**KELP FOREST ECOLOGY AND URCHIN BARRENS**

Kelp forests are highly productive coastal ecosystems that thrive in cool, nutrient rich waters including those of much of the Pacific coasts of the Americas.

*This is not an energy flow diagram*

Northern California red abalone $40 million tourism industry of restaurants, campgrounds, hotels & other businesses shut down as abalone populations shrink

stress

E A T

**E A T**

**E A T**

**warming climate**

**ocean heat waves**

**sea star wasting disease** densovirus thrives in warmer waters