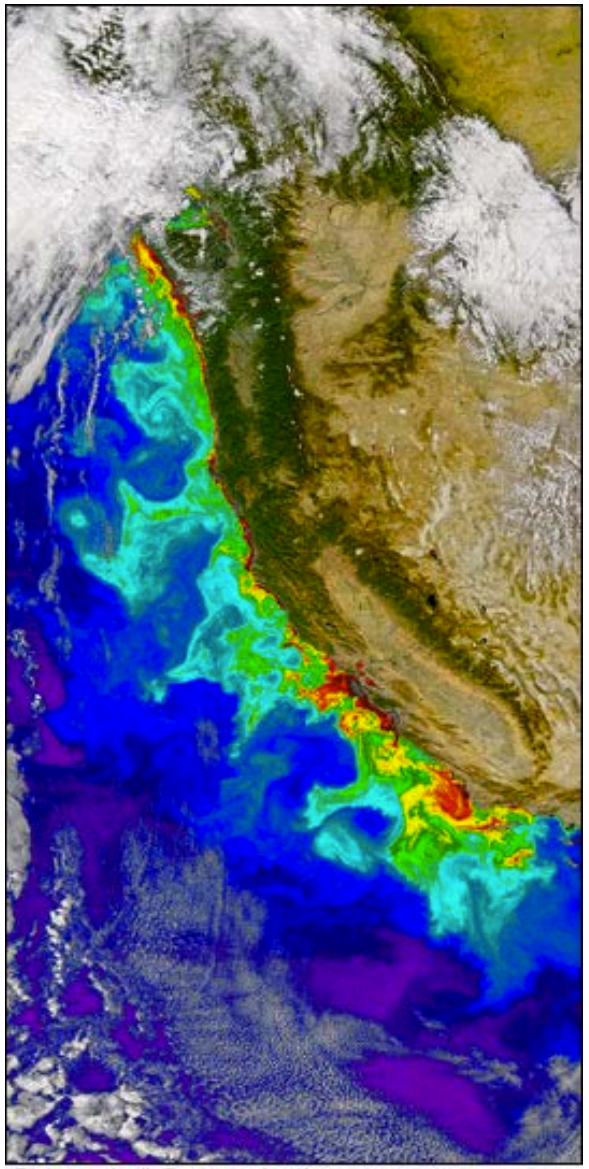
- Increased size and abundance for some, but it may take a long time!
  - Responses depend on life history and exploitation history
- Can MPAs support sustainable fisheries given climate variability and global change?



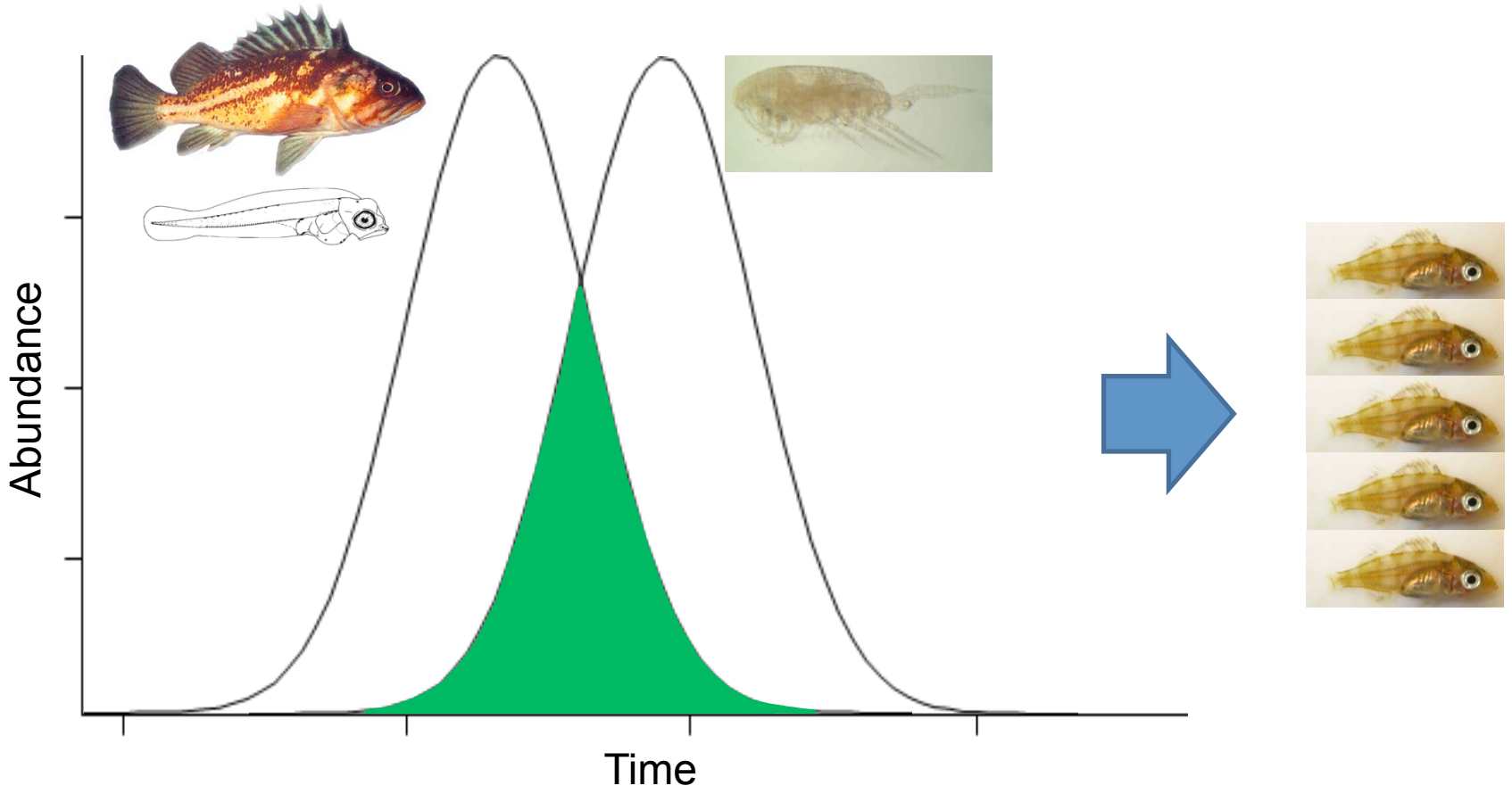
Shifts in timing of seasonal productivity?






