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FACT SHEET

CALIFORNIA'S MARINE PROTECTED AREAS:
UNDERWATER REFUGES SAFEGUARD OUR OCEAN LIFE

In 1999, California passed the Marine Life Protection Act—the nation's first ocean protection law of its kind—which created a network of underwater refuges that spans the length of our coast. Today, 124 marine protected areas safeguard over 16 percent of California's state waters, sheltering valuable species and habitats and bolstering marine biodiversity and resilience.[1] California's marine protected areas encompass some of our coast's most iconic and biologically rich places, including the kelp beds at South La Jolla, the submarine canyon near Malibu, the productive reefs at Point Lobos, the tide pools at Fitzgerald Marine Reserve, and the honeycomb rock formations at Point Arena. These areas are home to a vast array of sea life, from sea otters, pelicans, and rockfishes, to hydrocorals and abalone.

California's network of marine protected areas is hailed as a global model. However, ongoing efforts are required to ensure that these ocean refuges will benefit our environment, coastal communities, and economy for generations to come.

THE IMPORTANCE OF MARINE PROTECTED AREAS

A marine protected area (MPA) is an underwater haven where fishing, gathering, and adverse impacts to habitat or water quality are limited or prohibited in order to allow sea life to recover and thrive. By protecting entire ecosystems, MPAs create benefits along the marine food chain. They allow fish and shellfish to grow older and larger, thus producing more and healthier offspring that help replenish surrounding areas.

Protecting discrete areas of the ocean does more than simply shelter the marine species and habitats within the MPA; these underwater refuges can bring additional benefits that extend beyond the boundaries of an MPA, such as improving ocean health and resilience—which is increasingly important as ocean conditions shift in response to climate change. Stretched along the full length of the coast, California's network of MPAs represents a well-designed long-term insurance policy for marine life, increasing resilience, preserving genetic variation, and protecting suitable habitats to support species whose populations shift poleward as ocean conditions shift in response to climate change.

Flourishing wildlife makes MPAs wonderful places for tidepooling, diving, kayaking, and other recreational activities, as long as guidelines to protect marine life are respected. They are also valuable research sites providing important information to help scientists understand how marine ecosystems in unfished areas compare with those where fishing is allowed. Countries around the world are establishing MPAs to secure the long-term health of their ocean resources. Under current international agreement, hundreds of nations have agreed to conserve 10 percent of coastal and marine areas by 2020; however, many marine scientists and conservationists hope to increase that goal to 30 percent by 2030—and ensure that these ecologically representative, connected MPAs are effectively managed.[2]

For more information, contact the Natural Resources Defense Council's Oceans Division at 415-875-6100 or visit www.nrdc.org/issues/oceans.

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CALIFORNIA'S MPA NETWORK: A MODEL FOR GLOBAL OCEAN PROTECTION

California's Marine Life Protection Act (MLPA), sponsored by NRDC and adopted with bipartisan support, set a global precedent for ocean conservation. The law empowered citizens to design a network of safe havens, connected by currents, throughout the state's coastal waters. This system of linked MPAs protects marine animals that move across habitats during different life stages, allows species to seek cooler waters as sea temperatures rise, and helps ensure that local disasters, such as an oil spill, will not wipe out entire populations.

California's MPA network was designed by pairing expert scientific guidance with extensive input from fishermen, industry representatives, non-governmental organizations, coastal California Native American tribes, and other members of the public. It includes three kinds of MPAs offering different levels of protection:

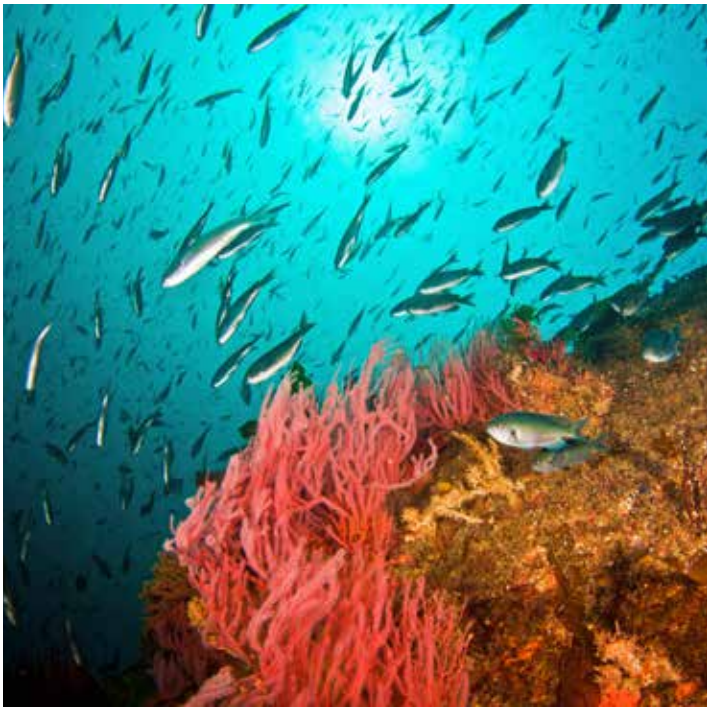
- **marine reserves**, where all living and non-living marine resources are protected, and no species can be fished or taken.
- **marine parks**, where managed sport fishing is allowed, but commercial fishing is prohibited.
- **marine conservation areas**, where one or more species is protected, but fishing for other species is allowed.

