

## REVIEW OF RATIONALE FOR MARINE PROTECTED AREAS IN THE MONTEREY BAY NATIONAL MARINE SANCTUARY (MBNMS)

The Monterey Bay National Marine Sanctuary (MBNMS, Sanctuary) has initiated a process to consider criteria, rationale, and scientific justification that would define the need for marine protected areas (MPAs) in Federal waters of the Sanctuary for additional resource protection. At the April 2008 Council meeting, Sanctuary Superintendent Paul Michel presented three principal needs for MPAs as follows: “1) There is a need for areas where the natural ecosystem structure and function are restored and maintained; 2) there is a need for research areas to examine human impacts to the marine environment; and 3) there is a need to preserve some areas in their natural state for future generations.” Superintendent Michel reported that additional rationale and scientific basis for MPA consideration will be available for review by the Council and its advisory bodies at the June 2008 meeting of the Pacific Fishery Management Council (Council).

In an April 23, 2008 cover letter (Agenda Item I.1.b, Attachment 1) Superintendent Michel presents for Council review an April 15, 2008 letter to the MBNMS Sanctuary Advisory Council (SAC) providing additional rationale and scientific justification for considering MPAs (Agenda Item I.1.b, Attachment 2), a draft decision process and timeline for Sanctuary consideration of MPAs (Agenda Item I.1.b, Attachment 3), and concepts for a process to move ahead with MPAs in the MBNMS (Agenda Item I.1.b, Attachment 4). Additionally, the Council received a letter dated May 21, 2008 from Mr. Frank Emerson, Co-Chair of the Alliance of Communities for Sustainable Fisheries (ACSF), a Monterey, California-based group which advocates for the heritage and economic value of fishing to California coastal communities. In his letter, Mr. Emerson requests the Council review a variety of reports and analyses on the subject of legal authority to regulate fisheries within National Marine Sanctuaries and the science, rationale, and public opinion for MPAs in the MBNMS (Agenda Item I.1.e, Attachments 1 through 6).

At this meeting, the Council should take into account statements of the Scientific and Statistical Committee and other Council advisory bodies and public testimony, and consider providing advice to the MBNMS on rationale, scientific justification, and legal authority for further consideration of MPAs Federal waters of the MBNMS. Further, the Council may wish to provide guidance on future collaboration with the MBNMS on their MPA consideration process.

### **Council Action:**

#### **1. Adopt Recommendations to the MBNMS**

#### **Reference Materials:**

1. Agenda Item I.1.b, Attachment 1: April 23, 2008 Cover letter from Mr. Paul Michel to Dr. Donald McIsaac.
2. Agenda Item I.1.b, Attachment 2: April 15, 2008 letter from Mr. Paul Michel to the MBNMS SAC regarding clarification on the authority and scientific justification for moving forward with MPA planning.

3. Agenda Item I.1.b, Attachment 3: Draft Decision Process and Timeline for MBNMS consideration of MPAs.
4. Agenda Item I.1.b, Attachment 4: Concepts for a Process to Move Ahead with MPAs in the MBNMS.
5. Agenda Item I.1.e, Attachment 1: May 21, 2008 cover letter from Mr. Emerson to Mr. Donald Hansen presenting analyses conducted on behalf of ACFS.
6. Agenda Item I.1.e, Attachment 2: Comments of Dr. Ray Hilborn on the MPA proposal by MBNMS.
7. Agenda Item I.1.e, Attachment 3: May 8, 2008 letter from Mr. Walsh regarding legal review of MPA authority under the MSA and NMSA.
8. Agenda Item I.1.e, Attachment 4: ACFS Opinion poll of California residents on fishery management.
9. Agenda Item I.1.e, Attachment 5: ACFS comments on public opinion regarding MPAs.
10. Agenda Item I.1.e, Attachment 6: ACFS comments on MBNMS research needs.
11. Agenda Item I.1.e, Attachment 7: May 21, 2008 letter in support of the MPA process in MBNMS from Mr. Ed Cassano, Deputy Director, Center for the Future for the Oceans, Monterey Bay Aquarium.
12. Agenda Item I.1.e, Attachment 8: May 21, 2008 letter for the California Wetfish Producers Association in support of the ACFS and its findings and documentation.

Agenda Order:

- a. Agenda Item Overview
- b. MBNMS Report
- c. Reports and Comments of Advisory Bodies
- d. Public Comment
- e. **Council Action:** Adopt Recommendations to the MBNMS

Mike Burner  
Paul Michel

PFMC  
05/27/08



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE

Monterey Bay National Marine Sanctuary  
299 Foam Street  
Monterey, California 93940

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April 23, 2008

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**PFMC**

Dear Dr. McIsaac, *Don*

I want to thank you again for the opportunity to present the Monterey Bay National Marine Sanctuary (MBNMS) MPA decision to the Pacific Fishery Management Council (PFMC) at their April meeting in Seattle. I thought the questions and comments from PFMC members were thoughtful and valuable. As I mentioned in my remarks, we have been working hard on a decision rationale document to augment the February decision to consider MPAs in federal waters of the Sanctuary. The enclosed letter clarifies the authority and scientific justification behind moving forward with MPA planning in federal waters of the Sanctuary. This document has been through intensive review by MBNMS, the Office of National Marine Sanctuary (ONMS), and NOAA Fisheries Southwest Region and Science Center. This letter was presented to our Sanctuary Advisory Council (SAC) on April 15. We have included the letter here for review by the PFMC. The Science and Statistical and Habitat Committees of the PFMC, in particular, indicated an interest in reviewing the supporting rationale document.

We are looking forward to the PFMC's review of the April 15 letter at your June meeting in Foster City. In addition, as I mentioned at the PFMC meeting in April, we are looking to establish the guiding process and timeline for MPA planning (realizing it will be an iterative/dynamic process) at the June 20 MBNMS SAC meeting. I am attaching the latest draft process and timeline ideas so the PFMC can see how we have incorporated the concepts provided us at the PFMC April meeting. We would welcome additional input on the process from the PFMC at the June PFMC meeting as well.

I hope my presentation in Seattle was viewed as a positive sign towards a collaborative partnership. Lisa Wooninck has been working with PFMC staff on coordination of these issues and others of mutual interest to the PFMC and the MBNMS.

Please call me if you have any questions. Sincerely,

*Paul Michel*

Paul Michel  
Superintendent MBNMS



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE

Monterey Bay National Marine Sanctuary

299 Foam Street  
Monterey, California 93940

April 15, 2008

Dear Sanctuary Advisory Council Members,

As you recall from my presentation at the February 15, 2008 meeting of the Sanctuary Advisory Council (SAC), the National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) has decided to move forward with a process to propose marine protected areas (MPAs) in federal waters of the Monterey Bay National Marine Sanctuary (MBNMS or Sanctuary). This letter provides additional information and rationale on this decision and clarifies the role of the National Marine Sanctuaries Act (NMSA) in managing the national marine sanctuaries from an ecosystem-based approach. I look forward to your continued participation, support, and advice on this important issue.

### ***1.0 Background***

The decision to move forward with a process to propose MPAs in the Sanctuary is based on advice from the regional community, input from partner agencies, and deliberations over the last five years by the MBNMS marine protected areas working group. If action is taken by the ONMS to establish MPAs in federal waters of the Sanctuary, the primary purpose for this action is to protect biodiversity and protect natural habitats, populations, biological communities and ecological processes (in this document collectively referred to as protection of ecosystem components). This action would not be taken for the purpose of managing any single human activity or impact, but rather to protect biodiversity, and protect components of the ecosystem within the Sanctuary using ecosystem-based approaches to management. Under the NMSA, the ONMS's responsibility for natural resource protection and ecosystem-based management is among the most comprehensive of all federal programs. Sections 1.1 and 1.2 provide further context on the ONMS's goal of marine resource protection and why MPAs are considered an essential ecosystem-based tool to address specific objectives within the broad goal of resource protection.

### ***1.1 Statutory context of proposed action***

The NMSA, of which the primary purpose is resource protection, is unique in that it allows management actions focused on the protection and conservation of the full spectrum of biological diversity and can serve as an important complement to tools focused on single species management, such as the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the Endangered Species Act (ESA), and the Marine Mammal Protection Act (MMPA). NOAA's National Marine Fisheries Service (NOAA Fisheries) manages individual species of economic importance under MSFCMA, the nation's primary law regulating fishing in federal waters. The MSFCMA requires regional fishery management councils to develop fishery management plans (FMP) with goals of optimum sustainable yield to manage targeted populations. The MSFCMA also requires management of essential fish habitat and habitat areas of particular concern, but management actions must be focused on specific spatial and temporal attributes that support populations of species managed as part of an FMP. The ESA provides for





broad protection of species listed as threatened or endangered, including recovery plans and the designation of critical habitat. The MMPA provides protections to marine mammals by prohibiting take of marine mammals and having a goal that individual marine mammal species or stocks remain at, or above their optimum sustainable population level. "Take" under the MMPA is defined as "harass, hunt, capture, kill or collect, or attempt to harass, hunt, capture, kill or collect.

While there are thousands of documented species in the Sanctuary, and many that remain unknown, only a small percentage is protected under the MSFCMA, ESA, and MMPA. Among the findings, purposes, and policies of the NMSA is the finding "while the need to control the effects of particular activities has led to enactment of resource-specific legislation, these laws cannot in all cases provide a coordinated and comprehensive approach to the conservation and management of special areas of the marine environment." The NMSA is unique in that it allows for coordinated and comprehensive management actions focused on the protection and conservation of the full spectrum of biological diversity at a sanctuary rather than single species populations, which is the focus of other resource specific legislation. Congress found that national marine sanctuaries are areas of the marine environment that have special national significance and provides they be managed "to maintain the natural biological communities.....and to protect, restore, and enhance natural habitats, populations, and ecological processes."

Another provision of the NMSA (Section 301(b)(6)) addresses the tension between resource protection and human uses and/or activities of sanctuary resources, and states a purpose of the NMSA is "to facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities." This provision of the NMSA identifies when facilitating public and private uses of sanctuary resources, resource protection is the primary objective and therefore takes precedence. Human uses should be facilitated only when compatible with resource protection. The MBNMS facilitates some form of compatible human use in vast portions of the Sanctuary. Such uses are sometimes facilitated under relevant legislation, such as the NMSA and the MSFCMA. Only small nearshore portions within MPAs implemented by the state of California prohibit all, or most forms of extractive activity. The purpose of facilitating human uses compatible with the primary objective of resource protection will be fully evaluated with the process to consider establishing MPAs in federal waters of the MBNMS.

In managing for biodiversity protection and ecosystem component protection, the authorities and protection measures afforded by all relevant statutes will be brought to bear in addressing the issues identified in sections 2.1, 2.2, and 2.3 below. Furthermore, given the distinctions made above among relevant governing statutes, it is reasonable to anticipate that the ONMS would advocate for higher levels of protection for certain areas of the Sanctuary than would be applied throughout the whole of the Sanctuary. By pursuing a process to consider further protections, the MBNMS is not characterizing the current management of habitats, economically important species, listed species, or marine mammals in the Sanctuary as inadequate under their respective regimes. Instead, the existing management actions designed for individual species or stocks are not designed to fully meet the ecosystem component protection and biodiversity protection goals of the MBNMS under the NMSA.



### ***1.2 The ecosystem and MPA effects on components of the ecosystem***

The Monterey Bay National Marine Sanctuary is within the California Current Large Marine Ecosystem (CCLME), which has been subject to major alterations due to a combination of climatic and oceanographic variation and human activities (Chavez *et al.* 2003). The CCLME is subject to natural fluctuations in environmental conditions, typified by alternating climate regimes that differ in temperature, circulation, nutrient availability, and productivity over multiple time scales. For example, anchovy and sardine stock abundances have responded to these regime shifts over the last two millennia by cycling in or out of phase with environmental conditions (Finney *et al.* 2002). Typically, when anchovies are abundant, sardines are less abundant, and vice versa. During the downswing of one of these stocks, an anthropogenic or natural impact, such as overfishing or global warming, may alter their response to natural regime shifts and slow their recovery rate (Chavez *et al.* 2003, Palumbi *et al.* 2008). Ed Ricketts in 1946 suggested that this might have occurred to the sardine stocks that were heavily exploited in the Monterey Bay (Rodger 2002).

The ONMS's ability to accurately evaluate the scale and consequences of change in the state of the Sanctuary's natural resources is often challenged by an inadequate knowledge of historic baselines to compare with present conditions. A number of global studies have recorded substantial decreases in abundances of large consumers, such as whales, turtles, sharks and pelagic fish (Jackson *et al.* 2001, Myers and Worm 2003). The following historic baselines of the ecosystem off the California central coast region concur with this global phenomenon. For example, Jean Francois de la Perouse described in 1792 what are believed to be the abundance of gray whales and stated, "it is impossible to describe the number of whales..... they blowed every half minute within a pistol shot from our frigate." Blue, right, gray and humpback whales were subsequently hunted to the edge of extinction. Despite full protection by the International Whaling Commission in 1947 for the California gray whale, their current numbers only represent 28-56% of their original historical abundance for the east Pacific population (Alter *et al.* 2007).

Shallow rocky reefs off the California coast often exist in alternative states comprised of kelp forests or urchin barrens (Tegner and Dayton 2000), depending on many environmental variables, but chiefly on the presence of urchin predators, such as spiny lobsters and sheephead in southern California or sea otter populations in central California. Hunted for their fur in the 1800s, sea otters were nearly extirpated before laws protecting otters were enacted. Sea otters have the potential for regulating kelp forest communities and the number and diversity of fishes resident in these nearshore communities (Estes and Palmisano 1974). As early as 1850, trophic cascades brought about by sea otter exploitation led to population explosions of two herbivorous invertebrates, abalone and sea urchins. Had it not been for the thriving abalone fishery led by the Chinese in the area, more serious impacts on kelp forest and the associated ecosystem might have been experienced. Although the size or location of any proposed MPAs in federal waters of the Sanctuary would be inappropriate for protection and restoration of whale or sea otter populations, these examples serve to demonstrate how the natural state of certain species within the CCLME and the Sanctuary have shifted to a fraction of their historical abundances. Marine fauna have undergone substantial population changes due to climatic influences and human activities. These examples support the need for long-term datasets to distinguish natural ecosystem variation inherent in the CCLME from anthropogenic forcing.



The basic diversity of marine life and the patterns and processes controlling distribution and abundance of marine organisms in the Sanctuary are still not well understood, especially in offshore waters and deeper habitats. At the same time, new technologies (e.g., geographic information systems or GIS) and conceptual advances (e.g., theoretical models) in ecosystem-based management allow the ONMS to implement research and management approaches that seek to reveal a more complete understanding of ecosystem components of the Sanctuary's deepwater communities.

Protecting biodiversity and ecosystem components is central to the implementation of ecosystem-based management, an evolving approach that stresses management of the Sanctuary in context of its ecosystem, including all habitats and species populations, biological communities, and all human activities. Both ecosystem-based management and MPAs offer an integrated approach to marine resource management (NRC 2001, MPA FAC 2006). Numerous advisory panels, such as the U.S. Commission on Ocean Policy and the Pew Oceans Commission as well as many marine scientists, believe that management of marine resources in U.S. waters would be most effective if implemented explicitly from an ecosystem perspective (NOAA 2005; Francis *et al.* 2007). The goal of ecosystem-based management is to achieve healthy and resilient ecosystems so that they can provide services humans need and want, such as water and air purification, seafood, recreation, and spiritual connections (MPA FAC 2006). MPAs promote an ecosystem-based approach to managing and understanding marine resources by protecting geographical areas, including resident organisms and their biophysical environment (Lubchenco *et al.* 2003).

MPA effects on ecosystem components range from habitat and population level responses to community level responses. For example, in areas less impacted by bottom-contact gear, particularly trawl gear, benthic habitats were topographically and structurally more complex, providing increased shelter for juvenile fish and reducing their vulnerability to predation (Kaiser *et al.* 2002). Engel and Kvitek (1998) compared highly trawled areas to lightly trawled areas in the Sanctuary and found lightly trawled areas to contain more heterogeneous sediments, more detritus, and higher abundances of opportunistic species.

In a global study by Halpern (2003) of 89 no-take MPAs, the increased protection inside these particular MPAs yielded, on average, increases in species number, size, and diversity. Improvements in size and age structure of fish populations may improve reproductive capacity, for older fish may produce larger, healthier, and more fit larvae (Berkeley *et al.* 2004a). A broad spectrum of age classes may also buffer a population against long periods of recruitment failure and unfavorable conditions induced by natural or anthropogenic sources (Berkeley *et al.* 2004b). These improvements in habitat and population variables have been shown to provide benefits to economically important species (Murawski *et al.* 2000).

At the community scale within the Sanctuary, natural refugia from human activities had higher abundances of large rockfishes (*Sebastes* spp.) than areas utilized by humans (Yoklavich *et al.* 2000). Shifts in community composition may disrupt direct and indirect ecological processes inherent in food webs and alter community trophic interactions and energy flow. A few studies of MPAs have shown to reverse these trends inside their boundaries by increasing predator abundances and restoring their top-down role in trophic cascades (e.g., Shears and Babcock



2003), and by increasing species richness and functional diversity (Micheli and Halpern 2005). Food web structures are complex and their influence on ecosystem states even more complex. A study of coral reef interactions inside a large marine reserve revealed increased levels of grazing by herbivorous fishes despite increases in predator abundances, which in turn reduced algal cover and increased live coral cover (Mumby *et al.* 2006).

At the ecosystem scale, MPAs have higher biodiversity, which plays a role in ecosystem productivity and stability. Worm *et al.* (2006) conducted a global comparison of regional biodiversity and argued that ecosystems with higher regional species richness appeared more stable, showing lower rates of extinction of economically important fishes and invertebrates over time. The same study reviewed how increased biodiversity in no-take MPAs and fishery-based MPAs were associated with large increases in productivity among economically important species.

Therefore, MPAs are considered an effective ecosystem-based tool for protecting biodiversity and ecosystem components. In addition, MPAs may also contribute to human uses, such as ecotourism and bolstering depleted stocks. Benefits of MPAs in the federal portions of the Sanctuary are most likely to be detected inside the boundaries of the MPA over many years to decades, particularly for sedentary species. Benefits beyond the MPA boundaries will be much harder to detect, but could include spillover of adults (McClanahan and Mangi 2000; Gell and Roberts 2003) and larval dispersal into adjacent areas (Murawski *et al.* 2000). It is important to note that even well-managed MPAs will require continued conservation efforts beyond their boundaries to be effective at promoting biodiversity and conserving ecosystem components (Murray *et al.* 1999).

## ***2.0 Management Objectives for MPAs in Federal Waters of the MBNMS***

Marine zones, such as MPAs that offer protections complementing those currently afforded to the Sanctuary as a whole, are tools of spatial management. Marine zones are not a new endeavor for the ONMS or the MBNMS. In fact, the MBNMS has used zoning since the Sanctuary was designated in 1992. Currently, the MBNMS has zones where:

- Certain human activities, otherwise prohibited throughout the Sanctuary, are allowed (such as motorized personal watercraft, harbor dredge disposal, or jade collection);
- Certain human activities are specifically prohibited (such as shark chumming or low over-flights by airplanes).

Through restricting or redirecting potentially harmful or disruptive human activities, these marine zones have improved management and protection of the Sanctuary's ecosystem components. There are three principal management objectives for moving forward with MPAs as additional marine zones in the federal waters of the Sanctuary:

1. Preservation of unique and rare areas in their natural state for the benefit of future generations;
2. Preservation of areas where natural ecosystem components are maintained and/or restored;



3. Designation of research areas to differentiate between natural variation versus human impacts to ecological processes and components.

Supporting information and reasoning for each of these management objectives is detailed below.

### ***2.1. Preservation of unique and rare areas in their natural state for the benefit of future generations***

In section 301(a)(4)(C) of the NMSA, Congress finds that the National Marine Sanctuary System will “maintain for future generations the habitat, and ecological services, of the natural assemblages of living resources that inhabit these areas.” There are certain areas of the Sanctuary environment with extraordinary features or attributes, such as unique habitats, biological diversity, or sensitivity, warranting a higher level of protection than currently provided by MBNMS regulations and other authorities. These areas of inherent or intrinsic value, due solely to their unique and/or exceptional qualities, may be considered analogous to land areas that are cherished and protected solely for their superlative beauty and untamed wildlife. There are similar wildlife areas in the Sanctuary, teeming with mysterious and stunning life, such as deep sea coral and sponge communities (NOAA 2008) or chemosynthetic biological communities that are vulnerable to human activities and deserve special protections. The concept of protecting “special places” within the Sanctuary of intrinsic value received strong support during the public comment for the Joint Management Plan Review (approximately 50% of comments), as well as comments received when considering the decision to pursue the action of establishing MPAs to manage resources in the federal portions of the Sanctuary (> 95% of comments).

