*Rainy Low Tide, Olympic National Park, WA, July 2019*

# US WEST COAST MARINE CONSERVATION

**Landscape Assessment and Opportunities Analysis, July 2020**

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# OVERVIEW OF THIS PRESENTATION

- Background, Scope, and Methods for this Project
- US West Coast Unity and Diversity: Geography, Demography, and Ecology
- Threats and Opportunities: Federal and State
- Transboundary and Indigenous-Led Conservation Opportunities
- Intersections with Climate Change and Renewable Energy Issues
- Conclusions and Opportunities for Funders

# THIS PROJECT WAS…

- COMMISSIONED by Marine Conservation Initiative (MCI) team at the Gordon and Betty Moore Foundation in Fall 2019
- CONNECTED to preparing for the MCI team's 3-year initiative strategy review
- CONDUCTED by marine ecologist and philanthropic advisor Dave Secord
- CONCERNED with marine conservation opportunities off the US West Coast

# SCOPE

- Conservation opportunities in federal waters off of California, Oregon, and Washington
- Transboundary conservation opportunities in the California Current Large Marine Ecosystem
- Potential for substantial measurable outcomes on a 5-year time horizon
- Insights that arose on conservation opportunities in state-managed waters
- Devolution of federal authority to other levels of government, such as states or Tribes

# SCOPE (CONT'D)

- Outcomes likely to endure in the face of inevitable but uncertain climate change
- Consider place-based initiatives and shifts in conditions that enable improved law or policy
- Consider science-based sustainable fisheries management and marine habitat protections
- Consistent with Moore Foundation Statement of Founders' Intent including the Four Filters

# THE FOUNDATION'S FOUR FILTERS*

** FOR FURTHER ELUCIDATION, CONSULT FOUNDERS' INTENT STATEMENT LINKED IN PREVIOUS SLIDE*

- Is it Important?
- Can we Make an Enduring Difference?
- Is it Measurable?
- Does it Contribute to a Portfolio Effect?

