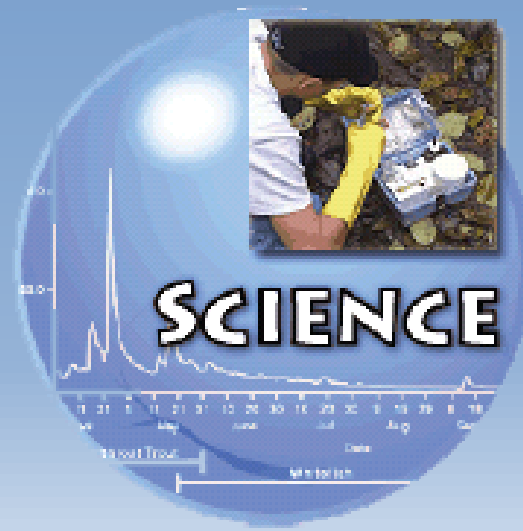


Marine-Derived Nutrients

The Aquatic Food Web

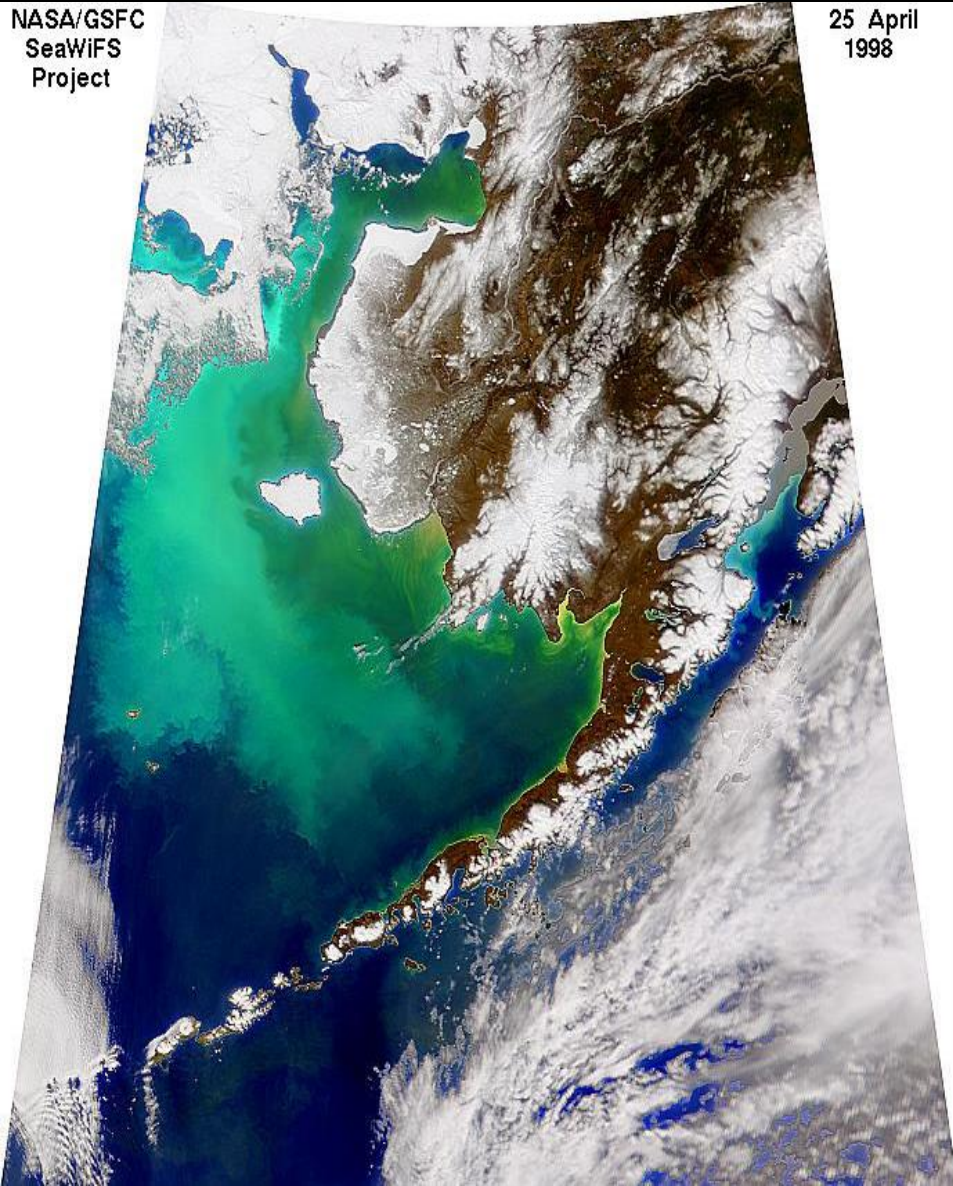


Algal Blooms

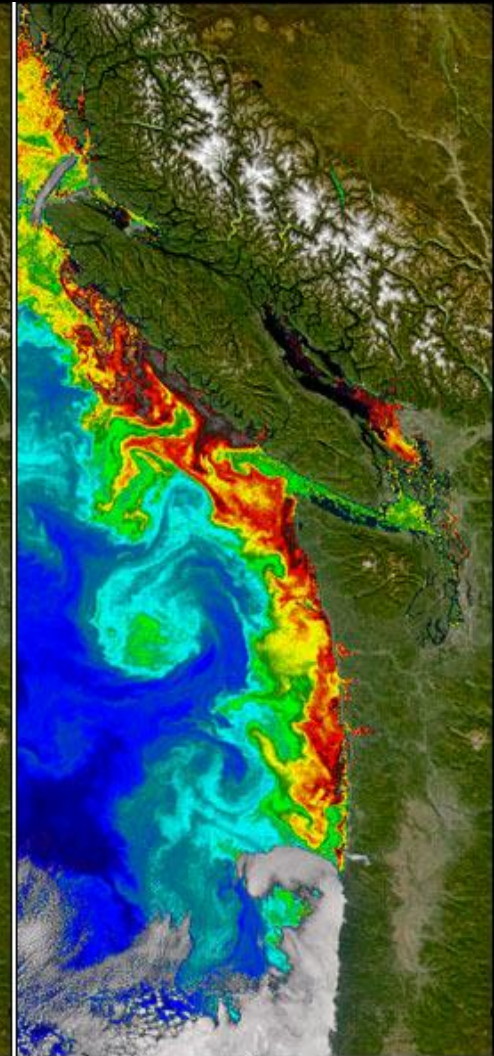
The North Pacific Turns Green

NASA/GSFC
SeaWiFS
Project

25 April
1998



Natural Color



Chlorophyll Concentrations

Ocean Chlorophyll Concentration (mg/m³)