By providing additional protections to areas of intrinsic value, the MBNMS can provide defense against unforeseen impacts and threats from technological advances in marine activities. Changes in a wide variety of marine technologies such as desalination, energy development, or aquaculture may result in unintentional deviations from how the activity had been previously conducted and potentially negatively affect natural resources of the Sanctuary. In many cases, although these technological changes occur quickly, it can take many years to decades for their impacts to be fully understood. The ONMS therefore, can proactively steward special places within the Sanctuary and seek to ensure they are protected for the public now and in the future.

### ***2.2. Preservation of areas where natural ecosystem components are maintained and/or restored***

Section 301(b)(3) of NMSA guides the ONMS “to maintain the natural biological communities in the national marine sanctuaries”, and “to protect, and, where appropriate, restore and enhance natural habitats, populations, and ecological process.” In an effort to achieve this goal, current MBNMS regulations protect Sanctuary resources and attributes from a variety of human activities that can have adverse impacts on the ecosystem. Examples include regulatory prohibitions on oil and gas development, resource extraction, discharge of harmful materials, and seafloor alterations.

To provide for additional protection of the natural components of the ecosystem, other human activities could be restricted or prohibited within any federal waters MPAs designated in the



Sanctuary. Activities that may require further regulation in federal waters include installation of cables, construction of offshore wave energy facilities, commercial and recreational extraction, extractive research, offshore aquaculture, and other types of bottom-contact activities. The effects of most of these activities are currently not well defined, with the exception of fishing. Fishing is one of the most studied human activities of the marine environment with a wide variety of data and sources analyzing its effect on components of marine ecosystems.

The ONMS does not regulate fishing in the Sanctuary and does not consider the establishment of MPAs for MBNMS objectives as a tool for fisheries management. However, any potential MPAs implemented by the MBNMS and existing or future zones designated by fisheries management agencies (hereafter referred to as fishery-based MPAs) may complement each other by contributing to the objectives of ecosystem conservation and sustainable production, respectively. The fishery-based MPAs implemented by the Pacific Fishery Management Council (PFMC) within the Sanctuary are rebuilding overfished populations (Rockfish Closed Areas, RCA) and protecting essential fish habitat (EFH: bottom trawl closed areas within the Sanctuary and bottom contact closed areas over Davidson Seamount). The RCAs provide seasonal protection to groundfish assemblages of "weak and strong stocks" by prohibiting the take of overfished species (weak stocks) that co-occur with healthy species (strong stocks). Recent stock assessments show notable improvement to the status of the overfished stocks, likely due to the RCAs and conservative total allowable catch (TAC) limits for the west coast groundfish fishery. The fishery-based MPAs thus contribute, in part, to the objective of "restoring ecosystem components" by rebuilding overfished stocks. However, the focus of these particular fishery-based MPAs is to rebuild individual stocks and will presumably be discontinued when stocks have been rebuilt (timeline: 2 – 80 years). The performance of designated EFH areas is currently being evaluated. For example, the MBNMS has partnered with Dr. James Lindholm to evaluate the recovery trajectory of a non-trawled area (EFH), compared to a trawled area (J. de Marignac, personal communication).

Fishing activities have altered marine resources and components of the ecosystem globally (NRC 2006) and within the Sanctuary (Yoklavich 2000; Levin *et al.* 2006). Examples of general effects include alterations to population abundances, size and age structure of fishes and invertebrate species, habitats, and species diversity. The dramatic decline of some rockfish species (*Sebastes* spp.) and the lengthy projected periods to rebuild to target levels are sufficient evidence that components of the groundfish community and habitats have been strongly impacted by fishing activity (Ralston 2002). Furthermore, based on two decades of bottom trawl surveys of the California Current, Levin *et al.* (2006) found evidence for broad-scale changes in community composition of groundfishes.

How these changes to groundfish populations and community composition ultimately affect the community interactions of the Sanctuary is thus far unknown. However, studies of temperate communities, both in central California and other regions, show that removal of predators can have cascading impacts to lower trophic levels. As alluded to earlier, the structure of kelp forest communities along the west coast from Alaska to southern California is strongly influenced by the relative abundance of predators (e.g., killer whales, sea otters, lobsters, sheephead) and prey (e.g., sea urchin, abalone) (Estes and Palmisano 1974, Estes *et al.* 1998, Steneck *et al.* 2002, Halpern *et al.* 2006). Other predator-prey examples from the North Atlantic and Baltic Sea



demonstrate how the demise of a predatory fish has led to substantial increases in the abundance of its prey (Worm and Meyers, 2003; Zabel *et al.* 2003). When community interactions are included in a model for design of no-take MPAs for west coast rockfish, two alternative community states are predicted as a consequence of initial densities of predator and prey fish species: one where the overfished rockfish predators dominate and one where the prey dominates (Baskett *et al.* 2006).

Declines in functional species or groups, such as the demise of key predators and herbivores, may also represent a loss of ecological redundancy, reducing ecosystem resilience and rendering the ecosystem vulnerable to additional anthropogenic threats or climatic change (Palumbi *et al.* 2008). Coral reef communities in Jamaica, for example, shifted from predominantly coral cover to algal cover due to serial loss of functional herbivores. Fishing had removed predatory and herbivorous fishes, and once a disease wiped out the remaining principal herbivore (the long-spined sea urchin), the reef community shifted to one dominated by fleshy algae. Nutrient input from sedimentation and sewage further contributes to the persistence of algal dominated reefs (Hughes *et al.* 1999). Recovery from alternative ecosystem states can be delayed by complex and often indirect interactions among species and the environment (Peterson *et al.* 2003).

On the west coast, the PFMC's groundfish FMP establishes a goal of reducing exploited populations to 40% of their unfished size (Ralston 2002). With few exceptions, the direct and indirect effects of removing this quantity of biomass from the ecosystem are poorly understood at an ecosystem level. The initial recovery of some overfished stocks on the west coast and the absence of trophic cascades as a consequence of their removal would suggest that fishing activities have not irreversibly perturbed the ecosystem. However, even though local data are lacking, ecological principles coupled with theoretical models and empirical studies from other regions would strongly advocate for using a precautionary approach. Risk-averse approaches are essential when uncertainty is high and the costs of error may produce irreversible damage. A precautionary approach is central to ecosystem-based tenets (Francis *et al.* 2007) and it is also applied by the PFMC and NOAA Fisheries, who utilize a precautionary approach in promoting sustainable fisheries, particularly when data are poor or lacking for managing economically important species. Because data are limited on the ecosystem-level effects of fishing and other human activities, this approach would dictate establishing areas where human activities are minimized, as a means to hedge against scientific and management uncertainty. These areas would help maintain and restore ecosystem components, and serve as research areas to study and better distinguish natural variation from anthropogenic impacts.

Setting aside certain areas of the Sanctuary as MPAs would also prepare the MBNMS for future management challenges. By establishing MPAs as areas with additional protections, the MBNMS can provide security against cumulative impacts, and unforeseen human and environmental threats by maintaining intact ecosystem components that are better able to recover, resist and reverse natural and human disturbances (Palumbi *et al.* 2008). The importance of resilient ecosystem components is one purpose of the NMSA, which states "develop and implement coordinated plans for the protection and management of [national marine sanctuaries] with...interests concerned with the continuing health and resilience of these marine areas."



### ***2.3 Designation of research areas to differentiate between natural variation versus human impacts to ecological processes and components***

Section 301(b)(5) of the NMSA addresses the importance of research by stating “support, promote, and coordinate scientific research on, and long-term monitoring of, the resources of these marine areas.” Developing an understanding of the interactions and interdependence of living marine resources in a natural environment is key to effective management. As with the protection of any natural resource, information on the status and natural variability of resource components, species, and interactions is essential for the informed management of an area as extensive as the Sanctuary. In order to adequately differentiate between anthropogenic and natural changes and to further determine how those changes might affect other components of the ecosystem, a baseline set of ecosystem measurements should be established and monitored over subsequent years. As these data are gathered and analyzed, scientists and managers can determine with greater confidence how much variability is natural in a system and how much may be the result of anthropogenic influence. With a better understanding of the factors that influence ecosystem components, managers can support both improved protection of the resource and a more rapid and appropriate response to natural and/or human-induced perturbations.

Control areas, places where extractive or disruptive anthropogenic activities are minimized, are critical for the MBNMS in order to determine the responses of key resources to human influence. By comparing changes in key resources in a control area to other areas of the Sanctuary, MBNMS management would have better information to address the needs of research, protection, and constituent use of the resources.

The research conducted in MPAs could be done in partnership with, or individually by, other managing agencies (e.g., NOAA Fisheries, PFMC, and the State of California), academic institutions, the fishing community, and conservation groups. The type of questions that can be addressed by establishing MPAs for research purposes include, but are not limited to, the following:

- What variability is inherent in the natural ecosystem components and what changes may be the result of human influence?
- What are the effects of extractive activities on ecosystem components?
- How would benthic communities change in response to a further reduction in human activity?
- What are the recovery trajectories in disturbed habitats?
- Where along the continuum of community structure does the protected area fall compared to unprotected or heavily used areas?
- What is the functional role of deep-sea biogenic habitats, such as deepwater corals, sponges, and chemosynthetic biological communities in regulating community structure?

In addition, the Marine Life Protection Act was intended, in part, to help the State of California understand the nearshore marine environment by providing the opportunity to study areas that are not directly impacted by human activities. Having similar research areas in federal waters, where results can be compared to those found in state waters, is not only critical to effective management of the Sanctuary, but is also key to effective ecosystem-based management.



## ***2.4 Other considerations***

The MBNMS recently evaluated the number and type of MPAs currently located within the boundaries of the Sanctuary to determine their role in addressing MPA objectives 2.1 thru 2.3. The state-implemented MPAs meet all three objectives, but only for the nearshore environment. The fishery-based MPAs (EFH and RCA), in part, meet objectives 2.2 and 2.3 for components of deepwater communities. Thus, fishery-based MPAs are complementary, but not sufficient in meeting the MBNMS objectives for MPAs in federal waters of the Sanctuary. The fishery-based MPAs protect some economically important species and their associated habitats, but do not adequately protect other non-economically important species or habitats. Nor are the protections permanent or year-round. In addition, fishery-based MPAs cannot restrict other potentially harmful human activities, such as construction of energy farms (wind or wave generated), unless they impact managed fishery species or fishing activities themselves. The target of any MPA that may be implemented on behalf of the ONMS is to protect biodiversity and ecosystem components, which is distinct from the targets for fishery-based MPAs. Additional measures that may be complementary to the fishery-based MPAs are required to address these differences among management approaches.

Additions to existing fishery-based MPAs may be an option to achieve multiple, yet separate, objectives of the MSFCMA and NMSA. For example, there may be merit in considering a few select areas for long-term protection of spawning biomass, age structure, and community structure for some of the more vulnerable habitats and species. These options would be considered as part of an open, transparent, and inclusive process with MBNMS partners, stakeholders, and constituent groups.

## ***3.0 Conclusion***

The natural resources of the Sanctuary and the environmental services they provide to the United States are unique, nationally treasured, and internationally recognized. However, certain human and natural impacts to the Sanctuary ecosystem have either become more severe or more apparent since the designation of the Sanctuary in 1992. MPAs are a promising tool for reducing and reversing some of these impacts within discrete areas of the Sanctuary. Current protections either do not cover offshore habitats in federal waters (state MPAs) or only provide limited protection based on target species or activities (EFH and RCAs).

The ONMS's responsibility to manage and protect special marine areas of the nation's public domain is clearly defined in the NMSA. Given this responsibility, coupled with ecosystem-based management principles, the ONMS determined it is appropriate to consider setting aside some areas in representative habitats of the Sanctuary where human impacts can be minimized and the natural ecosystem components of these areas may be restored and maintained. Considering establishment of these areas is compatible with ONMS's ecosystem-based approach to the management of NOAA trust resources and is responsive to public appeals for increased protection.

As such, the ONMS is initiating a process to propose designating MPAs in the federal waters of the Sanctuary, with goals of preserving unique and rare areas in their natural state for the benefit of future generations, preserving areas where natural ecosystem components are maintained and/or may recover, and serving as research areas to differentiate between natural variation

versus human impacts to ecological processes and components. There are many approaches ONMS can take to meeting these goals, and no determination has been made regarding the authority under which any new MPAs would be implemented. This decision will be an integral part to the process of establishing MPAs in the Sanctuary and will be made in close consultation with NOAA Fisheries, the PFMC, and other regulatory and resource management agencies.

Moving forward with a process will also involve focused stakeholder and public involvement and the MBNMS encourages public participation throughout. Further, the MBNMS will be seeking additional input from its Sanctuary Advisory Council, the PFMC, NOAA Fisheries and other regional resource management partners regarding the process to establish MPAs in federal portions of the Sanctuary.

Sincerely,

A handwritten signature in dark ink, reading "Paul Michel". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Paul Michel  
Sanctuary Superintendent



## ***Literature Cited***

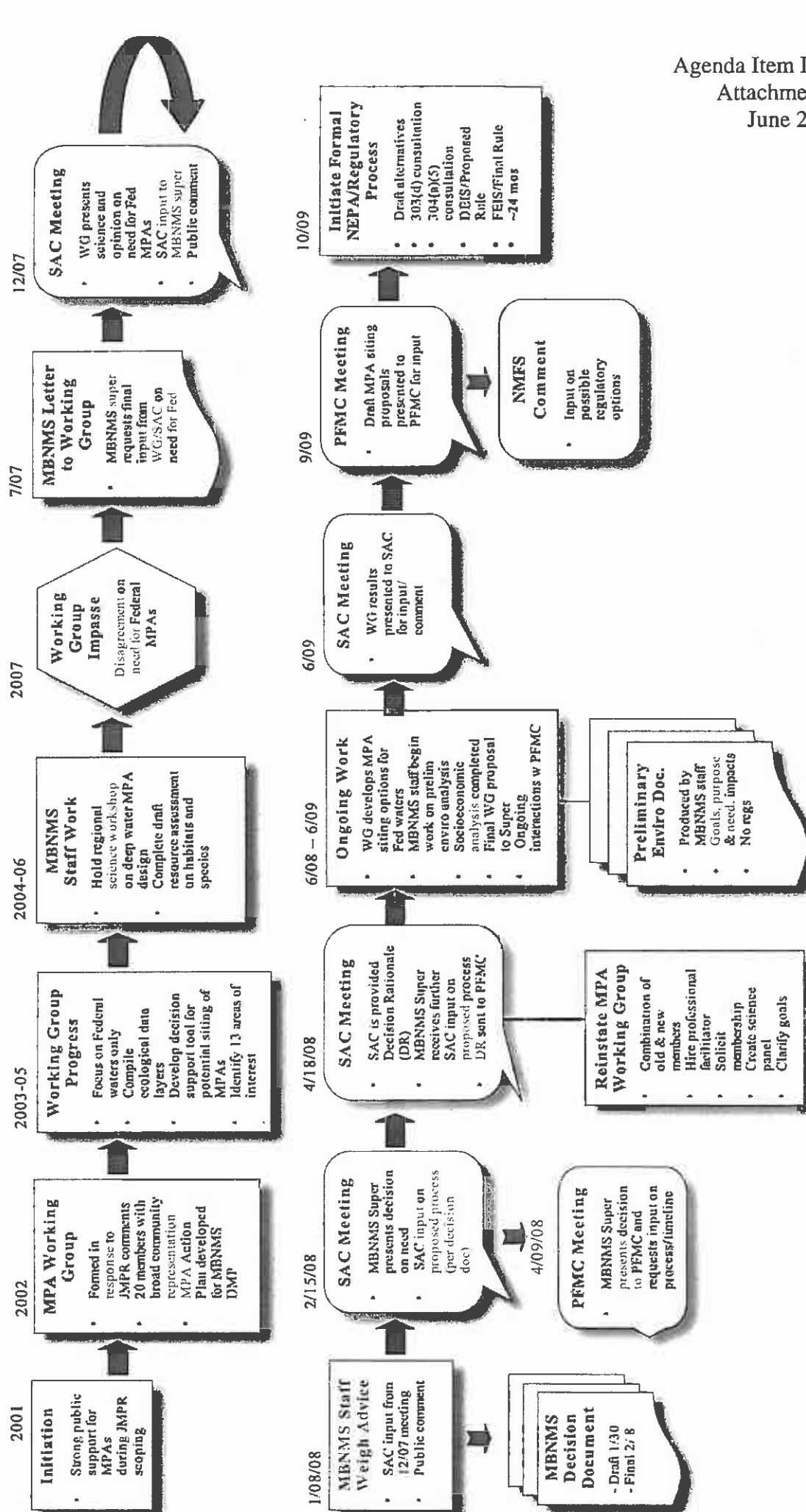
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# DRAFT DECISION PROCESS AND TIMELINE for the MONTEREY BAY NMS CONSIDERATION OF MARINE PROTECTED AREAS





## **Concepts for a Process to Move Ahead with MPAs in the Monterey Bay National Marine Sanctuary**

*The following concepts are draft and are put forward by the MBNMS for consideration and feedback from the Sanctuary Advisory Council:*

1. Over the last 5 years, much work has gone into the consideration of MPAs including the development of tools, products and goals. To the maximum extent possible, the process ahead should capitalize on this previous work
2. The membership of the MPA working group should remain approximately the same, although some adjustment to stakeholder representation may be warranted (i.e. add groundfish representation)
3. Science members should remain involved but serve as subject matter experts, not as stakeholders. A separate but public science panel should be convened to evaluate eventual proposals. Include a PFMC SSC member as part of science panel.
4. Working group meetings should be professionally facilitated
5. Working group and science panel meetings should be public and any products made publicly available
6. The MPA planning process should frequently provide for appropriate PFMC input and coordination prior to the NEPA phase.
7. There is a need for socioeconomic study to understand the impacts of Federal water MPAs
8. A starting point for discussions should be the Areas of Interest previously identified by the working group that are adjacent to MPAs in state waters
9. Adjacent State and Federal waters MPAs should generally have parallel regulations
10. Once the planning process begins, the working group will have approximately 6 meetings over 6 months to develop proposals to forward to the Sanctuary Advisory Council. The SAC will then provide it's advice to the MBNMS, and the MBNMS will consult with the PFMC regarding implementation.

11. Include a thorough characterization of existing protective measures as the status quo alternative and include the Davidson Seamount, if it becomes part of the Sanctuary, when developing alternatives.
12. Any decision regarding how MPAs will be implemented under the NMSA, the MSA, or both will be made in the future in close coordination with NOAA Fisheries, and PFMC



HABITAT COMMITTEE REPORT ON  
REVIEW OF RATIONALE FOR MARINE PROTECTED AREAS IN THE MONTEREY BAY  
NATIONAL MARINE SANCTUARY (MBNMS)

The Habitat Committee (HC) reviewed the Monterey Bay National Marine Sanctuary (MBNMS) letter submitted to the Sanctuary Advisory Council on the decision rationale for marine protected areas (MPAs) in Federal waters of the Sanctuary. The HC notes that the stated objectives for MPAs in the MBNMS decision rationale are consistent with the objectives for heritage and research MPAs outlined in the white paper written by an Scientific and Statistical Committee (SSC) subcommittee on MPAs (*“Marine Reserves: Objectives, Rationales, Fishery Management Implications and Regulatory Requirements”*). In addition, the proposed research objectives of MBNMS MPAs could help achieve the Council’s current Research and Data Needs as outlined in the draft document.

The HC recognizes that the rationale document uses the term MPAs, and that this term can imply various types of spatial management, including some that allow fishing with certain types of gear (e.g. pelagic trolling, long lining) inside the MPA.

The HC recommends the MBNMS conduct a thorough analysis of the set of spatial management measures currently in place in Federal and state waters and evaluate how these measures address the proposed MPA objectives in Federal waters of the MBNMS.

The HC also reiterates the last two paragraphs of the HC statement of April 2008:

“There is a need to improve coordination between the National Ocean Service, National Marine Fisheries Service, and the Council, such as improving synchronization of schedules. In addition, a review of the Scientific and Statistical Committee’s White Paper on marine reserves may prove useful to all sanctuaries interested in interacting with the Council.”