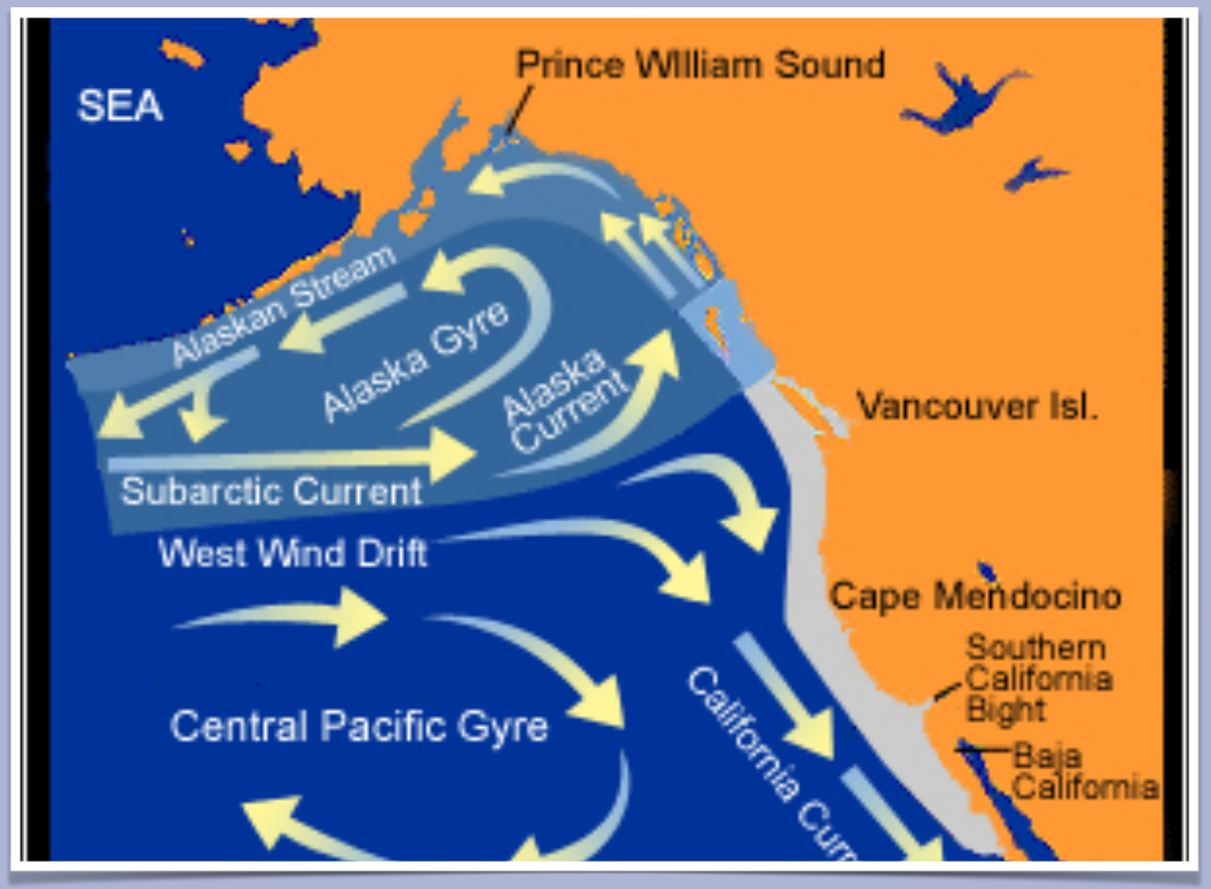
# INFORMATION SOURCES FOR THIS WORK

- Public documents on Moore Foundation granting history and its approach to philanthropy
- Other documents  and "grey literature" from various government, philanthropic, Indigenous, industry, and non-profit organizations
- The peer-reviewed scholarly literature
- About 50 interviews with relevant experts, including thought leaders, scientists, Indigenous and environmental advocates, funders, consultants, journalists, and people from government
- Place-based perspectives and expertise in all 3 states, British Columbia, and Washington, DC

# A NOTE ABOUT QUOTES

- This slide deck incorporates representative quotes from the interviews conducted for this project.
- These quotes reflect the diversity of perspectives that were shared on topics covered.
- Most of the quotes illustrate or illuminate ideas that were shared by one or more informants.
- All of the quotes are anonymous and should not be attributed to individuals.
- All quotes came from individuals with relevant scientific, policy, community, industry, or advocacy expertise.
- The quotes interspersed throughout this presentation should be viewed as indicative, not definitive.
- Quotes included do not necessarily represent the views of the Gordon and Betty Moore Foundation.

# CALIFORNIA CURRENT ECOSYSTEM (CCE)




https://uscdiving.wordpress.com/2012/05/21/marine-ecosystem-based-management/

- One large marine ecosystem across 3 US states plus parts of BC and Baja California
- Open ocean punctuated with large estuaries
- Cool southbound current
- Productive upwelling zones along its length
- Biogeographic variation, e.g. Point Conception

