

# Ocean Protection Council

Priorities and Progress

November 2006



# Five Big Problems

1. Habitat Destruction
2. Invasive Species
3. Pollution
4. Overharvesting
5. Global Climate Change



California's  
Official  
State  
Animal Can  
No Longer  
Be Found in  
California,  
Except . . .





**CALIFORNIA REPUBLIC**





















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Mescalitan Island

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# California Current Marine Ecoregion Trawling Impact









# Invasives

- California Aquatic Invasive Species Plan
- Goals: Prevention and Rapid Response

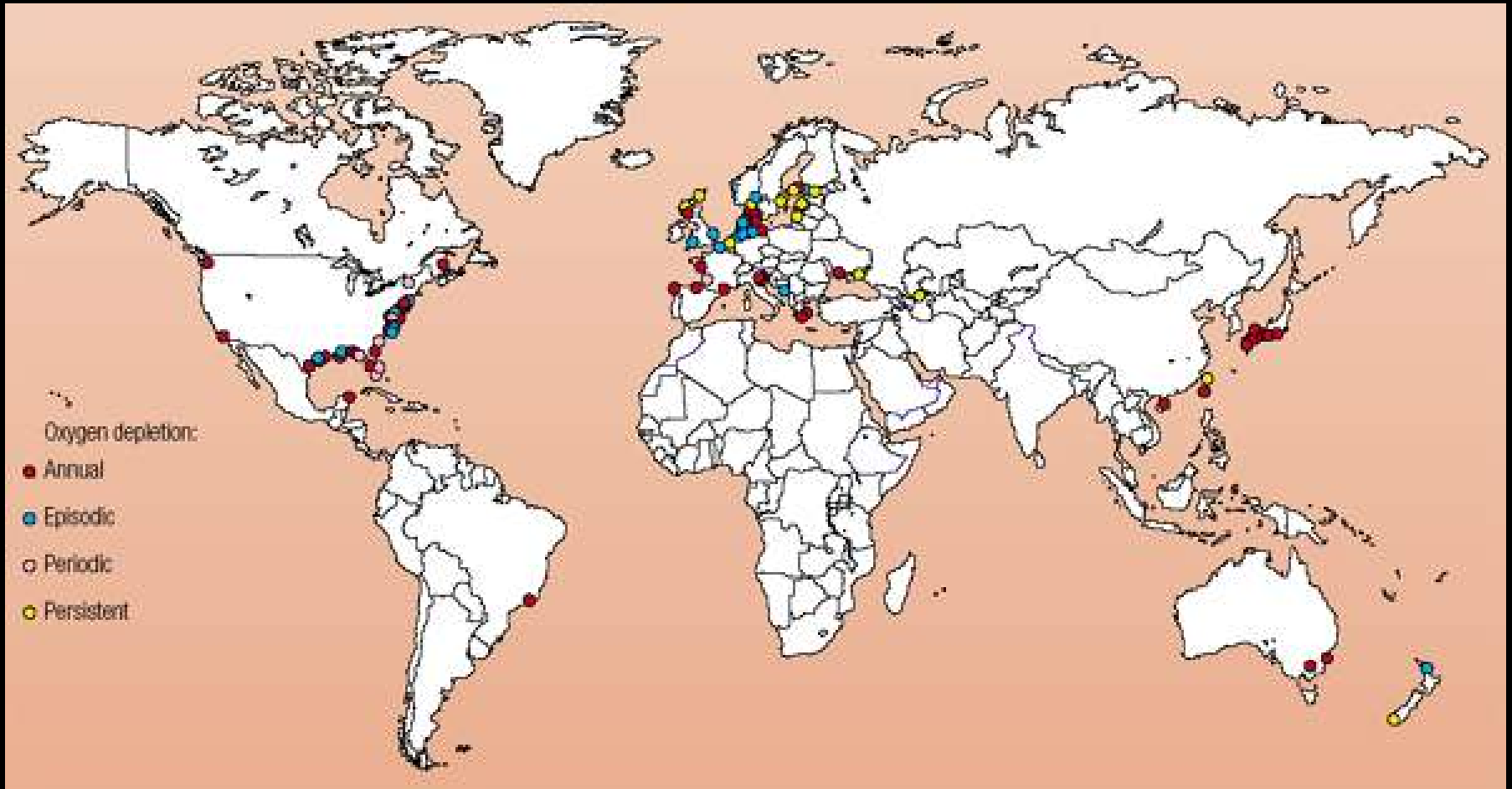




# Pollution



# Dead Zones













**WARNING**

BEACH LIFE GUARD POST OFFICE  