“There are several benefits to increased collaboration. The Sanctuary will benefit by considering areas already under MPA status (such as groundfish essential fish habitat (EFH), and rockfish conservation areas) to see if they meet their objectives, and can coordinate with existing research areas/projects to see if there can be progress on mutual goals for habitat protection. On the other hand, the Council will benefit because the National Marine Sanctuaries Act (NMSA) provides authority over non-fishing activities that affect EFH. This allows sanctuaries to comment on laws that are separate from the Council process. The Council may consider whether commenting and collaborating with sanctuaries through the NMSA will achieve greater protections needed for Council resources.”

PFCM  
06/10/08

SALMON ADVISORY SUBPANEL REPORT ON  
REVIEW OF RATIONALE FOR MARINE PROTECTED AREAS IN THE MONTEREY BAY  
NATIONAL MARINE SANCTUARY (MBNMS)

The Salmon Advisory Subpanel (SAS) notes that the Monterey Bay National Marine Sanctuary's (MBNMS) proposal for a marine protected area within the sanctuary has strong overtones of stakeholder involvement and is not presented by a neutral facilitator. Their advocate position seems contrary to their designation document directives. We question their actions in making regulations that affect fishing without making changes to their designation document that would give them that authority. We fail to see the correlation between global warming and fishing practices and how a marine protected area could affect it. Furthermore, we see no scientific justification for needing more protections in sanctuary waters than what currently exists.

PFMC  
06/12/08



SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON  
REVIEW OF RATIONALES FOR MARINE PROTECTED AREAS IN THE  
MONTEREY BAY NATIONAL MARINE SANCTUARY (MBNMS)

The Scientific and Statistical Committee (SSC) reviewed the Briefing Book materials regarding the rationales for Marine Protected Areas (MPAs) in Federal waters of the Monterey Bay National Marine Sanctuary (the Sanctuary). Dr. Lisa Wooninck of the Sanctuary staff read a statement and was available to respond to questions. Dr. Richard Parrish, a fishery science consultant, also participated in the discussion.

The SSC supports continuation of a dialogue between the Council and the Sanctuary on a process to identify and evaluate alternatives for MPAs in the Sanctuary. Alternatives should include a “no action” alternative, for which the adequacy of current protections will be evaluated; therefore support of the process does not necessarily imply support for MPAs in the Sanctuary.

The Sanctuary is currently looking for advice on evaluative processes for developing alternatives. The current rationales imply differing scales for MPA implementation; data may be inadequate to evaluate the need for MPAs at some of these scales; this disconnect will have to be addressed in developing the evaluation process. While not all criteria are amenable to rigorous scientific evaluation, those brought before the SSC should be.

In terms of process, the SSC agrees with the Sanctuary that science and policy should be kept separate and recommends that proposal development and review be done by separate entities. The SSC Ecosystem-Based Management Subcommittee is available for providing scientific input to the process. The SSC white paper “Marine reserves: objectives, rationales, fishery management implications, and regulatory requirements” provides useful background.

The SSC makes the following recommendations in developing and evaluating alternatives:

- 1) Proposed actions should be contrasted with protections afforded by current state and Federal regulations (the “no action” alternative) and, in particular, the added value of additional protection to Sanctuary management goals should be evaluated.
- 2) Consolidation of existing spatial management measures should be considered as one of the alternatives for evaluation.
- 3) It should be clear that the role of members of the Sanctuary’s working group is as stakeholders or institutional representatives, and the role of members of the Sanctuary’s science advisory panel is as independent scientists.
- 4) There should be experts from a variety of fields within the social sciences on the science advisory panel. A separate socioeconomics panel is not desirable.

- 5) Interactions between the Council and the Sanctuary should be formalized to help ensure that communication is efficient and timely. A Council staff member acting as a liaison between the Council and the Sanctuary would be helpful in this regard. SSC members, if on the science advisory group, would not speak for the SSC or the Council.
- 6) The Sanctuary, along with its partners, should develop monitoring plans to go along with each of the alternative proposed actions.
- 7) The potential loss of sampling and surveying opportunities could have a significant effect on data series used for stock assessments. Replacement of these surveying opportunities with alternative methods should be a high priority if MPAs are implemented.

PFMC  
6/10/08



## **Alliance of Communities for Sustainable Fisheries**

**256 Figueroa Street #1, Monterey, CA 93940**

**(831) 373-5238**

**[www.alliancefisheries.com](http://www.alliancefisheries.com)**

May 21, 2008

Donald Hansen, Chair  
Pacific Fishery Management Council  
7700 NW Ambassador Place, Suite 101  
Portland, Oregon 97220-1384

Dear Chairman Hansen and Councilmembers,

On behalf of the Alliance of Communities for Sustainable Fisheries, please find attached several documents relating to the authority (or lack of) of the Monterey Bay National Marine Sanctuary to create zones which regulate fishing, and the scientific and "public opinion" rationales provided by the MBNMS to create such zones. These attachments relate to both the MBNMS's February 15, 2008 decision letter, and to the further rationale provided by the Sanctuary on April 15, 2008. The ACSF will summarize the attachments below, and we request that this letter and attachments be provided to the SSC and other appropriate committees.

First, please know that the ACSF has deep concerns over this newest "rationale" statement from the National Marine Sanctuary Program. This "rationale" is meant to justify the Monterey Sanctuary's decision to "move forward with MPA planning." We find this rationale to be utterly unconvincing about a real need for additional MPAs in the federal waters of the Sanctuary. It also suggests an interpretation of the Sanctuary Act that we believe was never intended by Congress. If the SSC and other PFMC Committees concur that the Sanctuary's "rationale" is inadequate, the ACSF respectfully suggests that the PFMC voice such a finding to the Office of National Marine Sanctuaries and the MBNMS.

### **Further legal review of NMSA/Magnuson-Stevens Act**

James P. ("Bud") Walsh of the law firm Davis Wright Tremaine LLP, has provided an additional legal analysis of the question, "What federal law(s) provide authority to create zones wherein fishing is banned or restricted?"

It is Mr. Walsh's opinion that any fishing designation that would designate zones where, and periods when, fishing may be limited or shall not be permitted, must be issued in accordance with the Magnuson-Stevens Act, given Congress' express directive on such actions. The rationale behind this is quite clear. Restrictions and bans on fishing will impact overall fishery management goals and plans and, unless integrated using the best available scientific information,

serious conflicts could occur. One obvious negative impact would be to force harvesting from certain areas to other areas, causing local over-harvesting or disruption to carefully balanced allocation rules that were made with local fishing communities in mind. Some Regional Fishery Management Councils have instituted trawling bans in sensitive ocean habitats already. Therefore, with respect to a fishing regulation that would ban or restrict fishing within the Exclusive Economic Zone between 3 and 200 miles, the Magnuson-Stevens Act fishery management process appears to take precedence over the fishing regulation process set forth in Section 304(a)(5) of the NMSA.

### **Ecosystem Protection of Existing Management: Is there enough protection for the MBNMS?**

Dr. Ray Hilborn of the University of Washington has provided comments on the ecosystem needs and levels of protection assertions made by the MBNMS.

Dr. Hilborn points out that the report argues that ONMS does not regulate fishing in the sanctuary and does not consider establishment of MPAs in the MBNMS as tools of fisheries management. This is patently silly. The primary human activity that would be regulated by MPAs is fishing, and any establishment of MPAs modifies the fisheries management regime in the MBNMS. The entire document suggests that the primary ecosystem change that has occurred has been in the groundfish stocks, and that fishing has been the dominant impact on groundfish. It is thus impossible to separate fisheries management from the status of the ecosystem.

The MBNMS report is highly deficient in not recognizing the extent of existing areas closed to fishing, both from trawl bans, rockfish conservation areas, essential fish habitat and existing closed areas such as the Davidson Seamount. The report makes no attempt to determine if the protection from these activities is sufficient to achieve the objectives of the NMSA.

Since the level of protection would be maximized by absolute protection, including protection from non-consumptive recreational use, and there is a clear tradeoff between human use, and level of protection, the MBNMS objective statement provides no basis for determining how much protection is appropriate. Implicit throughout the report is the assertion that the current levels of protection are not sufficient, but there is no basis for making any decisions on how much is enough.

The MBNMS report argues that only a small portion of species are protected under MSFCMA, ESA, MMPA and this implies that exploited species that are well managed are not protected. Further this implies that an ecosystem that is being fished under the guidelines of the MSFCMA is not protected, yet the clear intent of MSFCMA is to protect the productivity of species and ecosystems for sustainable utilization. In short, there is a clear implication in this document that protection means no human impact.

The report argues that the ecosystem needs further protection, and that the



major ecosystem changes have been in the groundfish community. The possibility that all of the ecosystem concerns cited are already addressed by the combination of various management agencies is ignored, and the document implies that the ecosystem has gotten worse since the original designation of the MBNMS. The document totally ignores the fact that the groundfish stocks (not including hake) are now at greater than 50% of the estimated unfished biomass and increasing.

It can be argued that the legal frameworks of the MSFCMA, ESA, MMPA, NEPA etc is to specifically protect the marine ecosystems in Federal waters, and to protect them so that sustainable human use is possible. The EFH provisions of MSFCMA are clearly designed for such provisions. The assertion that the existing legislation does not provide for protection seems to be fallacious.

### **What are the researches needs, opportunities, and capabilities of the MBNMS?**

The ACSF points out that regarding the list of research questions listed in the April 15<sup>th</sup> letter, the letter does not address specifically how these questions can be answered by existing MPA opportunities. There are now 29 State MPAs within the region. The new State MPAs in our region include some very deep water in and along the edges of Monterey Bay Canyon. Additionally, research could be conducted on the Essential Fish Habitat Area to document the effects of bottom trawling on similar habitats. The RCA also provides research opportunities. And, of course, we should not forget that the National Marine Sanctuary came to the Council with a request that the 775-square-mile Davidson Seamount Area be made essentially a benthic reserve, with no bottom extraction at all within 1000 feet of the top of the Seamount. The Sanctuary gave both research and intrinsic value arguments for asking the Council for this protection. Finally, the new federal waters Channel Islands National Marine Sanctuary MPA was also created to provide research opportunities to the Sanctuary Program

The PFMC should also be aware that there is a credibility issue in a MBNMS claim of “research” needs. The MBNMS never even consulted with its own Research Advisory Panel, a group of approximately 20 respected scientists from all of the Monterey Bay Region’s research institutes. They were never asked for their opinions about research needs in the Sanctuary. Perhaps MBNMS officials should be asked why.

There is little evidence provided in the April 15<sup>th</sup> MBNMS rationale statement about why additional MPAs are needed for research. There is also no discussion about the MBNMS’s research capabilities. Not only has the MBNMS not answered the question: “How much protection is enough?” - they have also not answered the question: “How many research opportunities are enough, especially if they come at a cost of removing fishing opportunities from struggling local fisheries?”

### **The MBNMS’s selective use of data to claim a Public Opinion need to create “Intrinsic Value” MPAS**

The ACSF has provided extensive comments on this topic. Among the issues we raise is that the large bulk of public comments “for MPAs” was received in 2001 as part of the Sanctuary’s scoping process for its pending Management Plan Review. At this time, there were hardly any MPAs, and generally less protection in place within the Sanctuary Region. Now, extensive fishery management is in place, along with other precautionary management measures, including numerous MPAs. Therefore, for the Sanctuary to be claiming now that thousands of people want MPAs in the Sanctuary, and that’s why they need to propose more, simply is not a credible statement. It must be recognized that the public who made that statement in 2001 is not a currently informed public. Secondly, we point out that, by the MBNMS’s own statements, the public comment received was largely generated electronically from the list-servers of several large environmental organizations that are not necessarily representative of the general public. The MBNMS has done nothing to examine the quality of this data.

The Council and SSC should be aware that a recent (April 2007) public opinion poll conducted by Responsive Management Inc. of Virginia asked Californians in every county, in a statistically valid study, a set of questions about how the public views protection and ocean management. One key question asked: “When you hear the word “protect,” as in “We should protect the ocean,” do you think it means that ocean resources should be used in a sustainable way, or do you think it means that ocean resources should not be used at all?” Eighty-seven percent of the public responded that what they mean by protection is “manage for sustainable use.” Only eight percent stated that ocean resources should not be used at all. The public was also asked which they thought was the better management option for California’s coastal fisheries. One choice was to fully protect some areas from fishing, even if it means the fishermen would then concentrate their fishing in the remaining open areas. Only 24% of the public favored this option. However, 68% of the public favored the option that said “through the use of science-based limits on the amount of fish that can be taken, allow fishing in all areas.” An additional 8% did not choose an answer. These factors tell us that the Sanctuary is either misinterpreting or misusing data to support a position that the Sanctuary Program itself favors, as opposed to looking at this question objectively as to the opinions of all Californians. We do recognize, incidentally, that the Sanctuary Program represents all of the nation, not just California, but we believe that the poll results would not be substantially different in any other parts of the country. A copy of the poll is attached, and can be found at the ACSF website.

### **Lack of Coordinated Action a Problem; Recommendations**

The ACSF has previously pointed out that the Sanctuary Program has failed in its legal mandate to “provide coordinated and comprehensive management between all Federal, State, and Local jurisdictions”. A large current example of this is the MBNMS’s silence in California’s Marine Life Protection Act process, while the State asserted that it didn’t need to consider or integrate other management measures as it designed its system of MPAs. It seems clear in the MBNMS documents that the Sanctuary sees itself in a superior role to the Council or the

requirements of the Magnuson-Stevens Act, because the ONMS sees itself in a role as being the only agency with a responsibility to protect the ecosystem as a whole. Because of this agency self-view, it also seems clear that the Sanctuary Program will layer Sanctuary MPAs upon all the management that already exists. To further a true coordinated effort, the ACSF recommends that the Council request that the MBNMS and the ONMS:

- 1) Withdraw its two “decision” letters and re-structure the task of an MPA work group to be one of evaluating the utility and consequences of additional MPAs or other protection measures. A rational, science-based network of state and federal MPAs, or other management measures, should be the goal.
- 2) Include State waters in its review of protection, understanding that this might entail suggesting to the State a re-design of State MPAs.
- 3) Publicly state if the ONMS or the Sanctuary sites intend, in the future, to push for MPAs in the neighboring Gulf of the Farallones and Cordell Bank NMS’s (given the “rationale” provided by the MBNMS, it would be illogical for the Sanctuary Program to NOT try to create MPAs in these NMS’s). New MPAs in this region must be coordinated with the MBNMS, the State and PFMC actions.
- 4) The MBNMS, the State, and the Council are encouraged to consider “tradeoff” proposals that might come out of this process; i.e., in exchange for the MBNMS getting an area it wants, other areas are re-opened.
- 5) Given the economic crisis that is unfolding to fisheries and Coastal Communities, a goal of the MPA process should be that there be no further loss of economic opportunity.
- 6) This process should occur as part of the Council’s Ecosystem Based Fishery Management Plan, perhaps funded in part by the MBNMS. Conducting an evaluation of the need for, and/or siting of, additional MPAs in the MBNMS region in the context of a PFMC process would be consistent with the legal opinion we have provided about the lack of authority in the National Marine Sanctuaries Act to create zones which regulate fishing.

The ACSF and fishermen throughout the region would like nothing better than to have a constructive relationship with the Sanctuary Program. The recommendations suggested above are intended to be constructive and practical.

Thank you for considering these comments on behalf of the Alliance of Communities for Sustainable Fisheries.

Sincerely,

Frank Emerson  
Co-Chair, ACSF

Supporting Associations & Organizations



Pacific Coast Federation of Fishermen's Association  
Port San Luis Commercial Fishermen's Association  
Morro Bay Commercial Fishermen's Association  
Monterey Commercial Fishermen's Association  
Fishermen's Association of Moss Landing  
Santa Cruz Commercial Fishermen's Marketing Association  
Half Moon Bay Fishermen's Marketing Association  
Fishermen's Alliance  
Western Fishboat Owners Association  
Ventura County Commercial Fishermen's Association  
Federation of Independent Seafood Harvesters  
Golden Gate Fishermen's Association  
Port San Luis Harbor District  
City of Morro Bay Harbor  
City of Monterey Harbor  
Moss Landing Harbor District  
Santa Cruz Port District  
Pillar Pt. Harbor, San Mateo County Harbor District

C: Paul Michel, Superintendent, MBNMS

Attachments

Comments on the proposal for MPAs within the MBNMS.

MBNMS Decision and Rationale Documents of 2/15/08 and 4/15/08.

Ray Hilborn May 2008

When examining any management action I ask first, “What is the objective?” How would we evaluate any specific proposal? The MBNMS proposal begins with the following statement:

“the primary purpose of this action is to protect biodiversity and protect natural habitats, populations, biological communities and ecological processes”

Since the level of protection would be maximized by absolute protection, including protection from non-consumptive recreational use, and there is a clear tradeoff between human use, and level of protection, this objective statement provides no basis for determining how much protection is appropriate. Implicit throughout the report is the assertion that the current levels of protection are not sufficient, but there is no basis for making any decisions on how much is enough.

The report argues that only a small portion of species are protected under MSFCMA, ESA, MMPA and this implies that exploited species that are well managed are not protected. Further this implies that an ecosystem that is being fished under the guidelines of the MSFCMA is not protected, yet the clear intent of MSFCMA is to protect the productivity of species and ecosystems for sustainable utilization. In short, there is a clear implication in this document that protection means no human impact.

I believe it can be argued that the legal frameworks of the MSFCMA, ESA, MMPA, NEPA etc is to specifically protect the marine ecosystems in Federal waters, and to protect them so that sustainable human use is possible. The EFH provisions of MSFCMA are clearly designed for such provisions. The assertion that the existing legislation does not provide for protection seems to be fallacious.

The literature review is highly biased. For instance the Myers and Worm 2003 paper arguing that all the big fish of the ocean had declined by 90% by 1980, has repeatedly been shown to be wrong (Sibert et al 2006). The authors discuss the status of California grey whales, and cite a highly controversial genetics paper suggesting that the stock is not fully rebuilt, while ignoring the extensive work by NOAA and the Scientific Committee of the International Whaling Commission which suggest the stock has returned to its unfished abundance. In short the authors of this report have made no attempt to make a balanced analysis of the evidence on any of the issues but have been highly selective in their choice of literature to discuss. The literature review of MPA's is similarly highly biased, and (among other things) makes no attempt to recognize (1) the historically low exploitation rates on fishes in the system, (2) the fact that bottom contact gear historically covered only a small portion of the total habitat, (3) the recovery of the groundfish

community in recent years to greater than 50% of its unfished abundance and (4) the extensive portion of the MBNMS that is closed to trawling.

The report is highly deficient in not recognizing the extent of existing areas closed to fishing, both from trawl bans, rockfish conservation areas, essential fish habitat and existing closed areas such as the Davidson Seamount. The report makes no attempt to determine if the protection from these activities is sufficient to achieve the objectives of the NMSA.

The document argues that the ecosystem needs further protection, and that the major ecosystem changes have been in the groundfish community. While admitting that some of the overexploited groundfish have begun to recover, the possibility that all of the ecosystem concerns cited are already addressed by the combination of various management agencies is ignored, and the document implies that the ecosystem has gotten worse since the original designation of the MBNMS. The document totally ignores the fact that the groundfish stocks (not including hake) are now at greater than 50% of the estimated unfished biomass and increasing.

The report argues that ONMS does not regulate fishing in the sanctuary and does not consider establishment of MPAs in the MBNMS as tools of fisheries management. This is patently silly. The primary human activity that would be regulated by MPAs is fishing, and any establishment of MPAs modifies the fisheries management regime in the MBNMS. The entire document suggest that the primary ecosystem change that has occurred has been in the groundfish stocks, and that fishing has been the dominant impact on groundfish. It is thus impossible to separate fisheries management from the status of the ecosystem.

Sibert, J, Hampton, J, Kleiber, P, and Maunder, M. Biomass, Size, and Trophic Status of Top Predators in the Pacific Ocean. *Science*. 2006;314: 1773-1776.



