

Effects of a Changing Arctic on Polar Bears and Pacific Walruses

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Why sea ice matters...

Resting and refuge (from humans and predators)

Females give birth and nurse young

Access to wide areas of continental shelf to forage

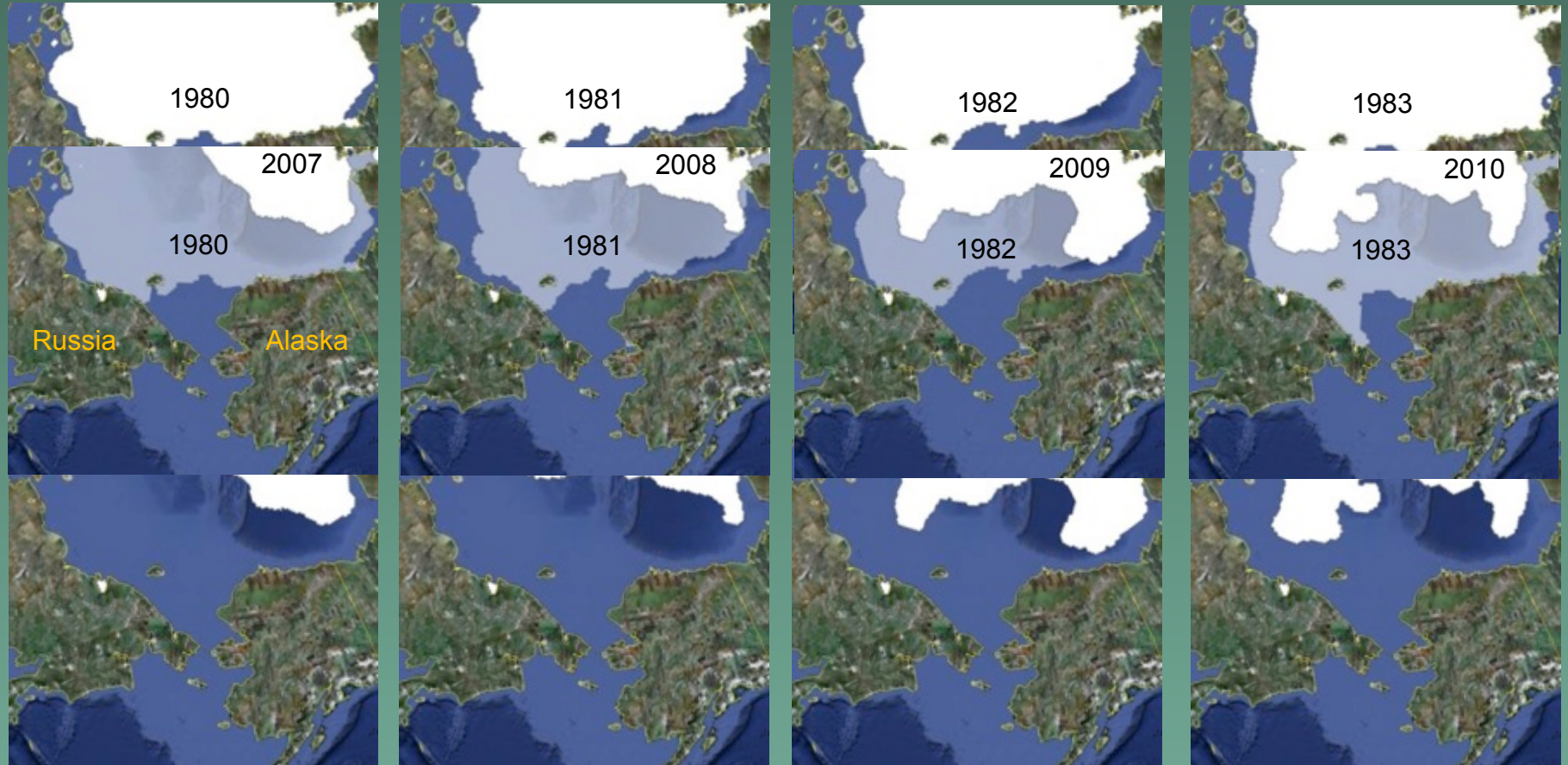


What are we seeing?

Since 1979...