BEACH LIFE GUARD OFFICE

**NO SWIMMING**



**AVISO**

BEACH LIFE GUARD POST OFFICE  
BEACH LIFE GUARD OFFICE

**NO NADAR**

BEACH LIFE GUARD POST OFFICE  
BEACH LIFE GUARD OFFICE





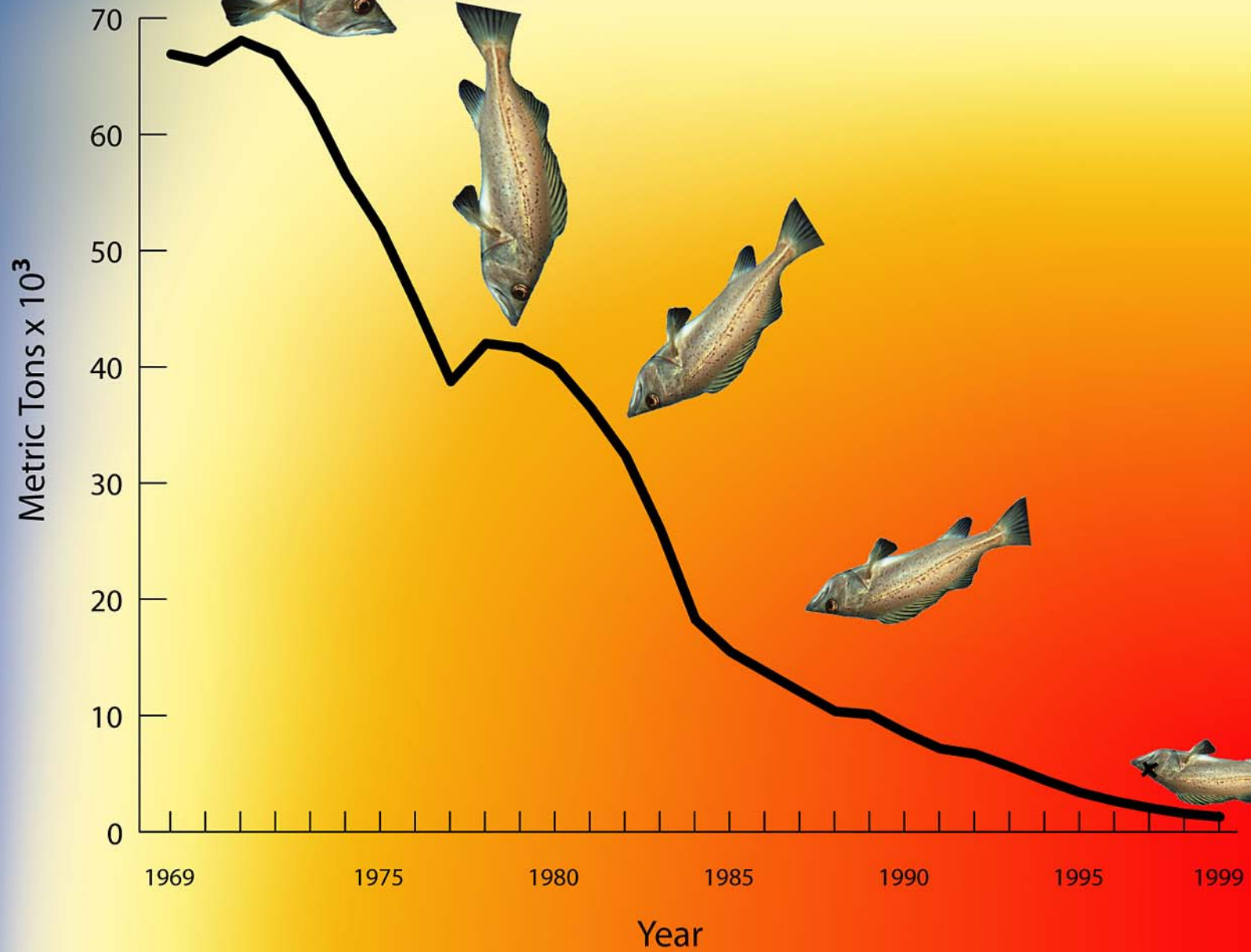


# Overharvesting









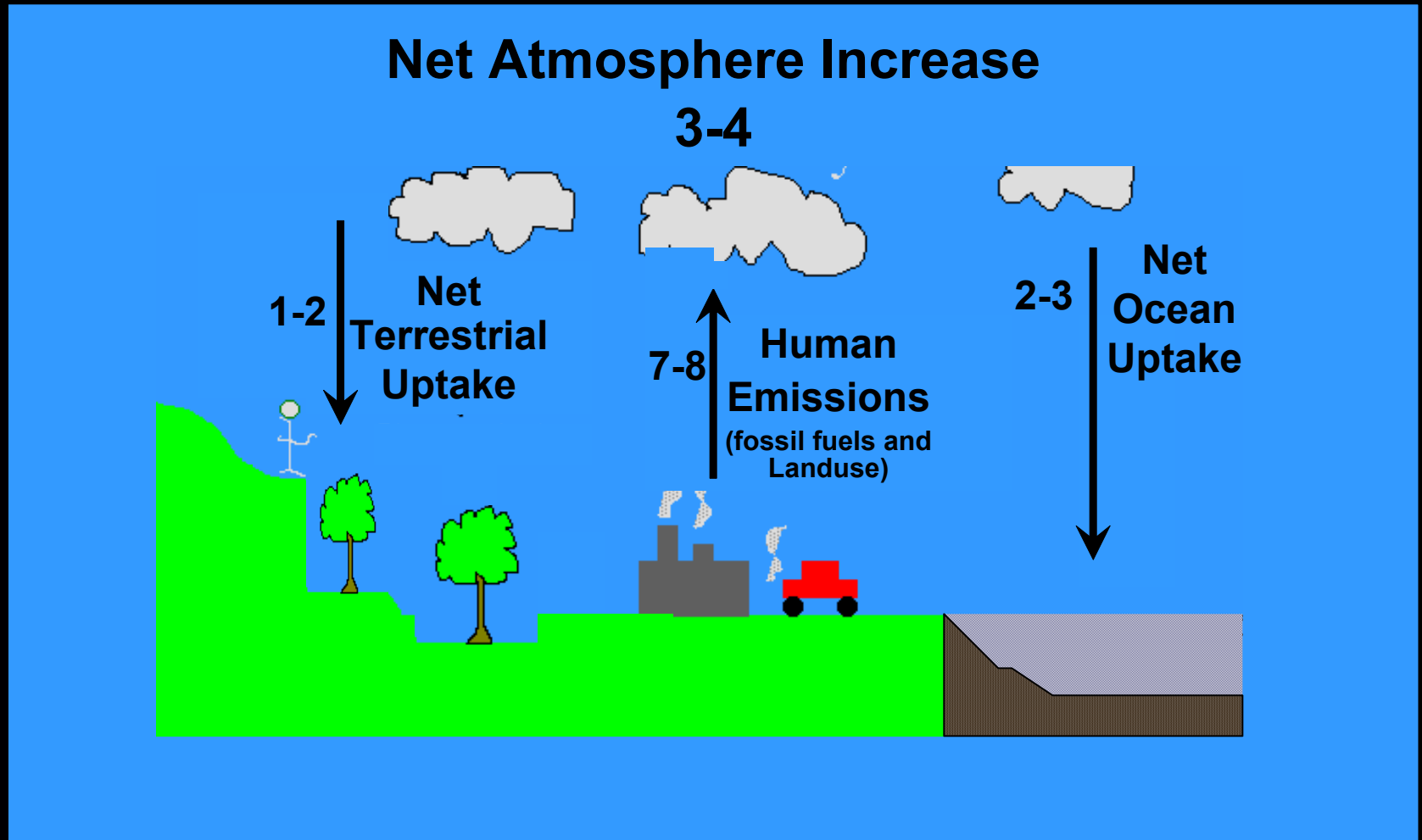


# Global Climate Change



# Simplified Carbon Cycle

(carbon flows in GtC/yr)