June 2008

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May 8, 2008

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Portland, OR 97220-1384

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Executive Director  
Pacific Fisheries Management Council  
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Portland, OR 97220-1384

Mr. Daniel J. Basta, Director  
National Marine Sanctuary Program  
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Silver Spring, MD 20910

Re: *Decision by Paul Michel, Superintendent of the Monterey Bay Marine Sanctuary  
Regarding Need for Marine Protected Areas in Federal Waters; February 15 and  
April 15, 2008 Letters to Sanctuary Advisory Council Members*

Dear Vice-Admiral Lautenbacher, Dr. Balsiger, Mr. Basta, Mr. Hansen and Mr. McIsaac:

Our firm represents the Alliance of Communities for Sustainable Fisheries ("ACSF"), an organization dedicated to representing the interests of recreational and commercial fishing industries in the geographic region from Point San Luis (Avila Beach) to Pillar Point in San Mateo County, in the State of California, and is comprised of local associations and communities. ACSF has been particularly active with respect to the programs of the Monterey Bay National Marine Sanctuary ("Monterey Sanctuary"). At the inception of the Monterey Sanctuary, representatives of the local California coastal fishing community supported the effort to create the special management program plan outlined in the 1992 Final Environmental Impact

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Statement/Management Plan issued by the National Oceanic and Atmospheric Administration ("NOAA"). The 1992 agency action approved the designation of the Sanctuary and approved its "Final Management Plan." As you know, the Sanctuary's Designation Document does not authorize the regulation of fishing, except for "aquaculture and kelp harvesting within the Sanctuary." Regulations implemented for the Sanctuary are found at 15 C.F.R. § 922.130 to 922.134.

Recently, due to an unusual amount of interest and strong political pressure from certain environmental interest groups and others, the Monterey Sanctuary has been considering whether the Sanctuary should "move forward with Marine Protected Areas" (referred to herein as "MPAs"). It appears that the Sanctuary has created an MPA Working Group, which has been charged with developing a "plan for evaluating the utility and potential siting of MPAs" within the Sanctuary Boundaries. On February 15, 2008, the Superintendent of the Sanctuary, Mr. Paul Michel, announced his decision to "mov[e] forward with MPAs in the federal waters of the Sanctuary." It would appear, however, based on Mr. Michel's announcement and related background documents, that the regulatory action that would underpin these MPAs would be a total, or near total, ban on any harvest of fishery resources within MPA boundaries. In effect, the proposed MPAs would manage harvest fisheries by banning fishing, an action that can only be characterized as the "regulation of fishing." No other activity would be restricted in the proposed MPAs, just the taking of fishery resources within Sanctuary boundaries outside three miles from shore. It appears that Mr. Michel predicates his decision on the following conclusion:

However, while the existing spatial management measures in state and federal waters of the Sanctuary provide valuable protections from fishing impacts in certain habitats. [sic]<sup>1</sup> Those habitats further offshore are either not adequately represented in existing MPAs, or not fully protected by the gear based restrictions associated with EFH [essential fish habitat] or the temporary RCAs [Rockfish Conservation Areas].

On April 15, 2008, Mr. Michel sent another letter seeking to "provide additional information and rational on this decision and clarif[y] the role of the National Marine Sanctuaries Act (NMSA) in managing the national marine sanctuaries from an ecosystem-based approach."

We are writing to express to you, on behalf of ACSF, our concern that the Monterey Sanctuary efforts regarding the creation of MPAs is not authorized by its Designation Document. We seriously question whether federal law allows the Monterey Sanctuary to move forward unless and until its Designation Document is amended pursuant to the NMSA, 16 U.S.C. § 1434. The Monterey Sanctuary is not authorized to regulate fishing in any fashion, including banning

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<sup>1</sup> This sentence is incomplete in the original, containing only a dependent clause before the period.

fishing to create a so-called MPA. Mr. Michel has failed, in his recent correspondence, to point out this important legal restriction on the Sanctuary's regulatory authority. This legal restriction is very much a part of the history of the creation of this Sanctuary, and binding on the agency. The amendment of the Designation Document must precede any effort to create an MPA that regulates fishing in any manner.

Moreover, no such regulatory action regarding fishing, whether it involves a ban or any other restriction, can be undertaken without full compliance with Congress' recent amendment to the Magnuson-Stevens Act that expanded the authority of Regional Fishery Management Councils, in their discretion, to "designate zones where, and periods when, fishing may be limited, or shall not be permitted, or shall be permitted only by specified types of fishing vessel or with specified types and quantities of fishing gear." 16 U.S.C. § 1853(b)(2)(A). This recent specific Congressional authorization trumps the more general authority provided under the NMSA. See *Santiago Salgado v. Garcia*, 384 F.3d 769, 774 (9<sup>th</sup> Cir. 2004) (it is an elementary tenet of statutory construction that where there is no indication otherwise, a specific statute will control a general one). The general authority given to NOAA in the NMSA for creation of marine sanctuaries does not contain any special authority to create MPAs. No MPA that bans or restricts fishing can be instituted without following the procedures and standards set forth in the Magnuson-Stevens Act, as well as the requirements of the NMSA.

### What Are MPAs Anyway?

A "marine protected area" or MPA is not defined in any federal statute.<sup>2</sup> On May 26, 2000, President Clinton issued Executive Order 13158 on Marine Protected Areas, defining an MPA as follows:

"Marine Protected Area" means any area of the marine environment that has been reserved by the Federal, State, territorial, tribal or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein. [Sec. 2.a]<sup>3</sup>

Yet this Executive Order did not contain new legal authority or change in any way existing legal authority with respect to the marine environment, such as laws that regulate vessel transit and pollution control, endangered and threatened species, water pollution, coastal zone management, fishery management, or any other specific statute enacted by Congress that implicates management of the marine environment.

<sup>2</sup> In fact, the only reference in federal statutes to "marine protected areas" is found in the Coral Reef Conservation Act, 16 U.S.C. §§ 6402(b)(8) and 6409(2), but the term not defined.

<sup>3</sup> The same definition is found in the Report of the Marine Protected Areas Federal Advisory Committee on Establishing and Managing a National System of Marine Protected Areas, NOAA (June 2005), at 2.



Some have referred to the recently created Northwestern Hawaiian Islands Marine National Monument as an MPA. President Bush proclaimed 1,200 nautical miles of coral islands, banks and shoals as a National Monument on June 15, 2006, relying on the authority given him under section 2 of the Act of June 8, 1906, commonly referred to as the “Antiquities Act.” 16 U.S.C. § 431. All fishing activities in the National Monument will be prohibited on June 16, 2011. Therefore, while the NOAA Marine Sanctuary Program manages this unique National Monument in the ocean, the Monument was not created under authority of the NMSA.

Most notably, Congress has never amended the NMSA to provide specific authority to create MPAs. See William J. Chandler and Hannah Gillelan, *The History and Evolution of the National Marine Sanctuaries Act*, 34 E.L.R. 10505-10565 (2004). Some have asserted that the purpose of the NMSA is to provide authority to control all threats to the entire marine ecosystem within a sanctuary. However, the legislative history of that law evinces a far more limited intent by Congress, as do myriad other special purpose laws enacted to prevent air pollution, water pollution, endangered species, marine mammals, and, of course, marine fisheries. In his April 15 letter, Mr. Michel implies that the findings and purposes and policy sections of the NMSA can be read broadly, but ignores the clearly stated restraint on such a reading in Section 301(b)(2) which mandates that any actions under the NMSA must be implemented in a manner “which complements existing regulatory authorities.” The NMSA cannot be read to supplant other regulatory authorities.

The conclusion that the Superintendent of a marine sanctuary can widely regulate or control every possible human-induced environmental impact within the limited boundaries of that sanctuary, in order to truly preserve the area in its natural state, is simply not legally viable. As the Supreme Court recently stated when interpreting authority given under a statute: “Congress does not hide elephants in mouseholes.” *Whitman v. American Trucking Assn, Inc.*, 531 U.S. 457, 468 (2001). Congress never gave the Marine Sanctuary Program such sweeping authority in the NMSA.

Even assuming that the Congress intended to give such broad authority (which we do not), we find it highly questionable that Congress, therefore, intended the Marine Sanctuary Program to create an MPA that only regulates or bans a single activity, i.e. fishing, in order to “restore and maintain” the entire ecosystem structure and function in a marine sanctuary and to preserve that ecosystem in its natural state.<sup>4</sup> No one can reasonably believe that current fishing activity, subject to the existing strict restrictions and limits, is the only issue to be addressed in seeking to restore ecosystem structure and function in the Monterey Sanctuary, if indeed the best scientific information available shows fundamental problems in the ecosystem caused by

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<sup>4</sup> We are certain that all of you are aware of the likely widely differing scientific opinions as to what might be the “natural state” of this discrete portion of the dynamic ocean environment along the California coast.

fishing.<sup>5</sup> Indeed, such an irrational conclusion suggests a political effort to subvert the procedures and standards created by the Magnuson-Stevens Act, not a meaningful effort to create real protections for the entire ecosystem within the Monterey Sanctuary. For example, should all shipping and boating, with the attendant air and water pollution, oil spill risk, marine mammal strike danger, and other potential environmental impacts be banned? What about water pollution and debris that enter the Sanctuary from land-based sources?

### **What Can be Regulated As an MPA Created under the NMSA?**

Consequently, it is quite unclear as to the legal authority that would guide the creation of MPAs in the context of the NOAA Marine Sanctuary Program, in general, and the Monterey Sanctuary, in particular. Our view of the law is that any such MPA cannot include any restrictions on fishing within the Monterey Sanctuary, unless and until its Designation Document is properly amended in accordance with NMSA. If and when the Designation Document is amended, then any fishery management regulations must go through the process set forth in subsection 304(a)(5) of the NMSA. 16 U.S.C. § 1434(a)(5). The Designation process is central to the operative provisions of the NMSA. It seems highly inappropriate for Mr. Michel to draw his conclusions without following the Designation process set forth in the Act, including consultations with the appropriate Committees of the Congress. Mr. Michel's recent correspondence avoids any mention of this fundamental legal issue.

With respect to any ban or restriction on fishing, the specific terms of the Magnuson-Stevens Act would control, both as to procedure and standards for consideration, not the NMSA. Therefore, only the regional councils appear to have the discretion to recommend such restrictions on fishing, including within any so-called MPA, not the Marine Sanctuary Program. Moreover, by its recent action with respect to this year salmon fishing season, the Pacific Fishery Management Council has demonstrated its ability to make tough conservation decisions based on the best available scientific information. In contrast to the extensive experience and history of management of marine fisheries under the Magnuson-Stevens Act, the Marine Sanctuary Program has no proven track record, or even any technical fishery ecosystem capability, with respect to the "regulation of fishing." Mr. Michel's attempt to say that "establishment of MPAs for [Monterey Sanctuary] objectives" is "not a tool for fishery management" is specious. Banning fishing is, in fact, the "regulation of fishing" regardless of the objective. We know that some scientists have argued that an MPA that bans fishing is a fishery management tool that would build up stocks within the MPA and greater catches would be available just outside its boundaries. If Mr. Michel's characterization were correct, he will then argue that any MPA that

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<sup>5</sup> Moreover, it is not clear there is any convincing scientific evidence that fishing activities can be singled-out and blamed as the major negative causative factor with respect to the current ecological condition of the Monterey Sanctuary area. Using MPAs as a laboratory experiment, to see whether this theory is right or wrong, in this limited part of the dynamic ocean environment, truly puts the cart before the horse.

bans fishing for sanctuary purposes would not have to go through the review process for fishing regulations Congress created in Section 304(a)(5) of the NMSA, because it is not fishery management. 16 U.S.C. § 1434(a)(5). Such an argument is patently wrong.

### Summary of Important Points

We offer the following summary comments on these issues, for your consideration, on behalf of ACSF:

1. The principal operative provision in the NMSA is the creation and approval of a sanctuary's Designation Document. Section 303; 16 U.S.C. § 1433 (Sanctuary Designation Standards; and Section 304; 16 U.S.C. § 1434 (Procedures for Designation and Implementation). Restrictive regulations for each sanctuary are predicated on the Designation Document and its contents, particularly the management plan for the sanctuary.
2. The Monterey Sanctuary's Designation Document expressly excluded the regulation of fishing, except for aquaculture (which is really not fishing) and kelp harvesting. As such, as a matter of law, there is no authority in the Designation Document and the existing management plan for the Sanctuary to regulate fishing, for whatever reason. It does not matter that the regulation of fishing is given the name "Marine Protected Area."
3. The NMSA makes clear that the regulatory powers of NOAA under that Act are limited to carrying out the purposes, goals and objectives as spelled out in the Designation Document. Therefore, no regulations that would "regulate fishing" may be adopted for the Monterey Sanctuary, unless and until the Sanctuary's Designation Document is amended in accordance with the standards and procedures of the NMSA.
4. The special fishing regulation provision in the NMSA (Section 304(a)(5); 16 U.S.C. § 1434) only applies where a Designation Document, or a proposed amendment to a Designation Document, specifies that a particular sanctuary intends to regulate fishing. Where, as here, the Designation Document expressly excludes the regulation of fishing, the Marine Sanctuary Program has no standing to use that special provision or ask a Regional Fishery Management Council to follow the procedures of Section 304(a)(5) with respect to fishing regulations in the Monterey Sanctuary.
5. The Regional Fishery Management Council may not even consider Mr. Michel's proposal because the Monterey Sanctuary lacks the legal authority to implement fishing bans or restrictions, given its Designation Document. Our federal government, by definition, is one of limited powers and certain laws, such as the Anti-Deficiency Act,<sup>6</sup> are intended to limit government expenditures to those authorized by law and appropriated by Congress. While we do not necessarily suggest a violation here, the issue should be carefully scrutinized.

<sup>6</sup> 31 U.S.C. § 1341(a)(1)(A) and (a)(1)(B).



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6. If the Monterey Sanctuary's Designation Document were in fact amended, then the special fishing regulation provision in Section 304(a)(5) would come into play.

7. Any fishing regulation that would designate zones where, and periods when, fishing may be limited, or shall not be permitted, must be issued in accordance with the Magnuson-Stevens Act, given Congress' express directive on such actions. The rationale behind this is quite clear. Restrictions and bans on fishing will impact overall fishery management goals and plans and, unless integrated using the best available scientific information, serious conflicts could occur. One obvious negative impact would be to force harvesting from certain areas to other areas, causing local over-harvesting or disruption to carefully balanced allocation rules that were made with local fishing communities in mind. Some Regional Fishery Management Councils have instituted trawling bans in sensitive ocean habitats already. Therefore, with respect to a fishing regulation that would ban or restrict fishing within the Exclusive Economic Zone between 3 and 200 miles, the Magnuson-Stevens Act fishery management process appears to take precedence over the fishing regulation process set forth in Section 304(a)(5) of the NMSA.

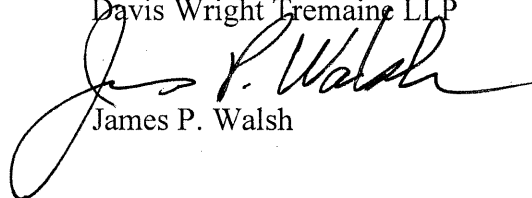
#### **Congressional Guidance May Be Necessary**

Before the Monterey Sanctuary moves forward with MPAs, given its questionable legal authority, it may be appropriate for NOAA to ask Congress to consider and, if necessary, enact new legislation on MPAs, before any large expenditure of time and expense is invested in Mr. Michel's proposal under the vague and conflicting authority of the NMSA. For certain, Congress must be involved in amending the Designation Document of the Monterey Sanctuary to allow for "regulation of fishing" before any such regulations should be considered by NOAA or the Pacific Fishery Management Council under the NMSA or the Magnuson-Stevens Act.

ACSF offers these comments in order to contribute to the continuing debate over MPAs. We hope that you will give them serious consideration. We ask that you make this letter a part of any administrative record being developed with respect to Mr. Michel's proposal or with respect to MPAs on the California coast.

Very truly yours,

Davis Wright Tremaine LLP



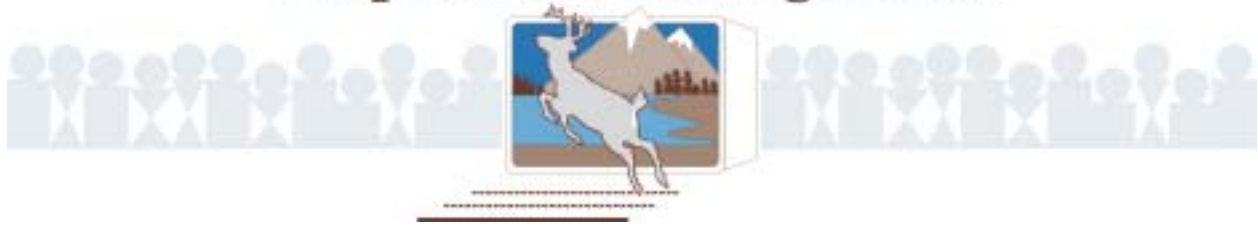
James P. Walsh



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cc: The Honorable Barbara Boxer  
The Honorable Dianne Feinstein  
The Honorable Lois Capps  
The Honorable Anna Eshoo  
The Honorable Sam Farr  
The Honorable Jackie Spier  
The Honorable Lynn Woolsey  
Association of Monterey Bay Area Governments (AMBAG)  
City of Monterey  
City of Morro Bay

# Responsive Management



## **CALIFORNIA RESIDENTS' OPINIONS ON AND ATTITUDES TOWARD COASTAL FISHERIES AND THEIR MANAGEMENT**

**Conducted for the Alliance of Communities for Sustainable Fisheries  
by Responsive Management**

**2007**

# **CALIFORNIA RESIDENTS' OPINIONS ON AND ATTITUDES TOWARD COASTAL FISHERIES AND THEIR MANAGEMENT**

**2007**

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## **Acknowledgements**

Responsive Management would like to thank all the California residents who took the time to answer the survey.

## **EXECUTIVE SUMMARY**

### **INTRODUCTION AND METHODOLOGY**

This study was conducted for the Alliance of Communities for Sustainable Fisheries (ACSF) to determine Californians' opinions on and attitudes toward commercial and recreational fishing in coastal areas of California, the ecological health of California's coastal fisheries and wildlife, and fisheries and wildlife management along the coast. The study entailed a telephone survey of California residents 18 years old and older.

For the survey, telephones were selected as the preferred sampling medium because of the universality of telephone ownership. The telephone survey questionnaire was developed cooperatively by Responsive Management and people associated with the ACSF. Responsive Management conducted a pre-test of the questionnaire, and revisions were made to the questionnaire based on the pre-test. Interviews were conducted Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. The survey was conducted in March 2007. Responsive Management obtained a total of 801 completed interviews. The software used for data collection was Questionnaire Programming Language 4.1.

The analysis of data was performed using Statistical Package for the Social Sciences software as well as proprietary software developed by Responsive Management. Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of California residents, the sampling error is at most plus or minus 3.46 percentage points.

### **PERCEPTION OF ISSUES FACING CALIFORNIA AND ITS ENVIRONMENT**

- The survey sought to determine Californians' concerns about the health of small family-run businesses versus the health of large corporations in California, as well as the level of concern for both of these relative to other issues facing California. The survey found that concern about small family-run businesses is much higher than concern about the health of large corporations. In the overall findings, concern about the health of small family-run businesses is just about equal to concern about highways and transportation. Overall, public education is the top concern.

- The survey asked respondents to rate six possible threats to California's marine waters, habitat, and fisheries. By far, water pollution in the ocean and coastal waters is perceived as the worst threat, with 72% of Californians saying it is a high threat. Nonetheless, corporate commercial fishing companies are also seen as a significant threat (29% rate them collectively as a high threat), second in the ranking of the six potential threats. In contrast, family-run commercial fishing boats (10% rate them as a high threat) and the sport of recreational fishing (5%) are not perceived as significant threats, being last in the ranking.
- California residents do not perceive the ecological health of California's natural resources positively. The mean ratings of ecological health (on a scale of 0 to 10, where 0 is not at all healthy and 10 is very healthy) of the various natural resources range from 4.78 for the ecological health of California's coastal fisheries (the last ranked) to 6.14 for the ecological health of California's forests (the top ranked). Perhaps more telling, no more than 12% gave any of the resources a rating 9 or 10 in health. Furthermore, for water and water-related resources (California's rivers and streams, its coastal fisheries, and its bays and estuaries), approximately a third of respondents rated the ecological health below the midpoint.

#### **PERCEPTION OF IMPORTANCE OF VARIOUS INDUSTRIES TO CALIFORNIA'S ECONOMY**

- The survey sought to gauge Californians' perceptions of the importance of various industries to California's economy. By far, agriculture and tourism are perceived as the most important (mean ratings of importance of 9.01 and 8.44, respectively). Commercial fishing is in the middle of the eight industries about which the survey asked.