A decade after the MLPA took effect, California's MPAs are setting a global standard in ocean conservation. The state is now poised to play an important role as a leader in MPA design, implementation, and management, and to inform similar efforts around the globe. To strengthen this model—and to secure the long-term success of its MPA network—California must continue to invest in and successfully manage its MPAs.

MANAGING THE MPA NETWORK

California's MPA management is guided by a Master Plan and carried out by the California Department of Fish and Wildlife, Ocean Protection Council, and other agencies and partners. The Master Plan focuses on four pillars of MPA management: research and monitoring, outreach and education, enforcement and compliance, and policy and permitting.[3]

Scientific monitoring of California's MPA network can both document the benefits of MPAs and help identify and illuminate non-fishing stresses to ocean resources from climate change and other factors. Ongoing monitoring of MPAs in the northern Channel Islands off of Santa Barbara shows that fish species traditionally targeted by fishermen are generally bigger and more abundant inside the reserves.[4] Studies done along the mainland coast generally indicate similar positive trends throughout the MPA network, including higher densities of marine life and increased biomass inside reserves.[5] Continuing California's robust scientific monitoring program will be crucial to effective MPA management, fisheries management, and climate adaptation.



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The state has also invested significantly in outreach and education—from signage and educational materials to promote understanding of and compliance with regulations, to the MPA Collaborative Network, which helps ensure local priorities are informing MPA management. In addition, multiple state agencies have integrated MPAs into their strategic plans and permitting processes, in order to avoid or mitigate industrial impacts and better safeguard the marine life within MPAs. Continuing this work is vital to the long-term success of the MPA network.

THE IMPORTANCE OF INVESTING IN EFFECTIVE ENFORCEMENT

Enforcement is also critical to ensuring California's MPAs function as intended. Within a network, poaching in one MPA can impact the health of other linked areas. Studies show that effective management can have a direct impact on the ecological productivity of protected areas. For example, one recent study found that MPAs with adequate capacity for monitoring, enforcement, and other activities saw ecological benefits nearly three times greater than MPAs without that capacity.[6]

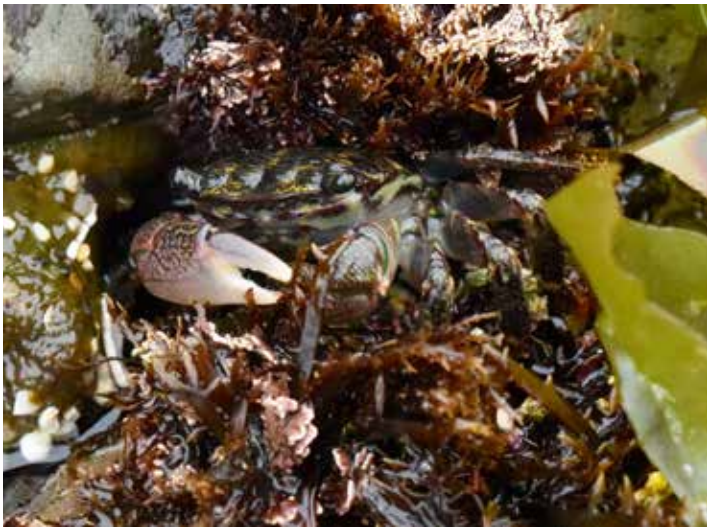
The California Department of Fish and Wildlife (CDFW) and its partners have invested heavily in publicizing and enforcing MPA rules. But while the majority of commercial fishing boats, commercial passenger fishing vessels ("party boats"), and recreational fishing boats follow the law, illegal fishing continues, indicating that penalties have not been stringent enough to serve as an effective deterrent. In some areas, poaching may threaten the effectiveness of MPAs. Experts on global MPA enforcement have stressed the importance of timely legal action and appropriate penalties to deter repeat offenders and would-be violators.[7]

New technology could complement the investments California has already made to support compliance and enforcement. NRDC published a report in 2015 that identified several enforcement technology priorities for California to consider investing in, including:

- **Predictive policing**—analyzing spatial data on warnings and citations to identify violation hot spots—would help to deploy enforcement resources more efficiently across the state, enhancing effectiveness.
- **Vessel monitoring systems** would provide real-time spatial tracking of participating vessels and facilitate geofencing, which provides notification when a vessel crosses an identified boundary. Designed for enforcement purposes, these tamper-resistant systems carried by vessels produce protected data and can provide a reliable record for use in court when vessel position is reported frequently enough, though the data generally needs to be substantiated by direct observation.
- **Targeted radar and camera surveillance** could aid enforcement in violation hotspots, and help detect vessels not carrying vessel monitoring systems.[8]

Since the MPA network was completed in 2012, California has already taken several important steps to strengthen enforcement, demonstrating the state's commitment to defending one of our most important marine conservation laws:

- In 2016, California adopted AB 298, which allows officers to cite MPA violations as either an infraction or a misdemeanor. Prior to 2016, all MPA violations were considered misdemeanors, which led to under-enforcement. The new law provides wildlife officers with the flexibility to cite for lower-level MPA violations, which helps to deter poaching.
- In 2017, CDFW's Law Enforcement Division created a Marine Enforcement Division with dedicated officers and patrol vessels, in order to devote more specialized resources to monitoring and enforcing the state's MPA network and other offshore responsibilities.



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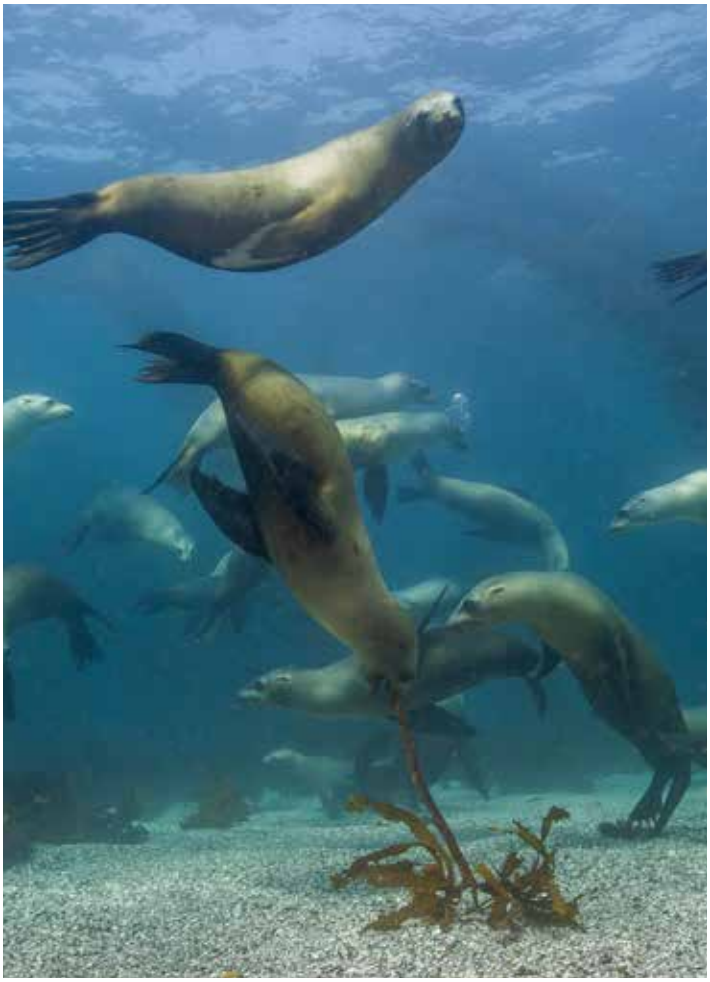

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- In 2017, the state allocated funds to upgrade its antiquated, paper-based ticketing system to a fully electronic records management system (RMS)—the top recommendation that NRDC advocated for in its 2015 MPA enforcement technology report. This technology investment is fundamental to preventing poaching in MPAs: it will enable CDFW to analyze enforcement data to identify poaching hot spots and repeat offenders, and to leverage predictive policing to target enforcement resources. The electronic records management system will be fully implemented in 2019.
- In February 2018, the Fish and Game Commission suspended the license of a fishing company for five years after they were caught poaching—the stiffest penalty in the history of the MPA network.
- In August 2018, California adopted AB 2369, which substantially increases penalties for poaching in MPAs, bringing them in line with the state's existing penalties for illegal trophy hunting on land, and prohibiting the transfer of a fishing license or permit during an ongoing investigation.

These actions are critically important steps towards effective enforcement of California's MPA network—and they send a strong message that California is serious about defending one of its most important marine conservation laws.