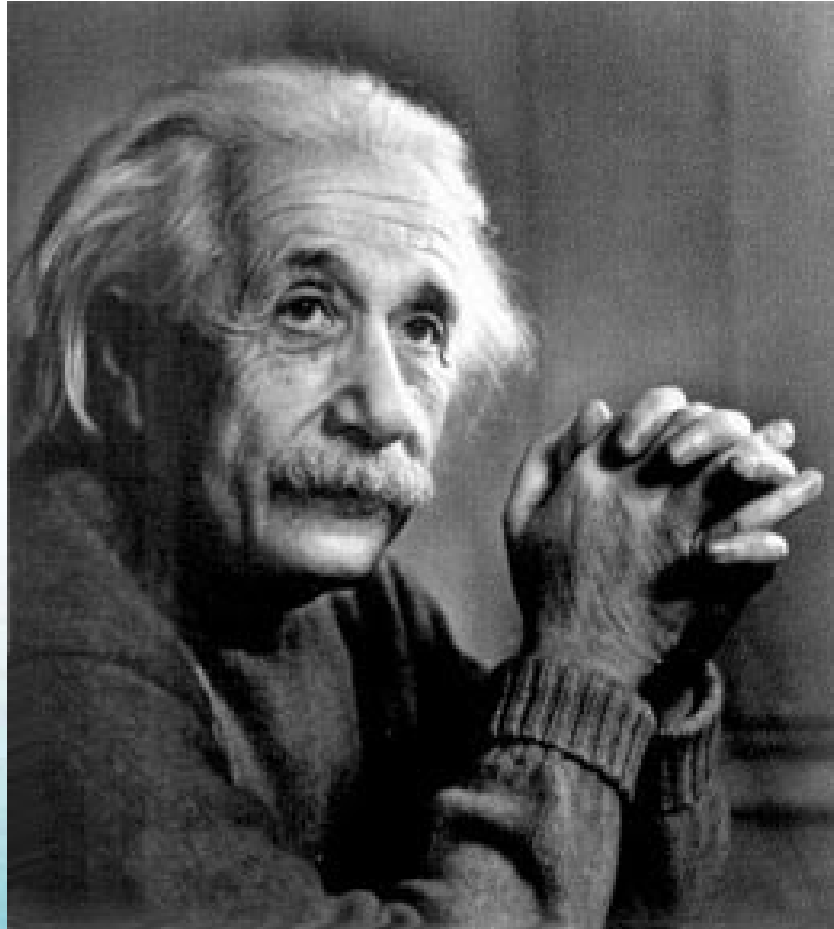
NOTE: while terrestrial and Ocean uptake are constant with time (although they change with climate), Human emissions are changing. These figures are based on IPCC Third Assessment Report (*Prentice et al., 2001*) with updated values on human emissions based EIA estimates.

Mean Tidal Range









We can't solve problems by using the same kind of thinking we used when we created them.

-Albert Einstein (1879-1955)





# Ocean Protection Council

## Priorities and Progress



# Policy and Funding Priorities\*

1. Governance
2. Research and Monitoring
3. Water Quality
4. Marine Life Protection Act (MLPA) and Marine Life Management Act (MLMA)

\*Our funding priorities match our policy priorities.





# 1. Governance

- Enforcement
- Funding
- Develop Metrics to Measure Progress
- Ecosystem-Based Management



# Enforcement



# Funding





# 2. Research and Monitoring

- Seafloor Mapping
- Marine Protected Area Monitoring
- Ocean Observing
- Other (TBD)



# Amber Mace



In her now famous “Mission Accomplished” photo

# 3. Water Quality

- Marine Debris
- Low-Impact Development
- Once-Through Cooling





# Marine Debris













- 8 million pieces of plastic litter enter our oceans every day, affecting over 267 marine species

- In the '80's, researchers estimated 100,000 marine mammal deaths per year in the N. Pacific due to plastic nets and fishing line alone