#### **PERCEPTIONS OF ECOLOGICAL HEALTH OF FISHERIES AND MARINE WILDLIFE**

- Nearly half of California residents (48%) say that they can name a type of fish or sea mammal off the coast of California that is depleted, threatened, or endangered. The most commonly named species are sea lion/seal, otter, whale, salmon, abalone, dolphin, tuna, and shark.
  - When asked what is causing the species to be depleted, threatened, or endangered, the most commonly named culprits are pollution and overfishing or overhunting.

- In a direct question about the health of California's wildlife, ratings are for the most part in the middle, with 48% giving a rating of 4 through 6 (on a scale of 0 to 10, with 0 being not healthy at all and 10 being very healthy). Only 5% give a rating of 9 or 10.
- The results regarding the health of California's sea mammals are similar to the results reported above regarding California's wildlife: the ratings of the health of California's sea mammals are generally in the middle, with the peak at the midpoint (5). Furthermore, 48% gave a middle rating from 4 to 6, and only 8% gave a rating of 9 or 10 regarding the health of California's sea mammals.
- Again, the results regarding the health of California's coastal fisheries are similar to the results reported above regarding California's wildlife and sea mammals: the ratings of the health of California's coastal fisheries, in general, are generally in the middle, with the peak at the midpoint (5). Furthermore, 41% gave a middle rating from 4 to 6, and only 4% gave a rating of 9 or 10 regarding the health of California's coastal fisheries.
- After asking respondents to name any types of fish that they could think of that are or were commercially fished in California's coastal waters, the survey asked them to indicate whether they think any of the types of fish they named are in trouble. Most commonly, respondents think that salmon, tuna, and abalone are in trouble.

## **OPINIONS REGARDING UTILIZATION, HARVEST, AND MANAGEMENT OF FISHERIES**

- The survey asked respondents to rate the importance of six values regarding coastal fisheries, on a scale of 0 to 10, where 0 is not important at all and 10 is extremely important. The highest mean rating was ensuring that California properly manages its coastal waters and coastal fisheries (8.31), markedly higher than the rest. However, knowing that fishermen can harvest fish sustainably from coastal waters in California (mean of 7.44) and that people have the opportunity to recreationally fish in coastal waters of California (mean of 7.42) were relatively important. At the bottom of the ranking were knowing that family-run commercial fishing boats can harvest fish sustainably and knowing that family-run fishing boats (without



“commercial” in the term) can harvest fish sustainably (both with a mean of 6.93). Note, however, that even those at the bottom of the ranking have means above the midpoint.

- These questions also tested respondents’ reaction to the term “commercial.” This was done by asking two sets of paired questions (part of the sample received one question of each pair, another part of the sample received the other question). In the paired questions, one question included the term, “commercial,” and the other question did not include “commercial.” In general, there was not a markedly negative reaction to the term “commercial.”
- The survey asked five questions related to what may harm the ocean, from fishing in general, to recreational fishing, to family-run commercial fishing boats, to large corporate commercial fishing companies, and even to personal consumer decisions. Looking at the results of the five questions together, large corporate commercial fishing companies are perceived most negatively, with 59% agreeing that those companies are harming the ocean’s fisheries. No other question had more than 29% agreeing. The results are further discussed below:
- In the most general question, 25% agree that fishing harms the ocean, but 65% disagree.
  - In the question allowing comparison between large corporate commercial fishing companies versus family-run commercial fishing boats, the large corporate commercial fishing companies (59% say they are harming the ocean’s fisheries) fare poorly relative to family-run commercial fishing boats (29% say they are harming the ocean’s fisheries).
  - Even consumers are perceived as harming the ocean’s fisheries by some: 27% agree that people who consume frozen, packaged seafood from large supermarket chains are harming the ocean’s fisheries.
  - Recreational fishing is not perceived negatively: only 16% agree that people who fish recreationally in California are harming the ocean’s fisheries.
- Four questions explore opinions regarding possible causes of fishing declines and possible bans on (or reductions of) fishing. When overfishing is identified as a reason for declining fish populations, a large majority of Californians agree (72%) that commercial and recreational fishing should be banned. However, if the reason for the decline is undetermined or is shown to be caused by something other than fishing, agreement on a ban

is much lower (52% and 58% agree, respectively). However, these latter results show that, even if fishing is not a problem but fisheries are declining, Californians show deference to the fisheries over commercial and recreational fishing. A final result of these questions demonstrates Californians moderate opinions: the most agreement, if fisheries are declining, is for a *reduction* in fisheries harvest rather than an outright ban.

- Another set of four questions explores opinions on harvesting California's coastal fisheries. Again, there is a split in opinions regarding the protection versus utilization dichotomy, but there is much concern about commercial fishermen's livelihoods, particularly family-run fishing boats.
  - In one question, deference is again shown for family-run commercial fishing boats over corporate commercial fishing companies: 52% agree that if scientific evidence shows that fish populations are declining, only corporate commercial fishing companies should be banned from fishing in California's coastal waters, but family-run commercial fishing boats should be allowed; disagreement for this is 36%.
  - One question shows the split in opinion on commercial fishing: 50% agree that if scientific evidence shows that fish populations are declining, commercial fishing should be banned, but recreational fishing is okay; 40% disagree.
  - When discussion of banning commercial fishing if scientific evidence shows that fish populations are declining includes the caveat that "even if it means that commercial fishermen's livelihood will be ended," more disagree (45%) than agree (39%).
  - The least agreement is for a complete ban of fishing, both commercial and recreational, if scientific evidence shows that fish populations are declining: only 32% agree, but 59% disagree.
- Californians show concern both for having their seafood harvested sustainably as well as for ensuring that California's seafood industry not be unduly harmed. The survey asked seafood consumers (those who typically eat seafood at least once a month) five questions about their opinions on the harvesting of seafood. Overwhelming majorities agree that it matters to them that local seafood is harvested sustainably (86% agree) and that imported seafood is harvested sustainably (79% agree). They also overwhelmingly agree (82%) that they would

buy California seafood over imported seafood when informed that California currently has more conservation safeguards in place than exist in most other countries. However, seafood consumers show concern about California's fishing industry, with less than a majority agreeing that they would be willing to buy their seafood only from international markets to put the highest priority on protecting California's fisheries (37%), and even less than that saying that they would be willing to buy their seafood from non-California sources if they knew that doing so would likely force many family-run commercial fishermen out of business in California (23%). Regarding this last question, 63% disagree that they would be willing to buy their seafood from non-California sources if they knew that doing so would likely force many family-run commercial fishermen out of business in California.

- In a question directly about use or protection of California's coastal fisheries, Californians are in the middle: they favored the moderate answers ("utilized with just a few limitations" and "mostly protected with just a little utilization") over the extreme answers ("fully utilized with almost no limitations" and "fully protected with almost no utilization"). Furthermore, the two moderate answers are supported by nearly equal percentages. Overall, this question shows an almost even split between utilization and protection.
- Another question, like the one discussed above, asks about opinions on use versus protection of California's coastal fisheries. There is much more support (by more than 2 to 1) for allowing fishing in all areas, with science-based limits on the total harvest (68% support this position) over fully protecting (i.e., prohibiting *all* harvesting in) some areas with the concomitant result that fishermen would concentrate their fishing in remaining open areas (24%). In simple terms, Californians support *harvest limitations* over *complete harvest bans*.
- More Californians oppose (38%) than support (27%) adding additional fishing restrictions to California coastal waters if it means that family-run commercial fishing boats may go out of business. As a demonstration of the difficulty in making this choice, nearly a third answered this question with "don't know" (29%).

- Finally, the survey sought to determine exactly how Californians perceive the term, “protect,” as in “We should protect the ocean.” In this regard, they are, again, moderate in their opinions: they overwhelmingly (87%) perceive “protect” to mean that the resources can be used in a sustainable way rather than not used at all (8%).

## **FISHERIES AND TOURISM**

- Working waterfronts are important for tourism in coastal towns, as a large majority of Californians (71%) agree that they seek out and enjoy going to working waterfronts in communities that have them; only 7% disagree.
- In another question that pertains to tourism, an overwhelming majority of Californians (84%) agree that the State of California and local governments should work to keep charter boat opportunities available to the public, given that charter boat businesses provide opportunities to people who otherwise would not be able to boat because they cannot afford a boat of their own.

## **CONCERNS REGARDING COMMERCIAL FISHING IN CALIFORNIA**

- The survey asked Californians what exactly they think of when the term, “commercial fishing,” is applied to California, and family-run commercial fishing boats are *not* primarily on their mind, as 59% think primarily of large foreign factory ships or large U.S. corporations; only 28% think primarily of small family-run fishing boats.
- The survey asked Californians directly to rate the importance of commercial fishing to California’s economy, and they think it is important: a large majority (60%) rated it above the midpoint, and 79% rated it at the midpoint or higher; only 17% rated it less than the midpoint.
- Californians do not perceive that fishing itself harms the ocean: in answer to a basic question, two-thirds of Californians (66%) disagree that fishing harms the ocean, and only 25% agree. However, when asked about large corporate commercial fishing companies, the



perception is more negative: 58% agree that large corporate commercial fishing companies are harming the ocean's fisheries.

- A large majority of Californians (73%) perceive corporate commercial fishing companies as being a high or moderate threat to California's marine waters, habitat, and fisheries; conversely, only 5% say that they are not a threat at all, and 10% say that they are only a low threat. Family-run commercial fishing boats are not perceived as being as great a threat, with opinion evenly split: 44% see them as a high or moderate threat to California's marine waters, habitat, and fisheries, and 44% see them as only a low threat or not a threat at all.
- Disagreement (59%) far exceeds agreement (32%) for a complete ban of fishing, *both commercial and recreational*, if scientific evidence shows that fish populations are declining. However, agreement is higher if *recreational* fishing is allowed while *commercial* fishing is still banned, if scientific evidence shows that fish populations are declining: 50% agree and 40% disagree. Finally, when a ban of commercial fishing is discussed with the caveat that commercial fishermen's livelihood will be ended, agreement erodes: only 39% agree, while 45% disagree. In short, Californians, in general, do not favor a complete ban, and they are concerned about commercial fishermen's livelihood, although substantial percentages, nonetheless, support a ban if scientific evidence shows that fish populations are declining.
- There is much more support (by more than 2 to 1) for allowing fishing in all areas, with science-based limits on the total harvest (68% support this position) over fully protecting (i.e., prohibiting *all* harvesting in) some areas with the concomitant result that fishermen would concentrate their fishing in remaining open areas (24%). In simple terms, Californians support *harvest limitations* over *complete harvest bans*.
- When presented with the scenario where fish stocks are stable or already recovering, there is little support for a ban, as only 24% agree that commercial fishing should still be banned if scientific evidence shows that fish stocks are stable or already recovering (66% disagree). Slightly higher agreement (37%) is found when it is suggested that commercial fishing be

banned while allowing recreational fishing, if scientific evidence shows that fish stocks are stable or already recovering (53% disagree).

- When asked to name commercially fished species off the coast of California, respondents most commonly named salmon (34%), tuna (28%), halibut (16%), and bass (13%). Note that 40% could not name a species. In a follow-up question asking if any of the named species are in trouble, salmon, tuna, and abalone are most commonly named.
- Of the 801 respondents to the survey, 6 respondents (0.75%) personally work in the commercial or recreational fishing industry or a closely related field. Additionally, 1.75% have family who work in the commercial or recreational fishing industry or a closely related field. Finally, 5.5% have one or more friends who work in the commercial or recreational fishing industry or a closely related field.

## **CONCERNS REGARDING RECREATIONAL FISHING IN CALIFORNIA**

- The survey asked Californians to rate the importance of recreational fishing to California's economy, and they think it is somewhat important: just barely a majority (52%) rated it above the midpoint, and 69% rated it at the midpoint or higher. However, a quarter (25%) rated it less than the midpoint in importance.
- A substantial percentage of California residents (15%) consider themselves to be recreational saltwater anglers.
- Recreational fishing is not perceived as a great threat to California's marine waters, habitat, and fisheries: only 5% rate it as a high threat, while 66% say it is a low threat or not a threat at all. Furthermore, 76% disagree that people who recreationally fish in California are harming the ocean's fisheries (only 16% agree). On the other hand, the opportunity to be able to recreationally fish is perceived as important (even if the respondent does not personally fish himself or herself): an overwhelming majority (88%) rate ensuring that the opportunity exists at the midpoint or higher in the rating scale, and 29% rate it 10.

- Disagreement (59%) far exceeds agreement (32%) for a complete ban of fishing, *both commercial and recreational*, if scientific evidence shows that fish populations are declining. However, agreement is higher if *recreational* fishing is allowed while *commercial* fishing is still banned, if scientific evidence shows that fish populations are declining: 50% agree and 40% disagree.
- An overwhelming majority of Californians (84%) agree that the State of California and local governments should work to keep charter boat opportunities available to the public, given that charter boat businesses provide opportunities to people who otherwise would not be able to boat because they cannot afford a boat of their own.

### CONCERNS REGARDING FAMILY-RUN BUSINESSES IN CALIFORNIA

- Californians express much concern about the health of small family-run businesses: a quarter rate their concern about this at 10 (on a 0 to 10 scale), and the overwhelming majority (87%) rate their concern at the midpoint or higher. Compare this to their ratings of concern about large corporations in California: only 14% rate their concern about large corporations at 10, and 67% rate their concern at the midpoint or higher.
- Californians indicate a desire that family-run fishing boats can work and harvest fish sustainably in California. When asked how important it is to them that they know that family-run fishing boats can harvest fish sustainably in California, 80% to 84% give a rating at the midpoint or higher (note that one question asked part of the sample about family-run *commercial* fishing boats and the other asked a different part of the sample about family-run fishing boats without the term “commercial,” and there was no marked difference in the two results).
- Californians indicate that they care that family-run commercial fishing boats operate in California’s waters. Only 23% of seafood consumers (those who consume seafood at least once a month) agree that they would be willing to forgo buying California seafood knowing that doing so would drive family-run commercial fishing boats in California out of business; 63% disagree.

- More Californians oppose (38%) than support (27%) adding additional fishing restrictions to California coastal waters if it means that family-run commercial fishing boats may go out of business. As a demonstration of the difficulty in making this choice, nearly a third answered this question with “don’t know” (29%).
- When asked directly whether family-run commercial fishing boats are harming the ocean’s fisheries, the majority of Californians (55%) disagree, while 29% agree.
- Finally, the survey asked Californians what exactly they think of when the term, “commercial fishing,” is applied to California, and family-run commercial fishing boats are not primarily on their mind, as 59% think primarily of large foreign factory ships or large U.S. corporations, and only 28% think primarily of small family-run fishing boats.

#### **OPINIONS ON FISH CONSUMPTION AND ITS EFFECTS ON CALIFORNIA’S COASTAL FISHERIES**

- Californians show concern both for having their seafood harvested sustainably as well as for ensuring that California’s seafood industry not be unduly harmed. The survey asked seafood consumers (those who typically eat seafood at least once a month) five questions about their opinions on harvesting of seafood. Overwhelming majorities agree that it matters to them that local seafood is harvested sustainably (86% agree) and that imported seafood is harvested sustainably (79% agree). They also overwhelmingly agree (82%) that they would buy California seafood over imported seafood when informed that California currently has more conservation safeguards in place than exist in most other countries. Seafood consumers show concern about California’s fishing industry, with less than a majority agreeing that they would be willing to buy their seafood only from international markets to put the highest priority on protecting California’s fisheries (37%), and even less than that saying that they would be willing to buy their seafood from non-California sources if they knew that doing so would likely force many family-run commercial fishermen out of business in California (23%). Regarding this last question, 63% disagree that they would be willing to buy their seafood from non-California sources if they knew that doing so would likely force many family-run commercial fishermen out of business in California.

- Interestingly, while the majority of seafood consumers in California agree that large corporate commercial fishing companies in California are harming the ocean's fisheries (59%), less than half that amount agree that people who consume frozen, packaged seafood from large supermarket chains are harming the ocean's fisheries (27%).
- The overwhelming majority of Californians (91%) are not vegetarian, while 5% are vegetarian but not vegan, and 3% are vegan. Those who are not vegan were asked how often they purchase seafood, with the large majority of them (57% of non-vegans) consuming seafood at least once a week. Interestingly, in a follow-up question, half of those who consume seafood do not know if any of the seafood they consume is harvested in California's waters; 38% indicated that some of the seafood is harvested in California's waters.
- When asked to name commercially fished species off the coast of California, respondents most commonly named salmon (34%), tuna (28%), halibut (16%), and bass (13%). Note that 40% could not name a species. In a follow-up question asking if any of the named species is in trouble, salmon, tuna, and abalone are most commonly named.



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## **INTRODUCTION AND METHODOLOGY**

This study was conducted for the Alliance of Communities for Sustainable Fisheries (ACSF) to determine Californians' opinions on and attitudes toward commercial and recreational fishing in coastal areas of California, the ecological health of California's coastal fisheries and wildlife, and fisheries and wildlife management along the coast. The study entailed a telephone survey of California residents 18 years old and older. Specific aspects of the research methodology are discussed below.

For the survey, telephones were selected as the preferred sampling medium because of the universality of telephone ownership. In addition, a central polling site at the Responsive Management office allowed for rigorous quality control over the interviews and data collection. Responsive Management maintains its own in-house telephone interviewing facilities. These facilities are staffed by interviewers with experience conducting computer-assisted telephone interviews on the subjects of natural resources and outdoor recreation. The telephone survey questionnaire was developed cooperatively by Responsive Management and people associated with the ACSF. Responsive Management conducted a pre-test of the questionnaire, and revisions were made to the questionnaire based on the pre-test.

To ensure the integrity of the telephone survey data, Responsive Management has interviewers who have been trained according to the standards established by the Council of American Survey Research Organizations. Methods of instruction included lecture and role-playing. The Survey Center Managers and other professional staff conducted project briefings with the interviewers prior to the administration of this survey. Interviewers were instructed on type of study, study goals and objectives, handling of survey questions, interview length, termination points and qualifiers for participation, interviewer instructions within the survey instrument, reading of the survey instrument, skip patterns, and probing and clarifying techniques necessary for specific questions on the survey instrument. The Survey Center Managers and statisticians monitored the data collection, including monitoring of the actual telephone interviews without the interviewers' knowledge, to evaluate the performance of each interviewer and ensure the integrity of the data. After the surveys were obtained by the interviewers, the Survey Center Managers and/or statisticians edited each completed survey to ensure clarity and completeness.

Interviews were conducted Monday through Friday from 9:00 a.m. to 9:00 p.m., Saturday noon to 5:00 p.m., and Sunday from 5:00 p.m. to 9:00 p.m., local time. A five-callback design was used to maintain the representativeness of the sample, to avoid bias toward people easy to reach by telephone, and to provide an equal opportunity for all to participate. When a respondent could not be reached on the first call, subsequent calls were placed on different days of the week and at different times of the day. The survey was conducted in March 2007. Responsive Management obtained a total of 801 completed interviews.

The software used for data collection was Questionnaire Programming Language 4.1 (QPL). The survey data were entered into the computer as each interview was being conducted, eliminating manual data entry after the completion of the survey and the concomitant data entry errors that may occur with manual data entry. The survey instrument was programmed so that QPL branched, coded, and substituted phrases in the survey based on previous responses to ensure the integrity and consistency of the data collection. The analysis of data was performed using Statistical Package for the Social Sciences software as well as proprietary software developed by Responsive Management.

Throughout this report, findings of the telephone survey are reported at a 95% confidence interval. For the entire sample of California residents 18 years old and older, the sampling error is at most plus or minus 3.46 percentage points. This means that if the survey were conducted 100 times on different samples that were selected in the same way, the findings of 95 out of the 100 surveys would fall within plus or minus 3.46 percentage points of each other. Sampling error was calculated using the formula described on the following page, with a sample size of 801 and a population size of 25,623,626 California residents 18 years old and older.

**Sampling error equation:**

$$B = \left( \sqrt{\frac{N_p(.25)}{N_s} - .25} \right) (1.96)$$

Where: B = maximum sampling error (as decimal)  
 N<sub>P</sub> = population size (I.e., total number who could be surveyed)  
 N<sub>S</sub> = sample size (I.e., total number of respondents surveyed)

Derived from formula: p. 206 in Dillman, D. A. 2000. *Mail and Internet Surveys*. John Wiley & Sons, NY.

**Note:** This is a simplified version of the formula that calculates the maximum sampling error using a 50:50 split (the most conservative calculation because a 50:50 split would give maximum variation).

