

# West Coast coastal C cycle priorities

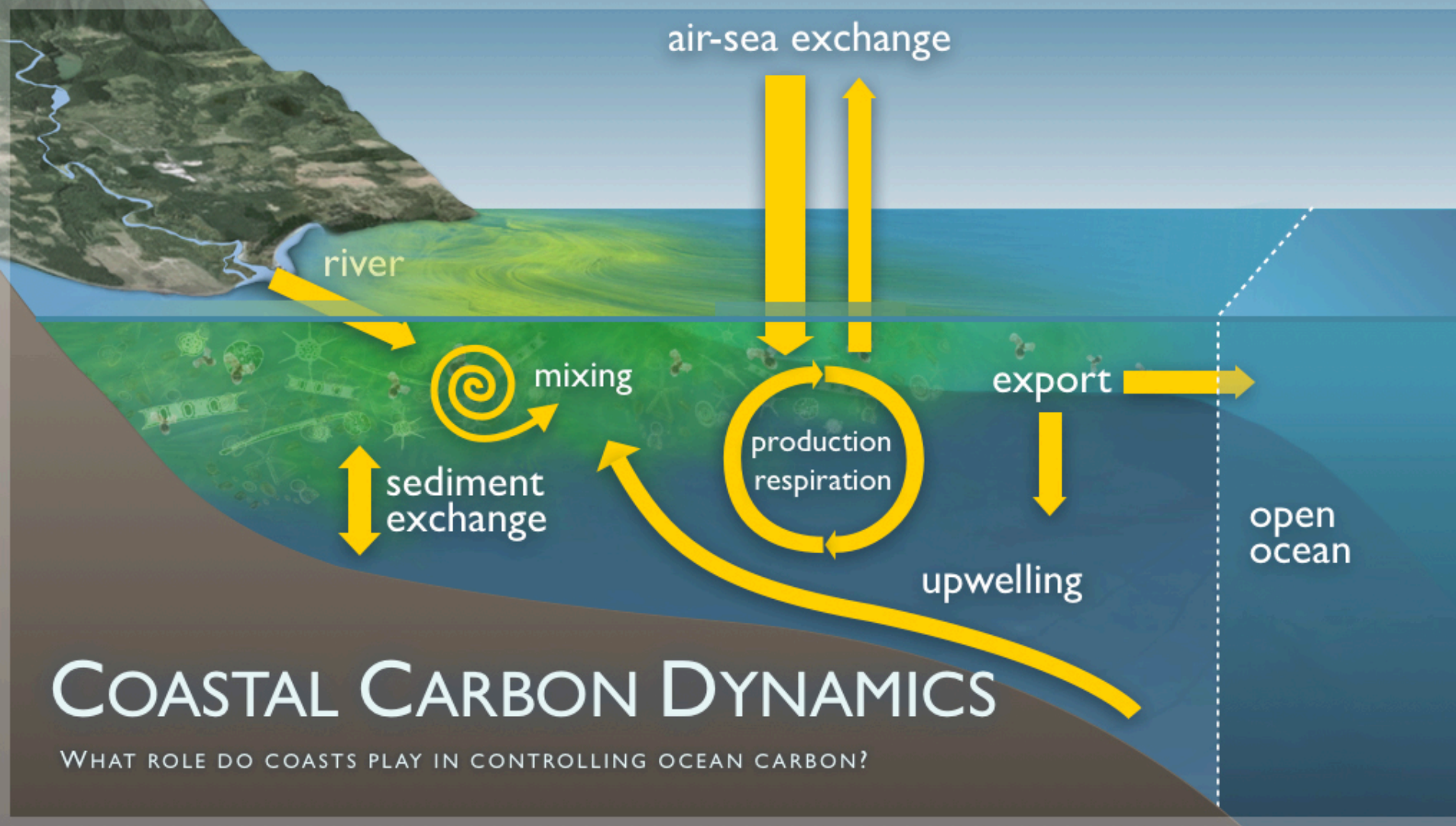
*The Pacific coast of North America is a global hotspot for ocean carbon cycle change and its impacts on marine ecosystems (e.g. ocean acidification and hypoxia), making it a natural laboratory for studying these processes. Priorities for future research:*

- **Better constraint on water column metabolism.** We don't have solid estimates for how much production and respiration occur in WC coastal systems or where the NCP ends up. This is critical for understanding development of hypoxic, corrosive, and toxic (HABs) conditions on our coastline.
- **Winter measurements.** In the CCS, winter storm events play a critical role in priming the system for summer P, R, and development of stressful ecosystem conditions through summer.
- **Lateral fluxes.** Both estuary-to-coast and coast-to-open ocean fluxes are critical to understanding the above processes and impacts and need better observational constraint.

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*A few specific considerations:*

- **Quantify accumulation or loss of C in tidal marsh and other 'blue carbon' systems.**
- **Improve linkages between offshore and nearshore observations.** Often fall under different research programs, but linkages critical for getting whole picture with respect to major coastal C cycle impacts (ocean acidification, hypoxia, etc.).
- **Event-scale observations are important.** Leveraging OOI infrastructure.



# COASTAL CARBON DYNAMICS

WHAT ROLE DO COASTS PLAY IN CONTROLLING OCEAN CARBON?