FREEING THE ELWHA

The Marine Food Web



Seals feed on small fish and salmon



Orca feed on salmon and/or seals



Adult Salmon feed on small fish

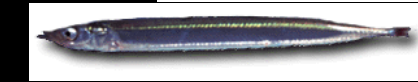
Anchovies are common schooling fish



Juvenile salmon can be prey for adults



Juvenile salmon feed on plankton



Small forage fish feed on plankton



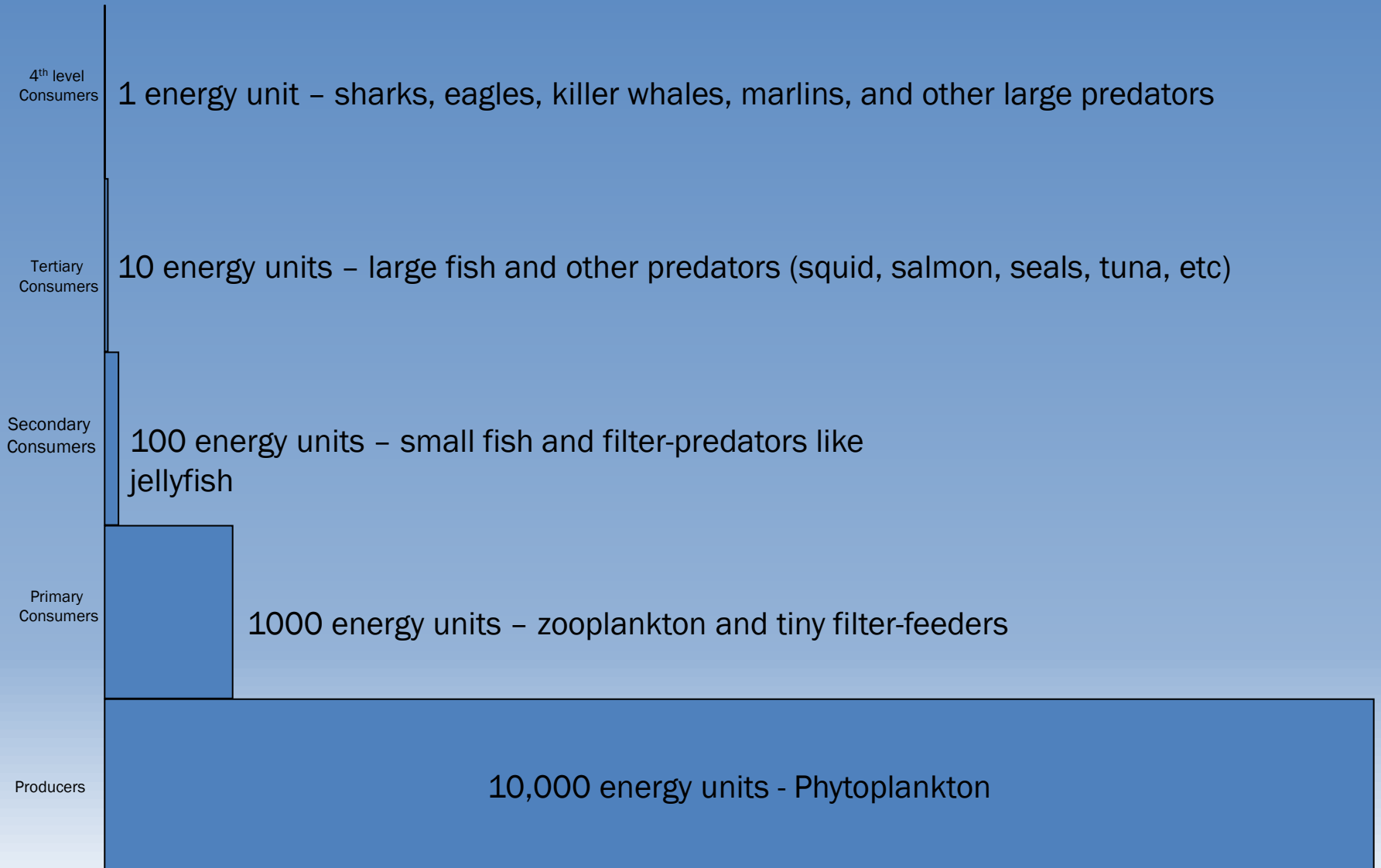
Zooplankton feed on algae and smaller plankton