Note that some results may not sum to exactly 100% because of rounding. Additionally, rounding on the graphs may cause apparent discrepancies of 1 percentage point between the graphs and the reported results of combined responses (e.g., when “strongly support” and “moderately support” are summed to determine the total percentage in support).

A note about the layout of the report: some graphs pertain to more than one section, so these graphs are discussed in more than one section of the report. In addition, some of these graphs are shown in multiple sections of the report to facilitate readability. In other instances, a graph may be discussed in more than one section, but the graph is only shown in one section, with a call-out in the other section indicating where the graph is located.

## PERCEPTION OF ISSUES FACING CALIFORNIA AND ITS ENVIRONMENT

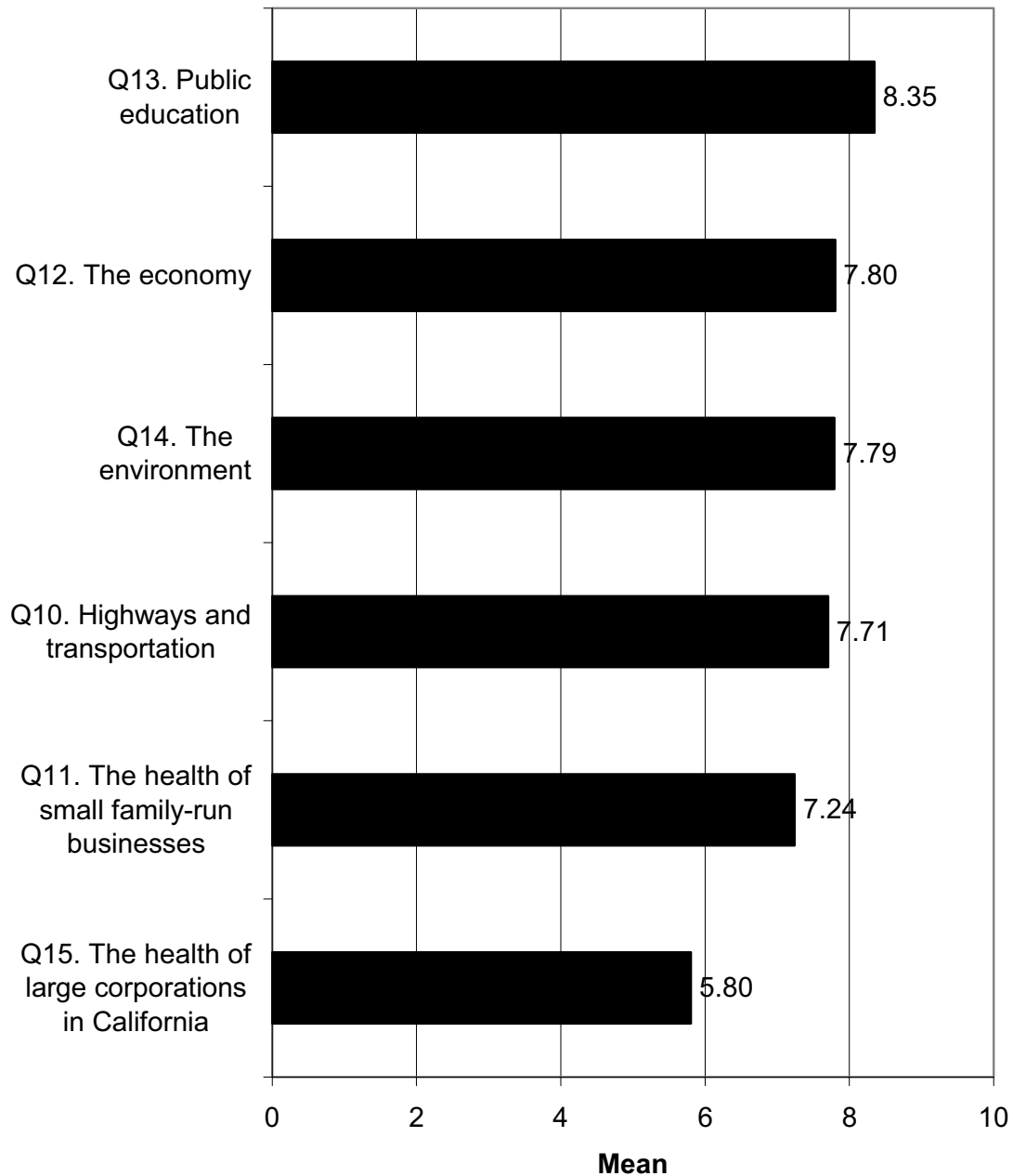
- The survey sought to determine Californians' concerns about the health of small family-run businesses versus the health of large corporations in California, as well as the level of concern for both of these relative to other issues facing California. The survey found that concern about small family-run businesses is much higher than concern about the health of large corporations. In the overall findings, concern about the health of small family-run businesses is just about equal to concern about highways and transportation. Overall, public education is the top concern.
  - The mean rating of concern (on a scale of 0 to 10, where 0 is not at all concerned and 10 is extremely concerned) for the health of small family-run businesses is 7.24, compared to a mean of 5.80 for large corporations in California. (Public education had a mean of 8.35.) While 25% rated their concern about the health of small family-run businesses at a 10, only 14% gave a similar rating for their concern about the health of large corporations in California. (At the top, 47% rated their concern about public education as a 10.)
- The survey asked respondents to rate six possible threats to California's marine waters, habitat, and fisheries. By far, water pollution in the ocean and coastal waters is perceived as the worst threat, with 72% of Californians saying it is a high threat. Nonetheless, corporate commercial fishing companies are also seen as a significant threat (29% rate them collectively as a high threat), second in the ranking of the six potential threats. In contrast, family-run commercial fishing boats (10% rate them as a high threat) and the sport of recreational fishing (5%) are not perceived as significant threats, being last in the ranking.
- California residents do not perceive the ecological health of California's natural resources positively. The mean ratings of ecological health (on a scale of 0 to 10, where 0 is not at all healthy and 10 is very healthy) of the various natural resources range from 4.78 for the ecological health of California's coastal fisheries (the last ranked) to 6.14 for the ecological health of California's forests (the top ranked). Perhaps more telling, no more than 12% gave any of the resources a rating 9 or 10 in health. Furthermore, for water and water-related



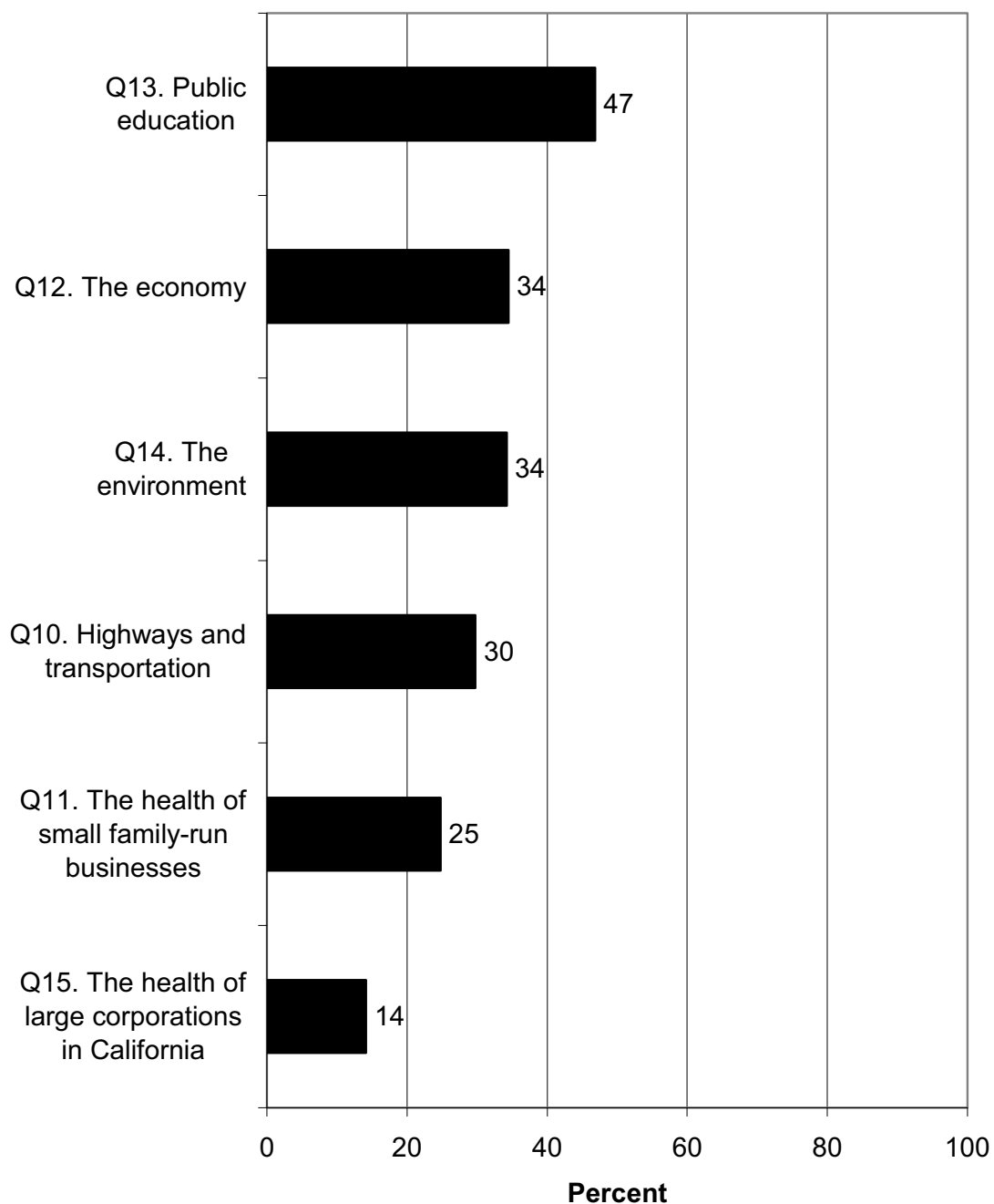
resources (California's rivers and streams, its coastal fisheries, and its bays and estuaries), approximately a third of respondents rated the ecological health below the midpoint.

- In the ranking of these six resources, California's forests are perceived as the most healthy, and its coastal fisheries are perceived as the most unhealthy (however, note that all ratings are fairly close to each other).

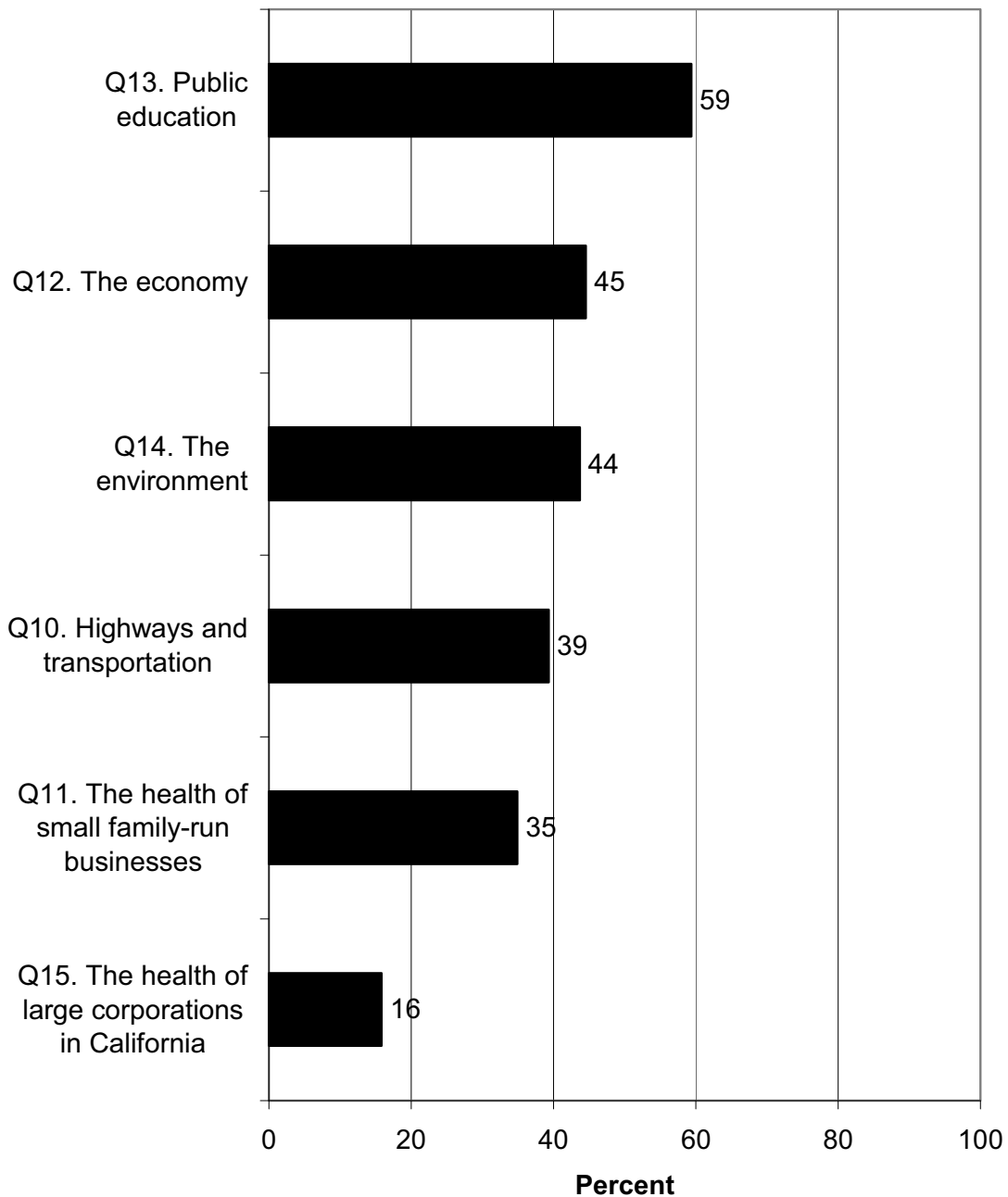
**Q10-15. Mean ratings regarding their concern about each of the following issues that California faces. (Don't know responses removed.)**



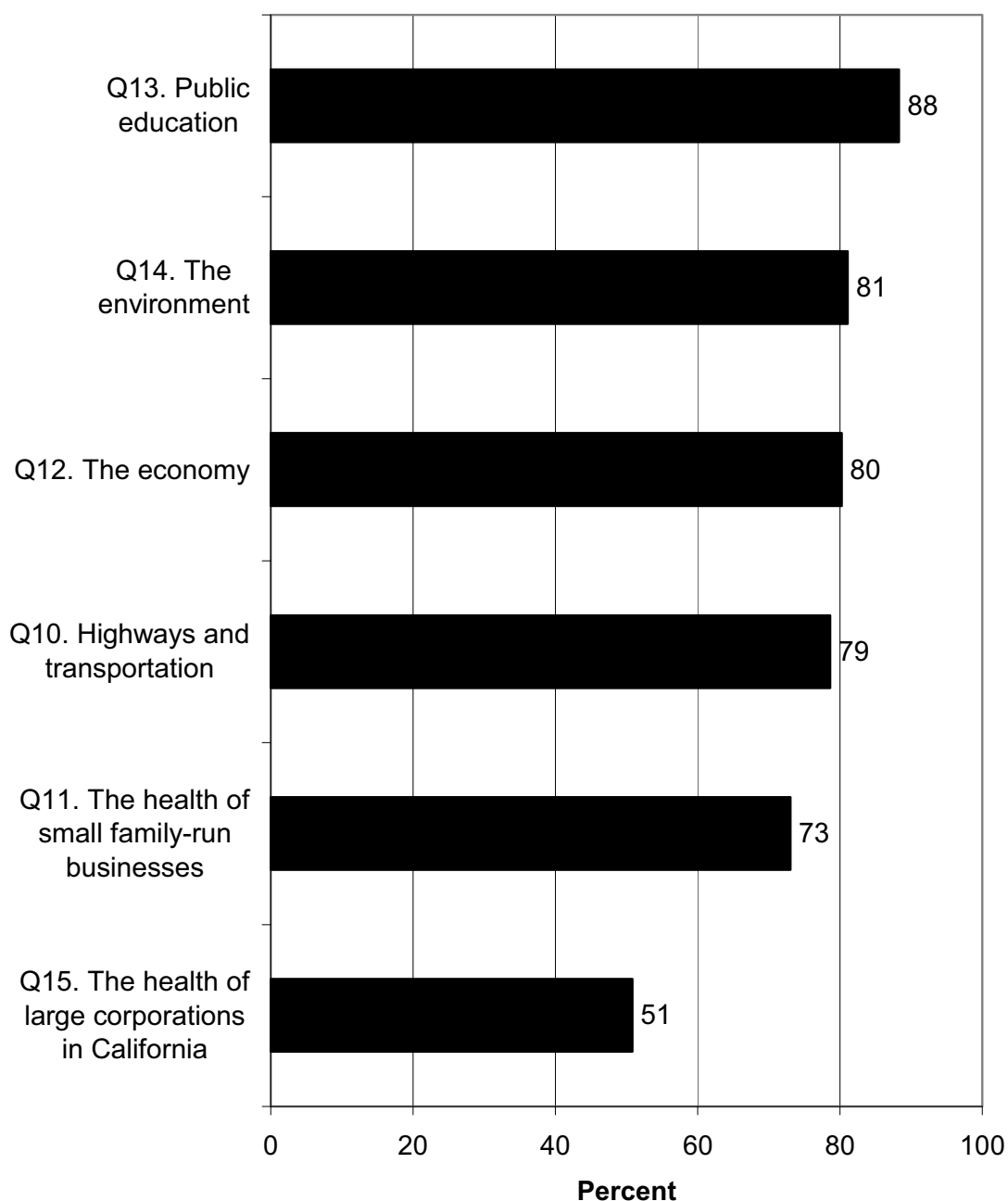
**Q10-15. Percent giving a rating of 10 regarding their concern about each of the following issues that California faces.**



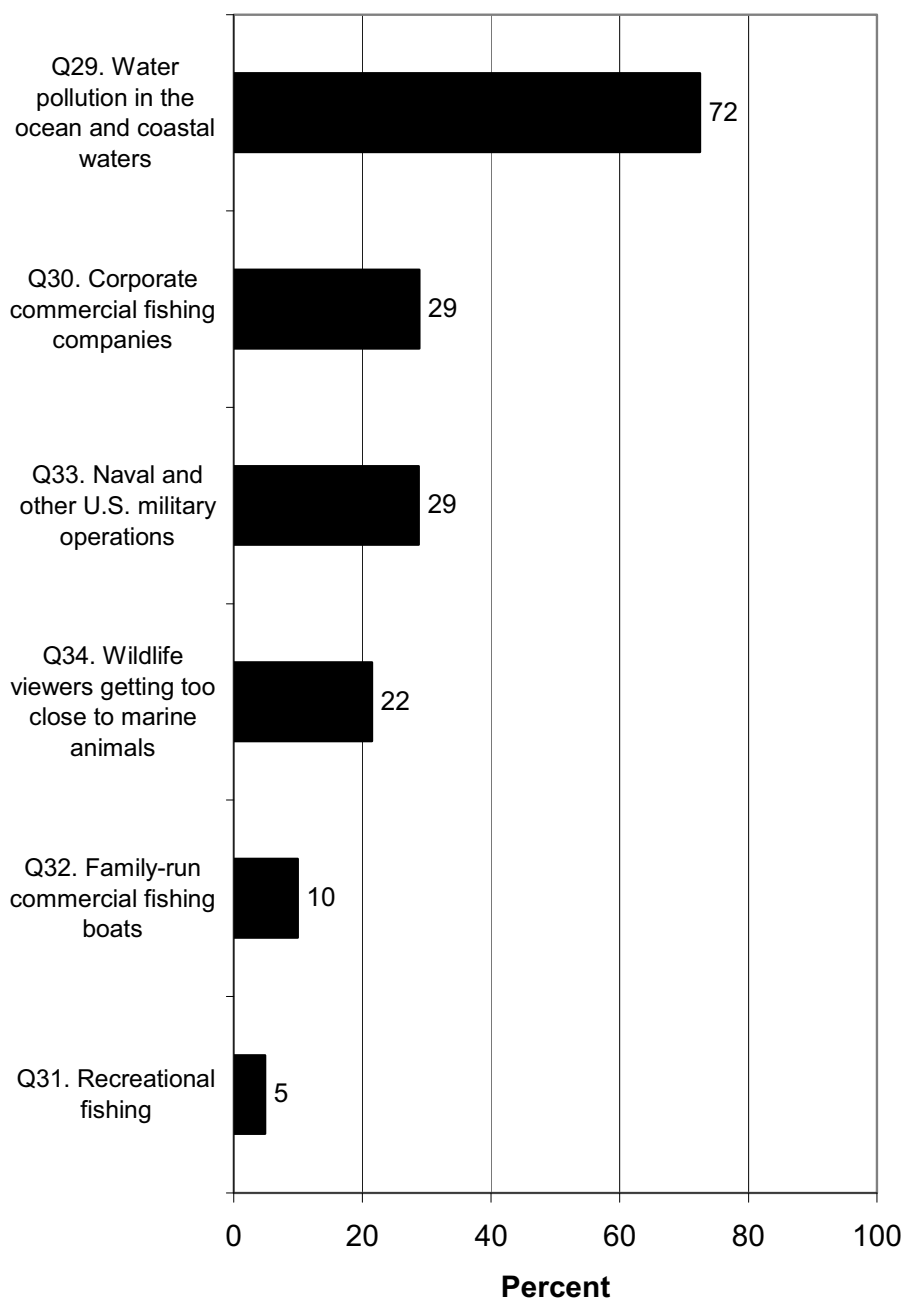
**Q10-15. Percent giving a rating of 9 or 10 regarding their concern about each of the following issues that California faces.**