- Extent: -14.2%/decade
- Open water: 12 days/decade (AK)

Large area of summer sea ice habitat is gone



September

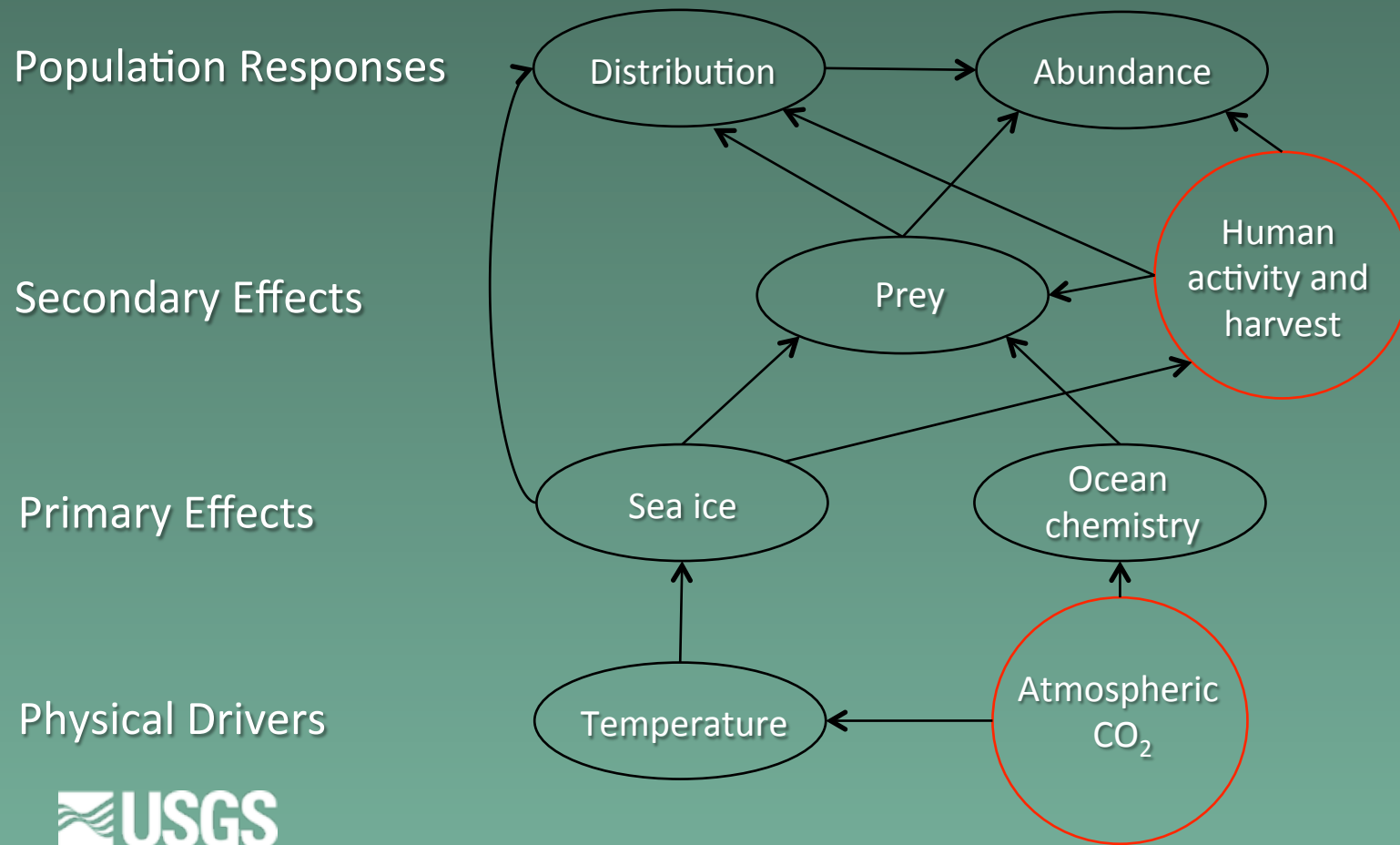


Polar bear population responses in the southern Beaufort Sea

- Increased fasting
 - 20% increase since 1980's
- Declines in physical stature
 - smaller, lighter...
- Increased exposure to infectious agents
- Declines in survival and abundance
 - 40% decline in the SB subpopulation



Forecasting Responses to Rapid Warming



Further information:

http://alaska.usgs.gov/science/biology/polar_bears/

<http://alaska.usgs.gov/science/biology/walrus/>