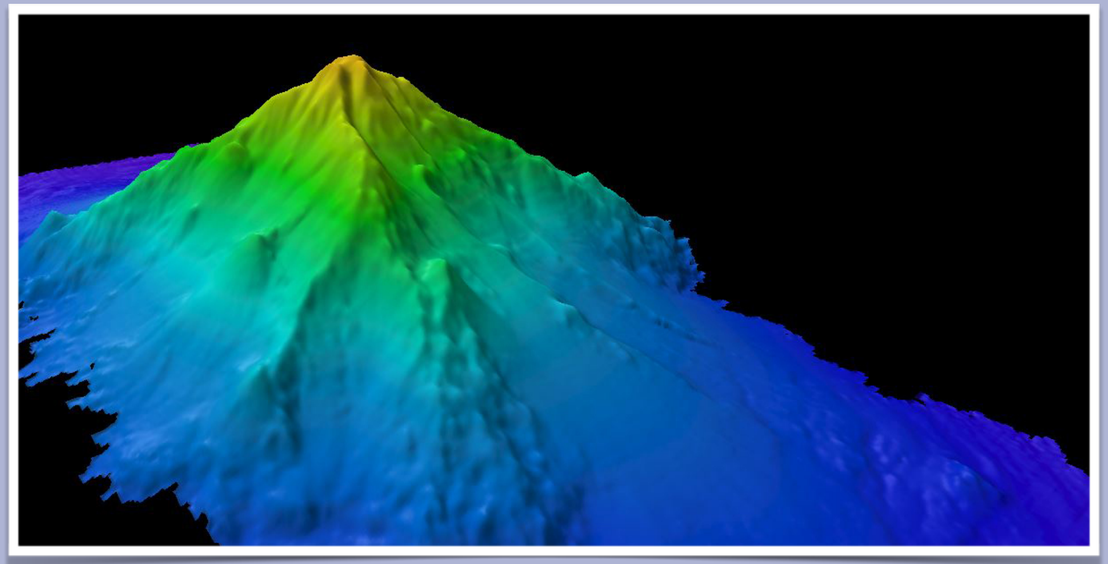
"We need to look at marine resources on the full scale of the California Current, all the west coast states with extensions into Baja and BC. We need to see an integrated system of Marine Protected Areas that are defined by the present and anticipated distributions and ecology of fish, birds, marine mammals, and primary productivity. Our approach has been more *ad hoc* so far."

“Birds are always sampling the marine environment telling us about fish stock conditions. They are also indicators of how many fish are out there. When birds die off, it’s because fish they forage on are slim in one or more places on their migratory pathways.”

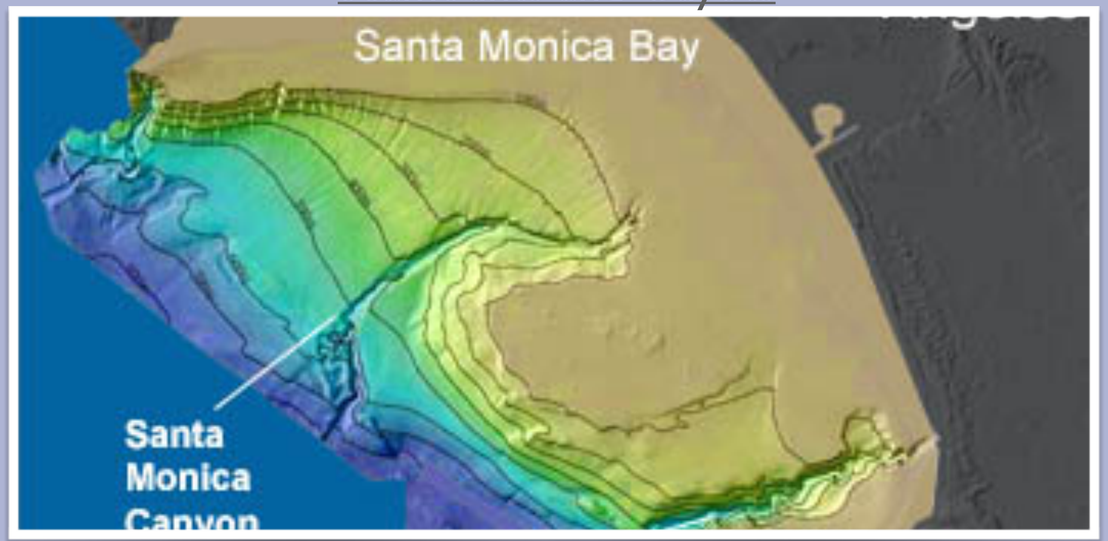
# PHYSICAL FEATURES DRIVE BIODIVERSITY

- Offshore Islands
- Sea Stacks
- Submarine Canyons
- Seamounts and Guyots
- Shelf Breaks and Banks
- Persistent Upwelling Zones
- Eddies and Gyres

Sea Stacks



Seamounts and Guyots




Submarine Canyons

# SOME PLACES ARE FEDERALLY PROTECTED

- Monterey Bay National Marine Sanctuary includes the productive Monterey Canyon.
- Oregon Islands National Wildlife Refuge encompasses many Oregon offshore islands.
- Olympic Coast National Marine Sanctuary includes many Washington State sea stacks and important upwelling areas.