RECOMMENDATIONS

Securing California's Marine Investment

In order to ensure the ongoing success of California's MPA network, and solidify our position as a global leader in marine conservation, the state should focus on the following priorities:

- Allocate adequate funding for managing, monitoring, and enforcing the MPA network—including hiring more state fish and game wardens to better protect California's marine species and MPAs.
- Continue robust monitoring to inform MPA management, as well as fishery management and climate adaptation.
- Continue to support public outreach and education to promote compliance with MPA protections.
- Invest in new technology that can leverage existing enforcement resources by identifying and surveilling poaching hot spots.
- Ensure state agencies do not permit coastal development, including industrial facilities such as desalination plants or oil and gas infrastructure, that will harm MPAs.

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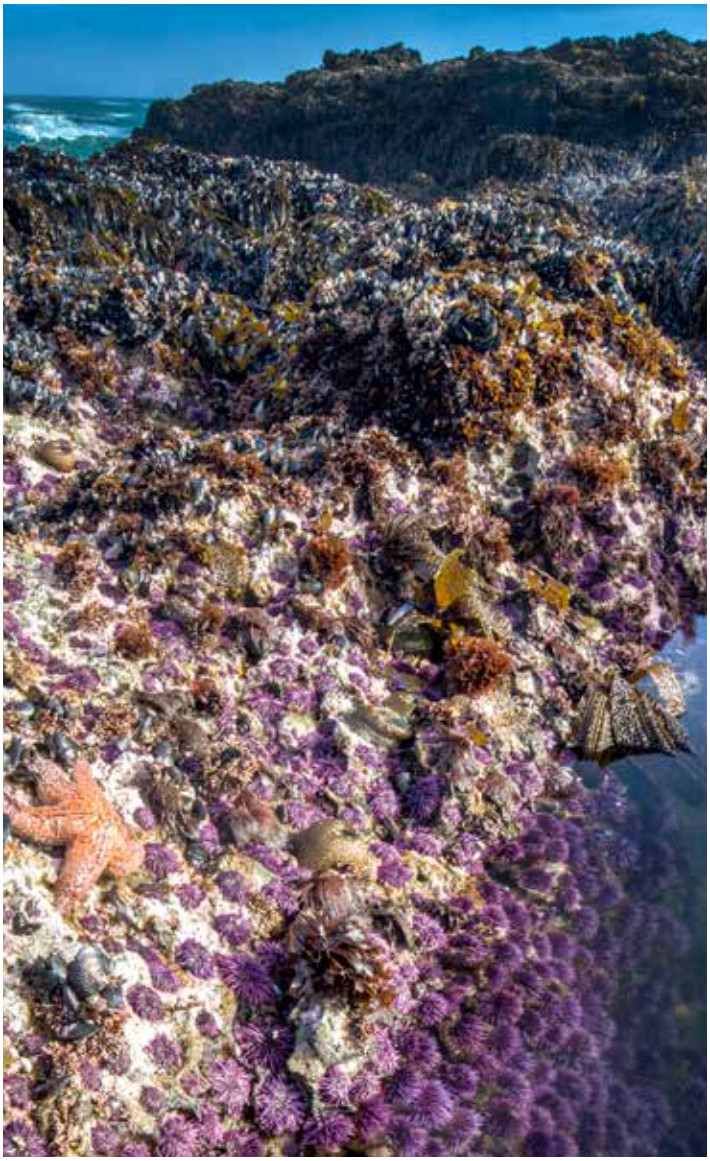

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ENDNOTES

1 https://www.wildlife.ca.gov/Conservation/Marine/MPAs/Statistics.

2 Convention on Biological Diversity, Decision X/2. See: https://www.cbd.int/decision/cop/?id=12268. Resolutions affirming the 30 percent target were adopted at the 2016 IUCN World Conservation Congress (Motion 053 at https://portals.iucn.org/congress/motion/053) and at the 2014 World Parks Congress (Marine Theme 1 at https://www.worldparkscongress.org/wpc/sites/wpc/files/documents/docs/Cross%20Cutting%20Theme%20-%20Marine%20%28English%29.pdf).

3 Additional information can be found at https://www.wildlife.ca.gov/Conservation/Marine/MPAs.

4 http://www.piscoweb.org/blog-post/channel-islands-marine-protected-areas-after-ten-years.

5 https://www.mlml.calstate.edu/ccfrp/wp-content/uploads/sites/57/2018/02/CCFRP_WGC_2018.pdf. https://www.wildlife.ca.gov/Conservation/Marine/MPAs/management/monitoring#537132165-additional-reports-by-region.

6 Gill D. A., Mascia M. B., Ahmadia G. N. et al. 2017. Capacity shortfalls hinder the performance of marine protected areas globally. *Nature*, 543: 665–669.

7 Environmental Law Institute, *Legal Tools for Strengthening Marine Protected Area Enforcement*. pp. 9-10, Sept. 2016.

8 https://www.nrdc.org/resources/enforcement-technology-options-california-marine-protected-areas.