**Q10-15. Percent giving a rating of greater than the midpoint (5) regarding their concern about each of the following issues that California faces.**

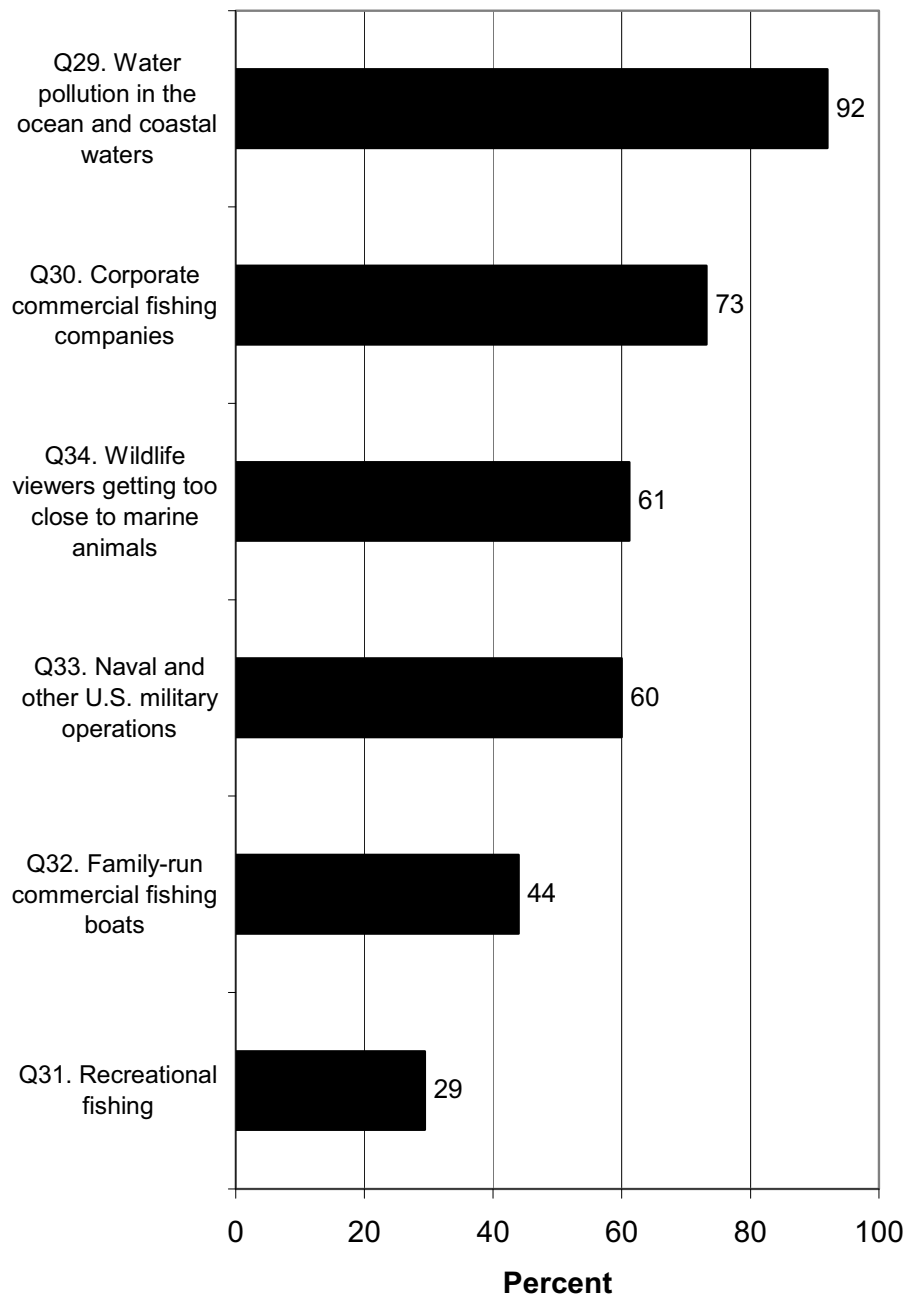


**Q29-34. Percent saying that each of the following is a high threat to California's marine waters, habitat, and fisheries.**

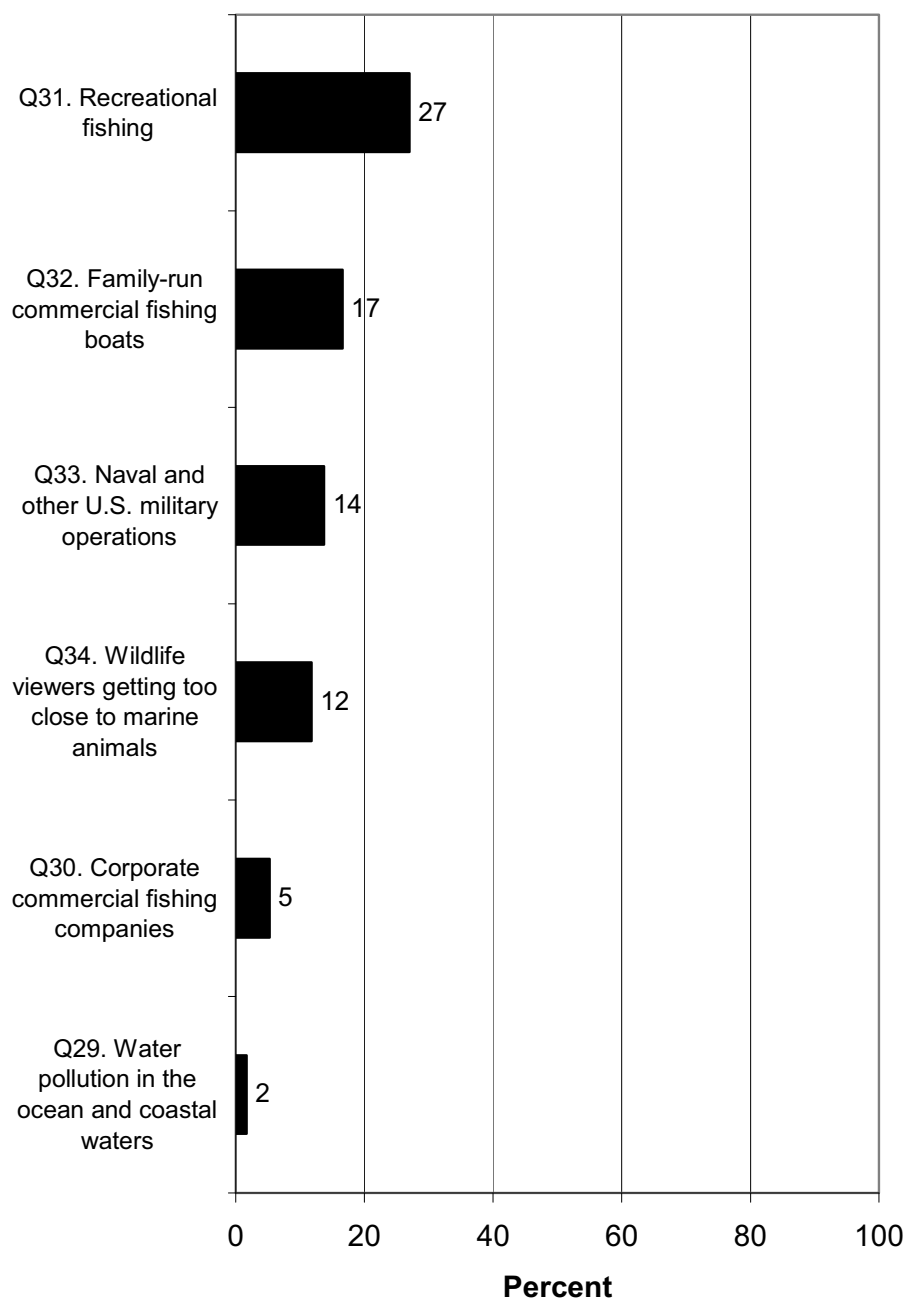




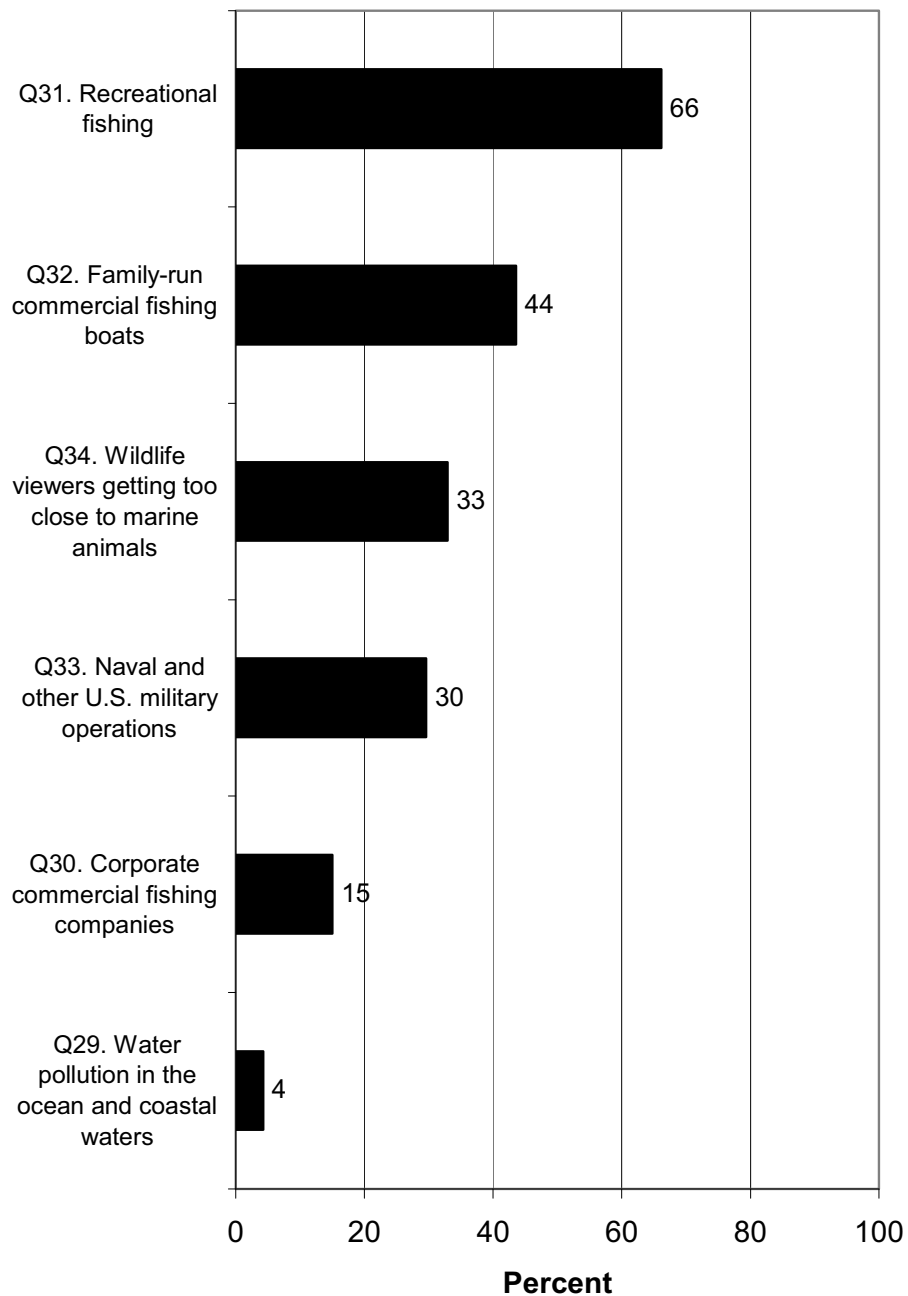
**Q29-34. Percent saying that each of the following is a high or moderate threat to California's marine waters, habitat, and fisheries.**



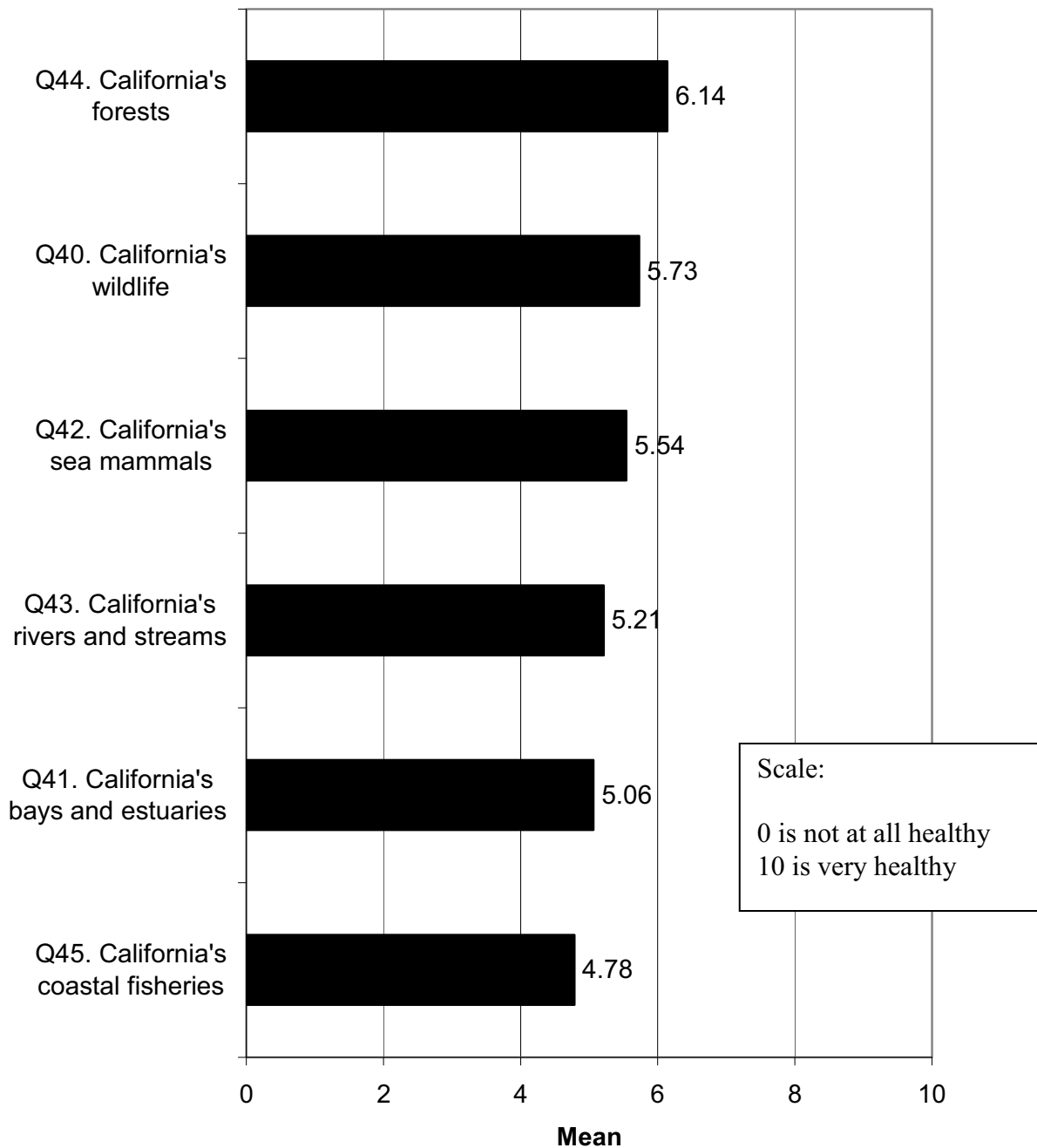
**Q29-34. Percent saying that each of the following is not a threat at all to California's marine waters, habitat, and fisheries.**



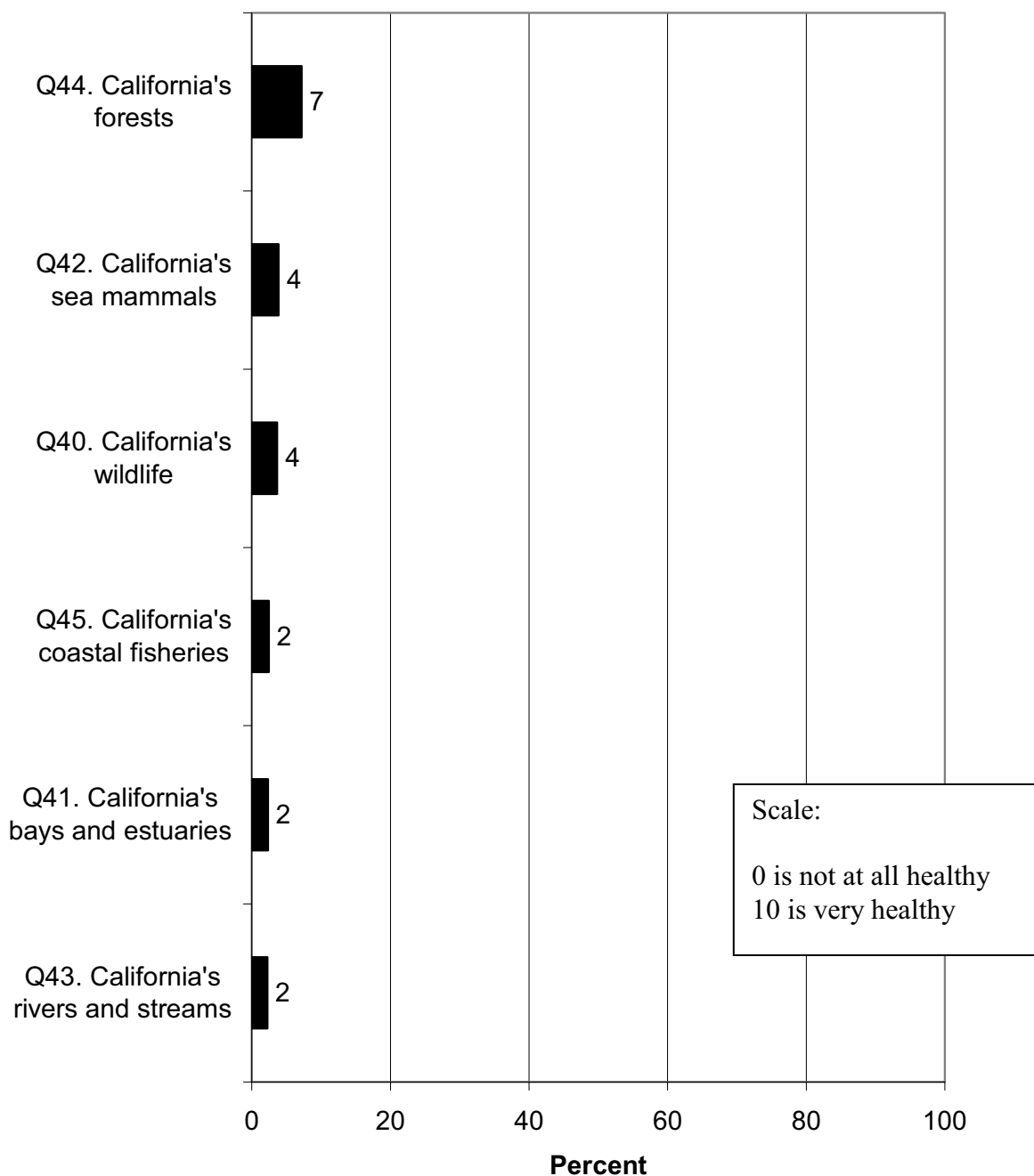
**Q29-34. Percent saying that each of the following is a low threat or not a threat at all to California's marine waters, habitat, and fisheries.**