Chlorophyll Concentration

Potential mismatches between birth timing and food availability



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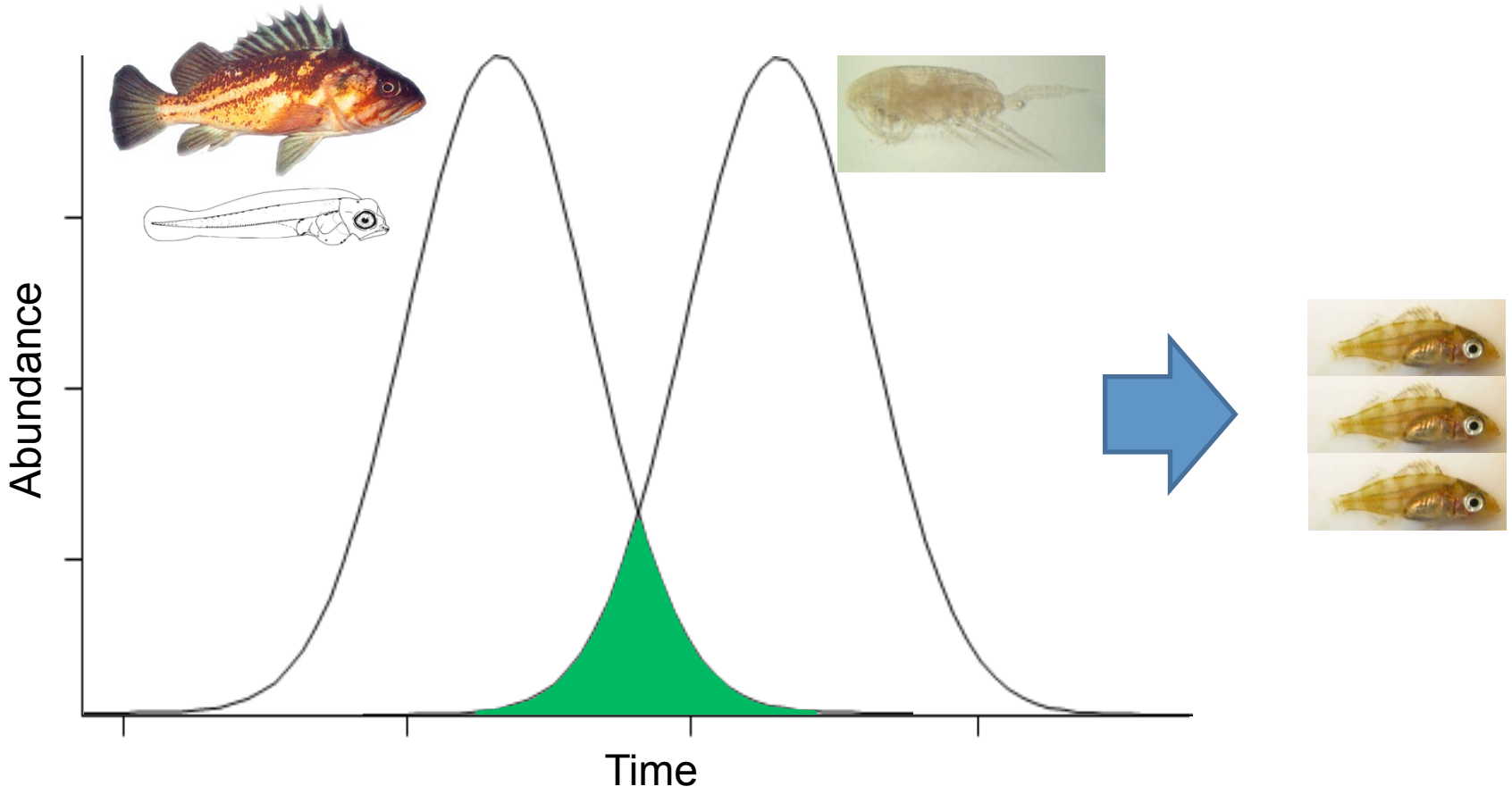

Take home: climate change can diminish productivity

- Solutions: reduce fishing or implement MPAs
  - Similar effects, but MPAs provide more of a buffer against uncertainty in fishing rate

- Future directions: further evaluating and addressing the population and community consequences of interactions between fishing and climate