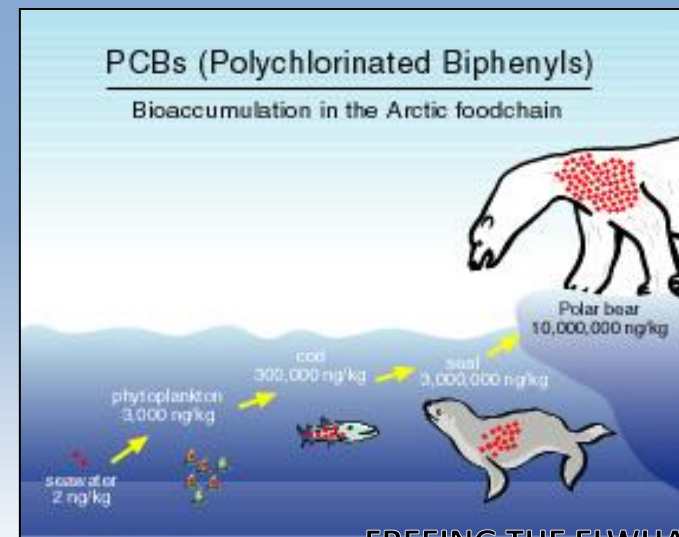
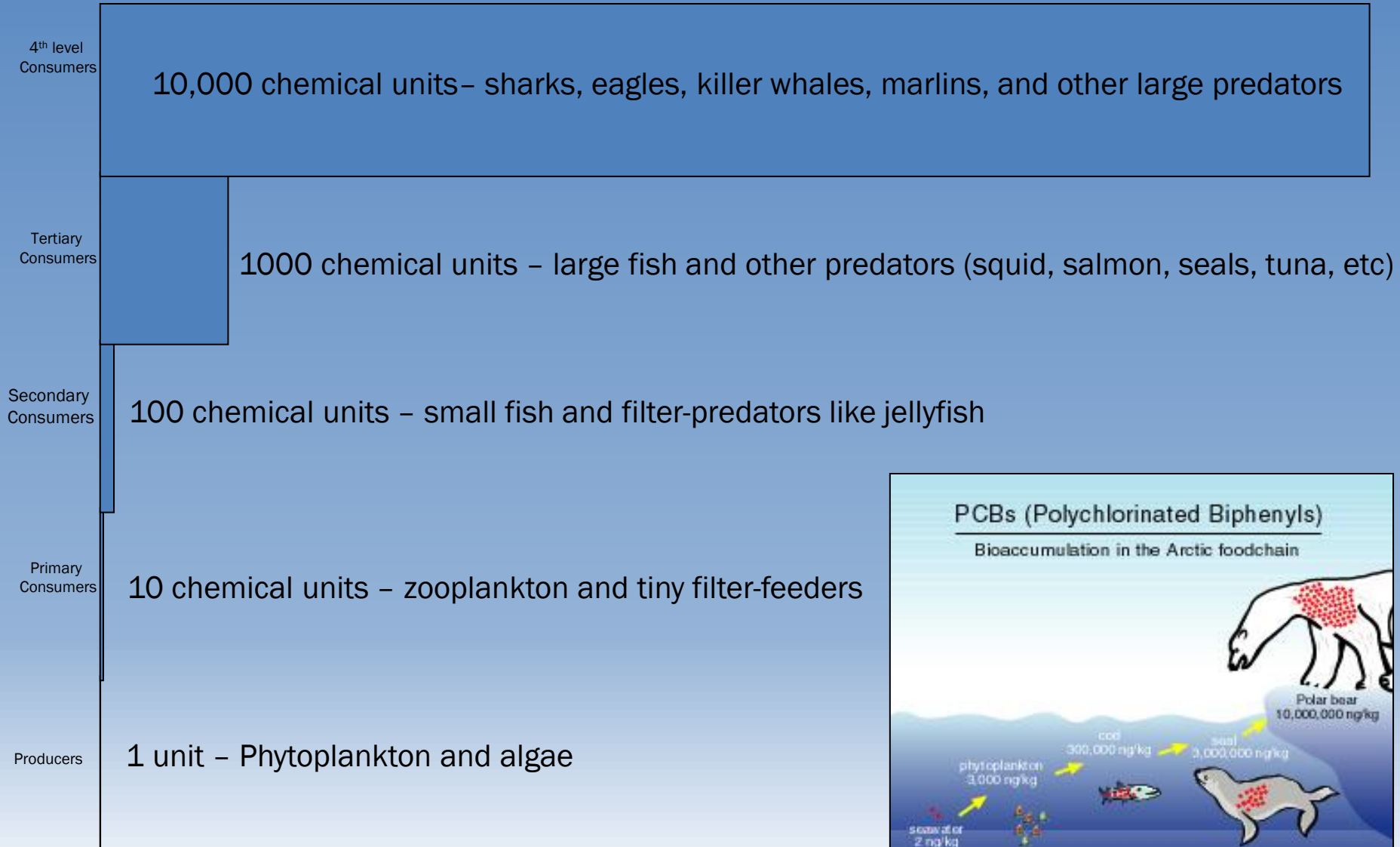
Algae produce food from photosynthesis



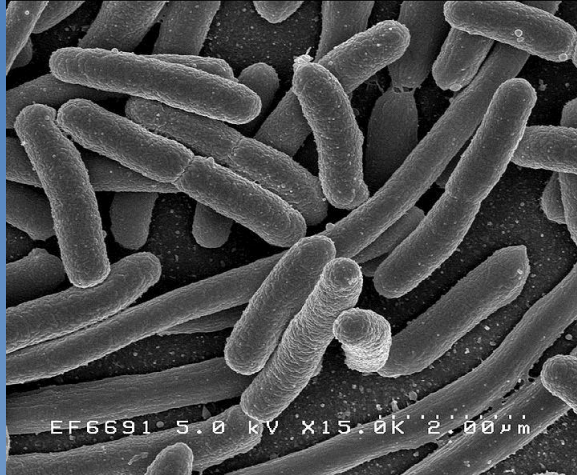
Trophic Levels



Biomagnification



Decomposition of Salmon Carcasses



Movement of Marine-Derived Nutrients Across Generations

Adult salmon return from sea



Salmon Carcass



Juvenile salmon head to sea



Nutrients enter water



Juvenile salmon feed on aquatic insects



Nutrients used by algae and bacteria on rocks



Aquatic insects feed on algae and bacteria

It is estimated that up 95% of the food consumed by a salmon fry may have originated from the salmon carcass. **FREEING THE ELWHA**

Movement of Marine-Derived Nutrients in the Food Chain

Adult salmon return from sea



Adults deposit eggs in gravel



Alevin hatch from eggs



Fry feed on aquatic insects



Smolts head to sea



Eggs eaten by predators



Alevin eaten by predators



Fry eaten by predators

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