# AND STATES HAVE TAKEN MEASURES TOO…

“Washington now has a marine spatial plan that protects existing interests. Oregon has a famous marine reserve system. California has its Marine Life Protection Act and Marine Protected Areas network. There are some key differences in approach among these states. So take a look at independent efforts like these, and see how they fit together or do not fit together. Is it better to streamline these, or is it better to encourage this diversity?”

# BUT MANY ECOSYSTEM THREATS REMAIN…

# THREATS TO WEST COAST MARINE HABITAT*

*IN NO PARTICULAR ORDER

- Seabed mining (state or federal waters)
- Bulk or container shipping and ports
- Naval sonar impacts on cetaceans
- Fishing practices (overharvesting, habitat damage, whale or seabird bycatch)
- Pollution (mobile sources, terrestrial runoff)
- Energy development (including renewables)

# THE WEST COAST IS HETEROGENEOUS…

# THE WEST COAST'S UNITY AND DIVERSITY

- Washington, Oregon, and California share aspects of their ecology and politics, but diverge greatly in…
  - Demographic profiles, including extent of urbanization, especially in their Outer Coast counties;
  - Political attributes and tendencies, and in coastal non-profit and small business organizing capacity;
  - Economic history and diversification, including dependence on commercial fisheries and tourism;
  - Cultures and regional identities that vary widely among these states and along their diverse coastlines;
  - Historical experiences with traditional and non-traditional mechanisms of marine conservation.
- Therefore, a conservation approach suitable for one state or subregion does not fit all of them.
- Each state has a unique history of using state, federal, Tribal, and local policy tools for marine conservation.

# CONSERVATION CONTEXTS VARY… LOCALS CAN INFLUENCE FEDERAL & STATE ACTIONS

# CALIFORNIA CONSERVATION CONTEXT

- About 40 million people live in the state.
- The largest cities adjoin the Pacific Ocean coast, including San Diego, Los Angeles, San Francisco.
- Outside of coastal cities, coast is relatively rural, including the Big Sur and Mendocino coastlines.
- Iconic coastal identity is expressed at multiple sites through fishing and tourism economies.
- Substantial coastal science and NGO capacity
- Politics of coastal regions is variable and localized.

# OREGON CONSERVATION CONTEXT

- Just over 4 million people in the state
- Largest cities such as Portland and Eugene are inland on the Willamette River I-5 corridor
- Pacific coast counties are rural and are a mix of politically progressive and conservative, with moderate coastal science and NGO capacity
- Legendary coastal road with substantial park system and visitor economy & infrastructure
- Rural coastal Oregon is still timber-dependent

# WASHINGTON CONSERVATION CONTEXT

- Approaching 8 million people in the state
- Largest cities such as Seattle and Tacoma are on the inland Salish Sea estuaries, a long trip by car/ferry to a relatively un-roaded Outer Coast
- Pacific coast counties are rural & conservative
- Substantial Tribal presence on Outer Coast including Boldt Decision fishing treaty rights
- Limited science, NGO capacity, and visitor infrastructure are based on the Outer Coast.

