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Look to the ocean for climate resiliency

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By Deborah Halberstadt

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Climate change is an existential and imminent threat, but there is reason for hope.

That hope lies in our planet itself — a planet with a surface that is 70 percent ocean. A healthy ocean holds the potential to help protect us against climate change. That's why it has never been more important to protect the ocean. If we reverse the ocean's current degradation, then we can create an opportunity for improved resilience against climate change.

The latest science shows our daily terrestrial activities are poisoning the ocean. Greenhouse gas emissions are causing an increasingly warm and increasingly acidic ocean. We are observing faster, more intense ice sheet melt than previously anticipated, leading to faster and higher projections of sea-level rise. As the ocean warms and absorbs more carbon dioxide, it becomes dangerously corrosive to marine life.

Sea grasses, kelp forests, mangrove forests and salt marshes can help address these climate-change impacts because they capture and hold carbon dioxide for centuries. They also help shield against the impacts of sea-level rise. However, degradation of these same ecosystems releases their stored carbon, so that ocean vegetation becomes a source rather than a sink. Their destruction likewise eliminates their ability to protect us against rising seas.

Conserving and restoring coastal habitat is an important means of protecting against climate change. In California, every state agency with responsibility for coastal management and several cities and counties have committed to maintain and enhance our coastal habitats and the critical biodiversity they support as part of our climate change strategy.

Protecting marine ecosystems from stressors such as oil drilling and overfishing similarly will lead to improved biodiversity and increased resilience to climate change. California's network of 124 ecologically connected marine protected areas is a global model and establishes places in the ocean where marine life and habitats can thrive, enhancing the ecological functions that underpin resilience and improving the capacity of the ocean — and the communities that rely on it — to adapt to the effects of climate change.

Our frontline communities — low-income, immigrant, communities of color and native nations — already bear the brunt of pollution and environmental degradation. They will be disproportionately impacted by sea-level rise. Healthy coastal ecosystems can help buffer against those impacts. California’s Sea-Level Rise Guidance, adopted by the Ocean Protection Council earlier this year, prioritizes environmental justice and urges coastal resilience investments that also bolster social equity.

Next month, the council will consider adopting a statewide ocean acidification action plan. This policy and management plan is one of the first of its kind and is being developed within the framework of the International Alliance to Combat Ocean Acidification. California is a founding member of this global partnership, which seeks to enhance our ability to anticipate, mitigate and adapt to the significant chemistry changes in our oceans. The Netherlands, Hawaii, Virginia, and the city of Seattle just announced they have joined the alliance, bringing us to 65 members.

We could choose to continue stripping our ocean of its life, polluting it, filling it with a planet’s worth of plastic and changing its very chemistry. But let’s not.

Let’s choose instead to protect this magical, mysterious, watery source — and guardian — of life.

Deborah Halberstadt is executive director of the California Ocean Protection Council.



California brown pelicans fly over the ocean as the sun sets in the distance in Moss Landing, Calif.

Photo: Mason Trinca / Special to The Chronicle 2017



William Ferris and Martha Ferris, of Citrus Heights (Sacramento County), take a selfie at the ocean at Bodega Head in Bodega Bay (Sonoma County). California, along with 64 other governments and organizations, are working to address ocean acidification.

Photo: Gabrielle Lurie / The Chronicle 2017