- Only 5.5% of plastic waste was recycled in 2001







Snapping turtle  
June, 2000







# Other Problems

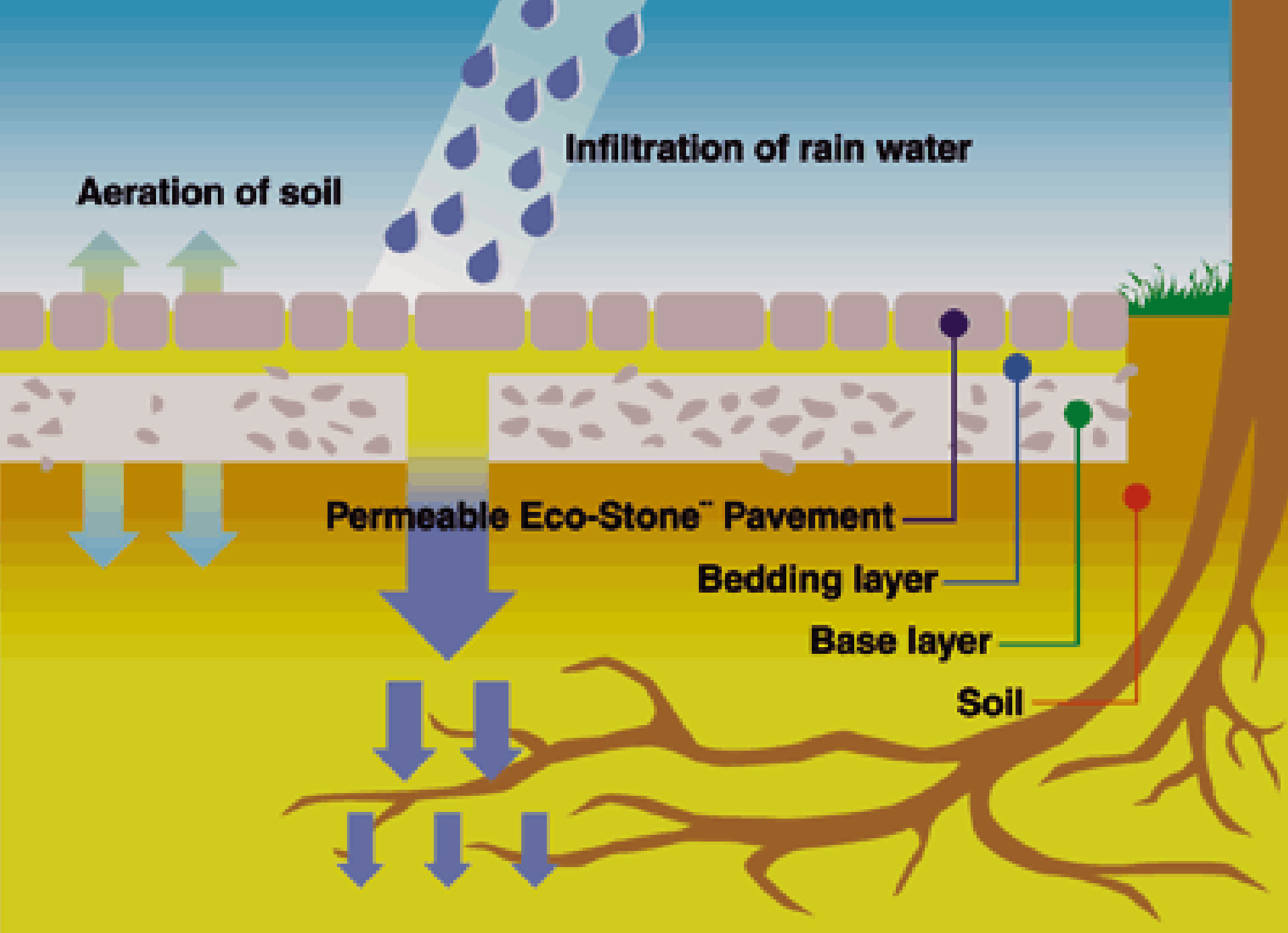
- **Costs** – Caltrans alone spends \$41 million/yr. removing debris from state highways.
- **Beach Experience** – Who wants junk on the beach? How is tourism impacted?
- **Toxicity** – Toxics are attracted to plastic (e.g. PCBs, PAHs, DDT). And plastic itself can contain harmful chemicals (e.g. phthalates).
- **Invasive Species** – Plastic makes a terrific raft.



# Permeable Surfaces







**porous asphalt**

**standard asphalt**







# Once-Through Cooling

- 17 billion gallons a day permitted statewide
- Billions of small organisms killed by entrainment



# 4. MLPA/MLMA

- Funding
- Monitoring
- Innovative Fisheries Management



# Funding





# Monitoring



# Innovative Fisheries Management











# Why We Do What We Do





















# California's Ocean Economy\*

**\$46 Billion/Year**

\*Source: National Ocean Economics Project



















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RINCÓN POINT

WINDS OF THE OCEAN • AUGUST 2004