# FEDERAL JURISDICTION HOLDS BETWEEN 3 AND 200 NAUTICAL MILES OFFSHORE…

# FEDERAL MARINE CONSERVATION TOOLS…

- Science-Based Fisheries Management
- Habitat Protection Designations

# FEDERAL POLICY: SUSTAINABLE FISHERIES

- Magnuson-Stevens Fishery Conservation and Management Act is the primary law governing fisheries in US federal waters. It is commonly known as the Magnuson-Stevens Act (MSA).
- The MSA uses an Ecosystem-Based Fisheries Management framework.
- The MSA divides US federal waters into regions, each with a Fisheries Management Council.
- US West Coast has a single MSA region governed by the Pacific Fisheries Management Council (PFMC) covering the oceans offshore of California, Oregon, and Washington.
- Alaska has its own MSA council, the North Pacific Fisheries Management Council (NPFMC).

“We are lucky that we only have one Council on the contiguous west coast. Unlike the east coast, we don’t have to deal with stuff like species moving across Council boundaries.”

# MSA (PFMC) CONSERVATION ACTIVITIES

- Fisheries closures
- Fisheries catch & gear limits, e.g. bottom trawling bans
- Designation of Essential Fish Habitat
- Community, academic, NGO partnerships and pilots
- Scientific and economic analysis, e.g. climate-driven range shifts and emerging fisheries
- Species-specific, spatially explicit protections (e.g. lingcod or rockfish conservation areas)

"The PFMC has been a leader nationally. They have done a great job ending overfishing and rebuilding stocks. We see an opportunity to bring the science heft and conservation orientation of the PFMC to address climate change in fisheries management, community resilience, and range shifts."

"PFMC-created Rockfish Conservation Areas are a success story showing that protected areas work to grow fishable fish. It's key to get scientific data in other places, like deep rocky reefs in federal waters, to demonstrate that protecting structural habitat elements is useful."

# MSA CONSERVATION CONSIDERATIONS

- New, spatially-explicit habitat protections for fisheries reasons are possible under MSA.
- They will require multi-party consensus at the level of the PFMC or sub-regions thereof.
- Science, economics, and community considerations shape what is possible under the MSA.
- The MSA contains a powerful science/policy toolbox for incremental conservation gains.
- There is ongoing debate about reauthorization and potential improvements to the MSA.
- There are opportunities to emphasize ecosystem- and biomass-centric *vs.* single-species management.
- Conservation NGOs successfully advocate for improved catch share practices, e.g. electronic monitoring.

# FEDERAL MARINE HABITAT DESIGNATIONS

- National Marine Sanctuaries Program (NOAA)
- National Wildlife Refuges (Interior Department)
- Special Tribal conservation agreements (by treaty, court action, Indigenous law or advocacy)
- Fisheries-centric designations created under Magnuson-Stevens authority.

# FEW INTERVIEWED THOUGHT NEW FEDERAL MARINE PROTECTED AREAS ARE IMMINENT.

BUT MANY AGREED THAT CURRENT FEDERAL AREAS ARE CRUCIAL, AND SOME CONSERVATION MEASURES WITHIN THEM CAN BE STRENGTHENED, ALONGSIDE STATE ACTIONS.

"Absolutely yes to marine sanctuaries…I used to be a skeptic and now I'm a fan…they are an important safeguard and firewall against inappropriate mining and energy development. These areas are very important."

# STATE-LEVEL POLICY AND LAW OPTIONS

- Robust Marine Protected Areas networks in Oregon and California state waters are subject to periodic legislative review. It is important that these be done well, so state governments and community allies see clear evidence of diverse benefits resulting from these networks.
- Washington finalized its Marine Spatial Plan in 2018, offering another planning tool featuring extensive stakeholder and Indigenous participation, and yielding important conservation outcomes.
- Such spatially explicit plans and processes lay the groundwork for communities, businesses, NGOs, and Tribes to influence federal as well as state marine decision-making and zoning.
- Oregon and California have a longer history of experimenting with marine spatial planning.
- States and Tribes also regulate fish and shellfish harvest and habitat in the waters in their jurisdictions.

"Conservationists have focused for years on state-level Marine Protected Area networks in Oregon and California — setting them up, implementing, and making sure they're durable. Stakes are high as both states review their programs in the next few years. Lots of eyes are on those evaluations."

# GRASSROOTS CONSERVATION OPTIONS

- Community engagement and support underlie conservation decisions at state and federal levels. Demographic differences among West Coast states and coastal counties determine which interests shape and advocate for conservation proposals.
- Depending on the geographic context, the local and regional interests supporting conservation efforts may include:
  - Recreation or subsistence access such as clam digging or surfing.
  - Conservation-oriented economic benefits, e.g. pescatourism, wildlife viewing, storm watching, or recreational fishing.
  - Revitalizing and sustaining Indigenous traditions, and non-Indigenous spiritual motivations for coastal conservation.
  - Scientific and climate resilience arguments for conservation, such as enduring biodiversity hot spots and blue carbon.
  - Black, Indigenous, Latinx, and other People of Color who widely support ocean conservation and equitable access.

"The land restoration world is ahead of the marine realm. We should focus more on critical species close to shore like abalone and sea otters, and also on the kelp-urchin crisis. These issues span a big chunk of coast from CA to WA with basic science, monitoring of change, community development."

“Fish and fishers go back and forth between state and federal waters. Pieces come together in climate-ready fisheries where temperature, sea level, and acidification fluctuations meet biology, jurisdictions, and community interests.”

“The keys are knowing what a win looks like, and being sure communities are on board.”

“Many more folks care about what happens onshore than out in the ocean. But you can get strong engagement in coastal communities when issues directly affect whales or coasts, or involve oil spills that impact beaches, or industrial infrastructure threatens coastal communities. How you get action in federal waters hinges largely on what’s happening at the state level.”

# TRANSBOUNDARY CONSERVATION

- At the mouth of the Strait of Juan de Fuca, in waters between Northwest Washington and Southwest Vancouver Island, BC, is a large oceanographic gyre known as Big Eddy.
- Big Eddy is a highly productive biophysical feature of interest to Washington's Makah Tribe and BC's Nuu-chah-nulth First Nations, along with scientists and conservation practitioners.
- There is a long history of BC-Washington collaboration on protecting the shared inland waters of the Salish Sea, which could portend fruitful collaboration for the open ocean too.
- There is history of economic and political cooperation among the three West Coast governors and one premier, and well-established institutions to support collaboration.

"If there is healthy, mature cooperation between sub-national jurisdictions like BC and Washington, how do you build on that and move it out into real marine waters? What are the shared outcomes you could achieve?"

# INDIGENOUS CONSERVATION LEADERSHIP

- Tribal governments, Native communities, and Indigenous non-profits are actively leading on Pacific coastal conservation and stewardship initiatives.
- Mechanisms include science, law, policy, advocacy, land- and ocean-based cultural activity, economic development and co-management arrangements with public governments.
- Coastal Indigenous communities in WA, OR, and CA are designing locally relevant efforts and alliances, and driving reciprocal learning with BC First Nations, Alaska Native and Canadian Inuit organizations and leaders.
- There are many opportunities for funders, NGOs, scientists, businesses, and various agencies of public government to be allies to Indigenous-led conservation.

"There are places in California and Washington where Tribal communities are hungry for BC-style coastal guardian and stewardship programs. West coast states are making progress on Tribal interactions and recognition of rights, including roles in regulatory matters. We need more real examples."

# INDIGENOUS-LED CONSERVATION: CALIFORNIA

- Indigenous-led grant-making, e.g. the Mino-Niibi Fund for Indigenous Cultures
- Coastal Indigenous land trust movement
- Coastal Tribes' advocacy on estuarine and marine policy and marine protected areas
- Campaign for new Chumash National Marine Sanctuary
- Tribal Marine Stewards Network Pilot

"I'm compelled by the Tribes' efforts to establish a Chumash marine sanctuary, including restoring traditional abalone fisheries, at the intersection of Tribal and federal jurisdictions. I'm drawn to this by its similarity to collaborative Native stewardship in Canada and Alaska, and by the potentially broad coalition of supporters their proposal could bring."

# INDIGENOUS-LED CONSERVATION: OREGON

- Sea Otter restoration campaign driven by an Indigenous-led network (Elankha Alliance)
- Indigenous-led land trusts or partnerships and coastal cultural site repatriation

# INDIGENOUS-LED CONSERVATION: WASHINGTON

- Indigenous-led grant-making funds, e.g. Na'ah Illahee Fund and Potlatch Fund
- Tribal sovereignty over coastal and marine habitats via Boldt fisheries authorities
- Indigenous-led restoration initiatives, including clam garden revitalization with BC partners

# FINAL CONSIDERATIONS & CONCLUSIONS

# CLIMATE CHANGE ON THE WEST COAST

- Greenhouse gases cause ocean acidification, undermining calcification, affecting marine food webs and aquaculture
- Climate change is causing sea level rise, affecting estuarine habitats, coastal communities, and infrastructure
- Climate change is driving marine species range shifts, including among commercially valuable and emerging fisheries
- Climate change could alter the usefulness of spatially fixed conservation strategies, pointing to adaptation needs
- Climate change in the ocean compounds other stressors, including those from land
- Climate change and pollution are associated with ocean deoxygenation and "dead zones"
- Solutions to climate change, such as offshore renewable (wind and wave) energy infrastructure, must be carefully designed to ensure habitat protection and avoid unintended consequences for marine biodiversity.

# RENEWABLE ENERGY CONSIDERATIONS

- Climate change affects ocean health and biodiversity via many pathways.
- Some solutions to climate change involve ocean renewable energy development.
- Ocean renewable energy infrastructure can negatively affect marine habitats if not designed and sited appropriately.
- Climate solutions and marine conservation solutions must be carefully evaluated so policy outcomes are integrated, tradeoffs are examined by interdisciplinary and inter-sectoral expertise and analysis, and Indigenous rights and stakeholder interests are fully considered.

“Climate change is one of the biggest threats facing the oceans. It interplays with other stressors.”

“Species are going to move around everywhere. Everybody and every place will win and lose some species. Managing the fisheries-climate space is the biggest challenge for us all.”

# PHILANTHROPIC FOOD FOR THOUGHT

There are many gaps in the philanthropic landscape where US West Coast funders can add value that fits their places and priorities….

# COMPARATIVE RETURN ON INVESTMENT

- This project considered comparative return on investment (ROI) for marine conservation off the US West Coast relative to Moore Foundation MCI regions in BC and the Arctic.
- There are inherent conservation values on the US West Coast, such as high biodiversity, place-based opportunities to enhance climate resilience, and public will to mitigate threats.
- The large marine ecosystems off the West Coast of Canada, and in US and Canadian Arctic waters, are of greater geographic extent with less industrial impact and far fewer people.
- There is no apples-to-apples comparison between the US West Coast and temperate marine habitats farther north; both these large regions have substantial, inherent conservation value.

# RIPE US WEST COAST OPPORTUNITIES…

- Support new and enhance existing measures such as marine protected areas networks, spatial planning, and seasonal closures
- Support grassroots, climate-savvy ocean protection advocacy in rural and urban coastal counties and transboundary regions
- Support marine conservation leadership, decision-maker access, and capacity development in coastal Indigenous organizations
- Support intersectional work on diversity, equity, and inclusion to grow power and reach of coastal and marine constituencies
- Support site-specific activities such as ecological restoration, cultural activities, citizen science, and marine education
- Support development of coastal marine conservation economies, e.g. tourism, stewardship, wildlife viewing, harvesting
- Support participation in policy efforts (e.g. PFMC, advisory boards) with sustainable fisheries or habitat protection mandates
- Support work to link marine conservation to other movements, e.g. climate change, community economic development, racial justice