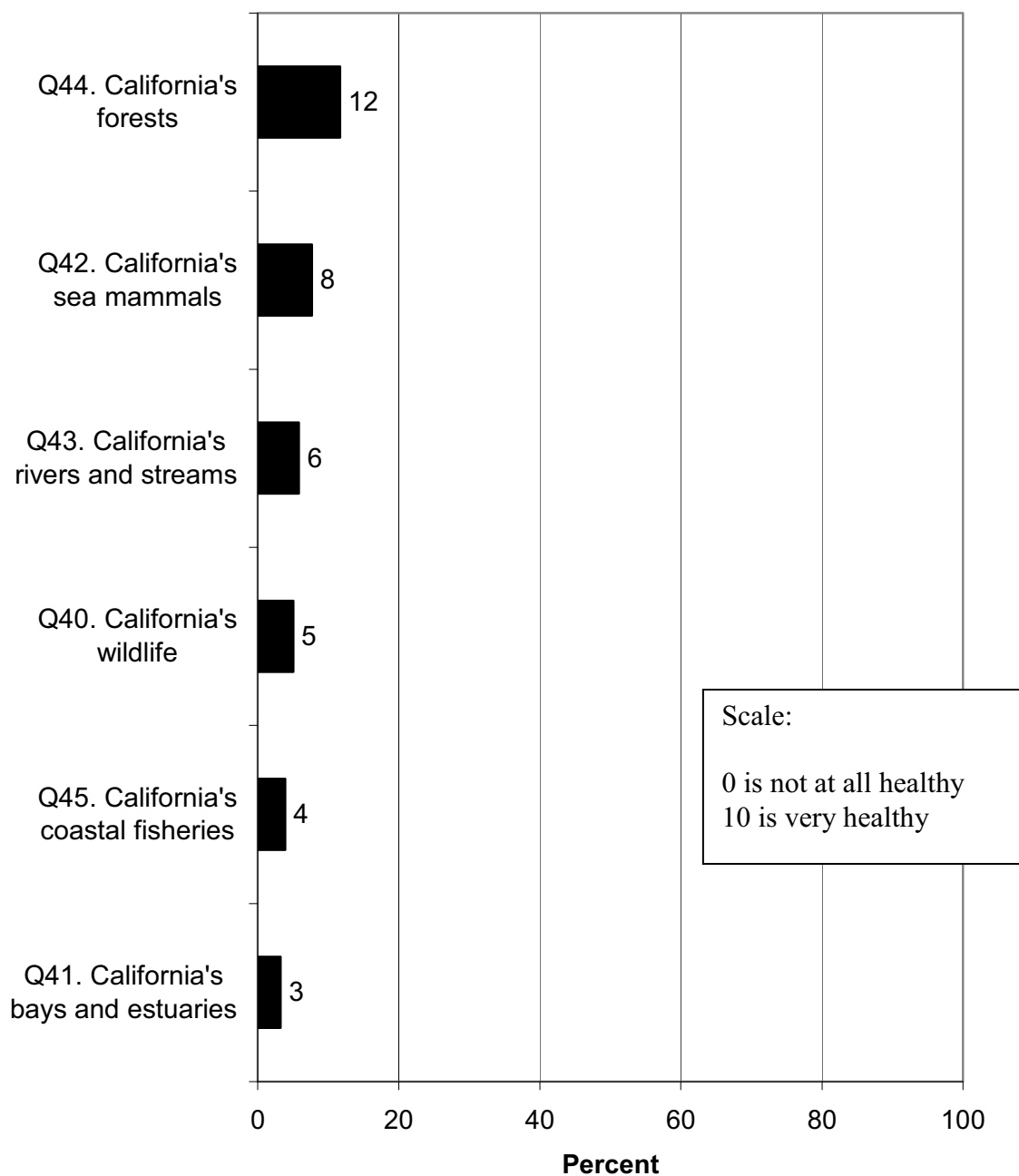
**Q40-45. Mean ratings of the ecological health of each of the following. (Don't know responses removed.)**



**Q40-45. Percent rating the ecological health of each of the following as a 10.**

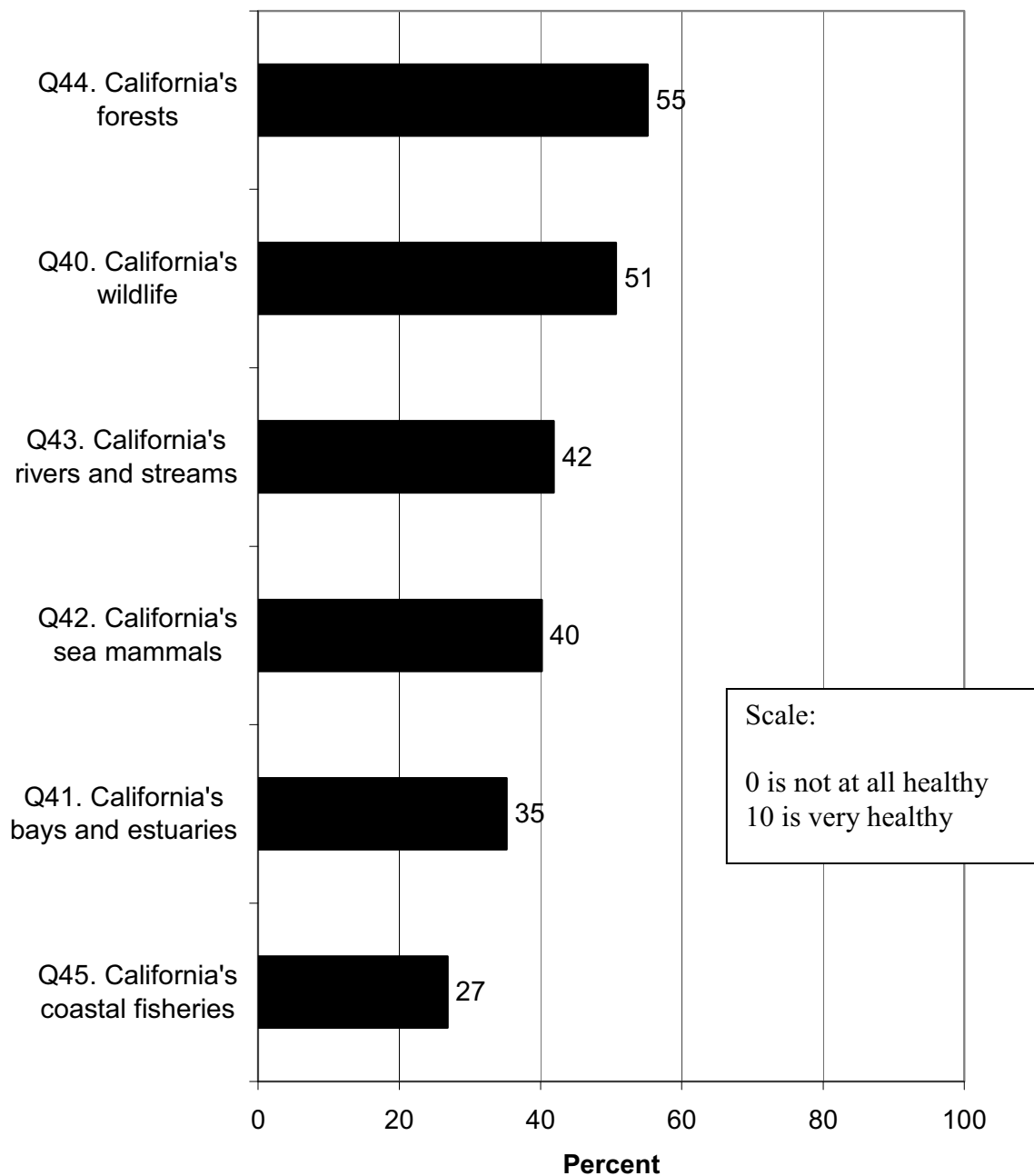


**Q40-45. Percent rating the ecological health of each of the following as a 9 or 10.**

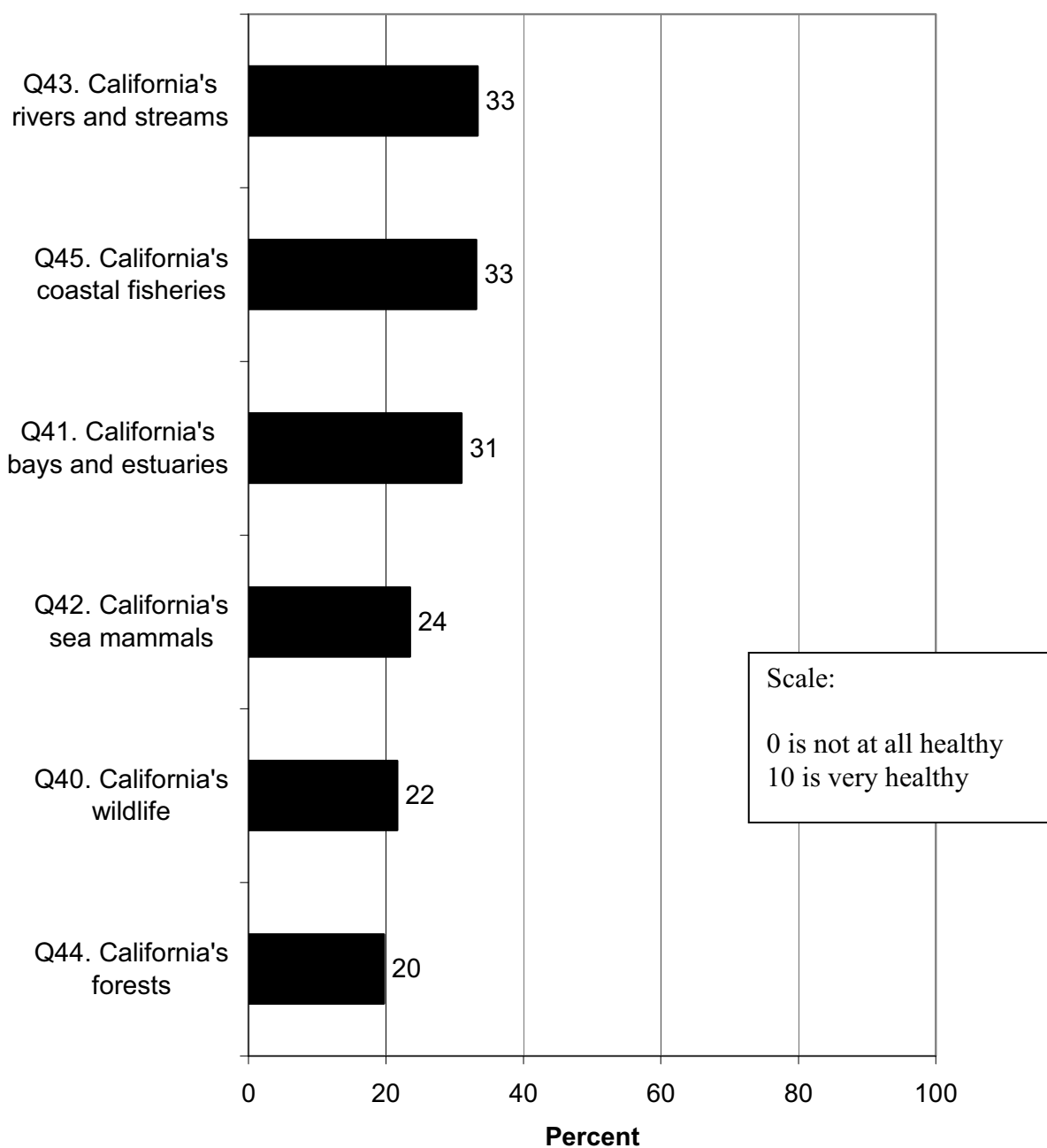




**Q40-45. Percent rating the ecological health of each of the following as greater than the midpoint (5).**



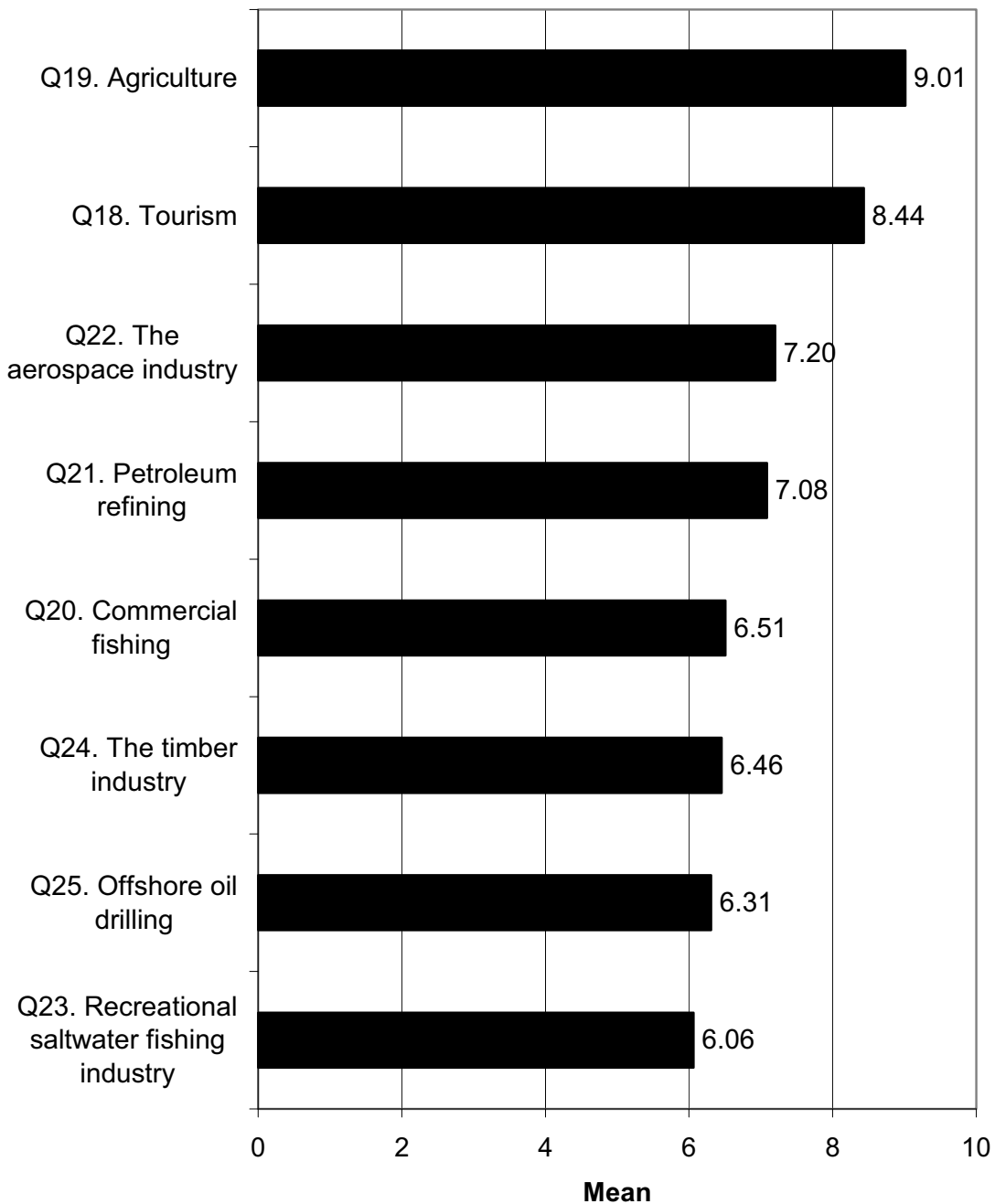
**Q40-45. Percent rating the ecological health of each of the following as less than the midpoint (5).**



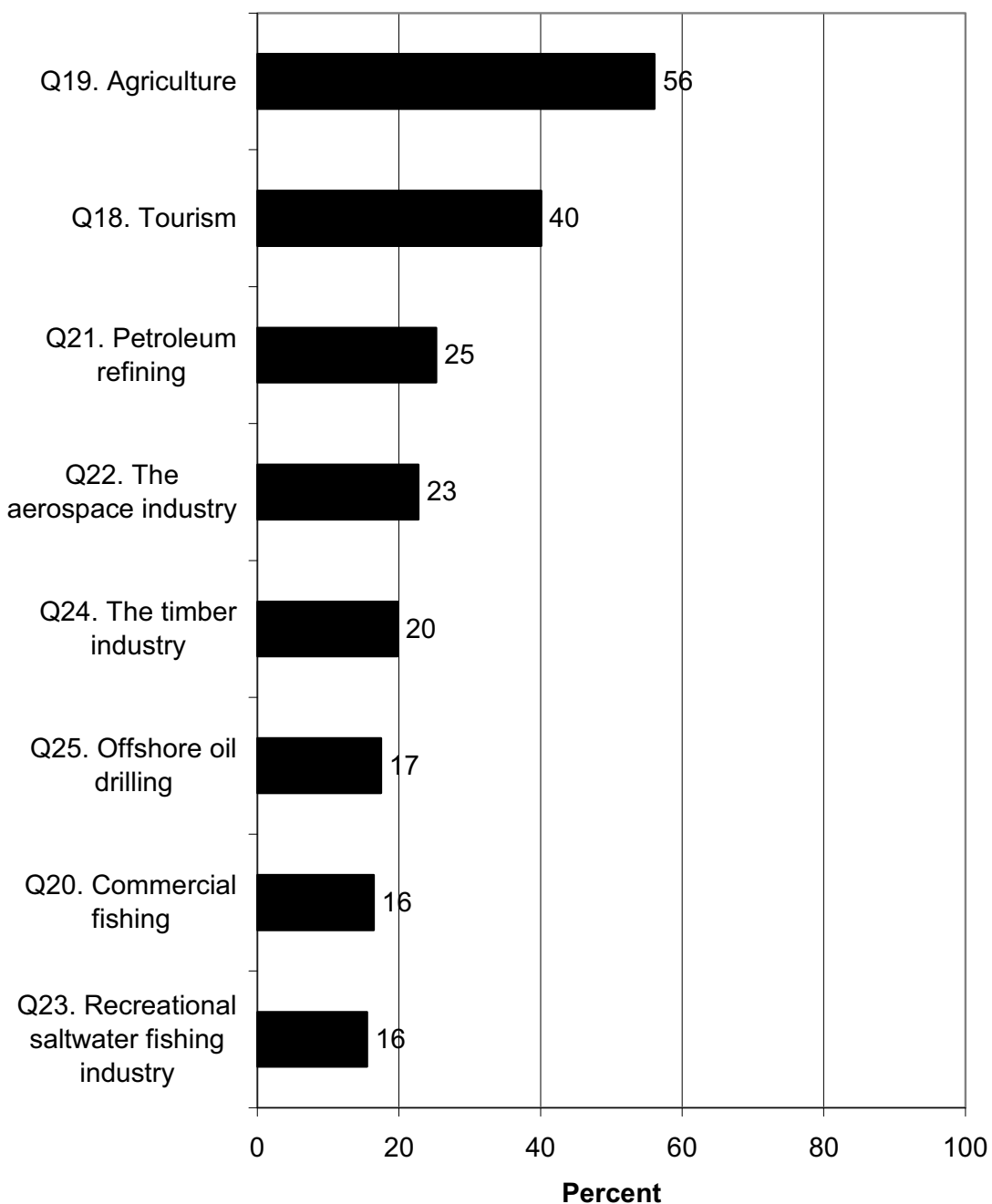
## **PERCEPTION OF IMPORTANCE OF VARIOUS INDUSTRIES TO CALIFORNIA'S ECONOMY**

- The survey sought to gauge Californians' perceptions of the importance of various industries to California's economy. By far, agriculture and tourism are perceived as the most important (mean ratings of importance of 9.01 and 8.44, respectively). Commercial fishing is in the middle of the eight industries about which the survey asked (mean of 6.51), below the aforementioned top two as well as the aerospace industry and petroleum refining, but above the timber industry, offshore oil drilling, and the recreational saltwater fishing industry.

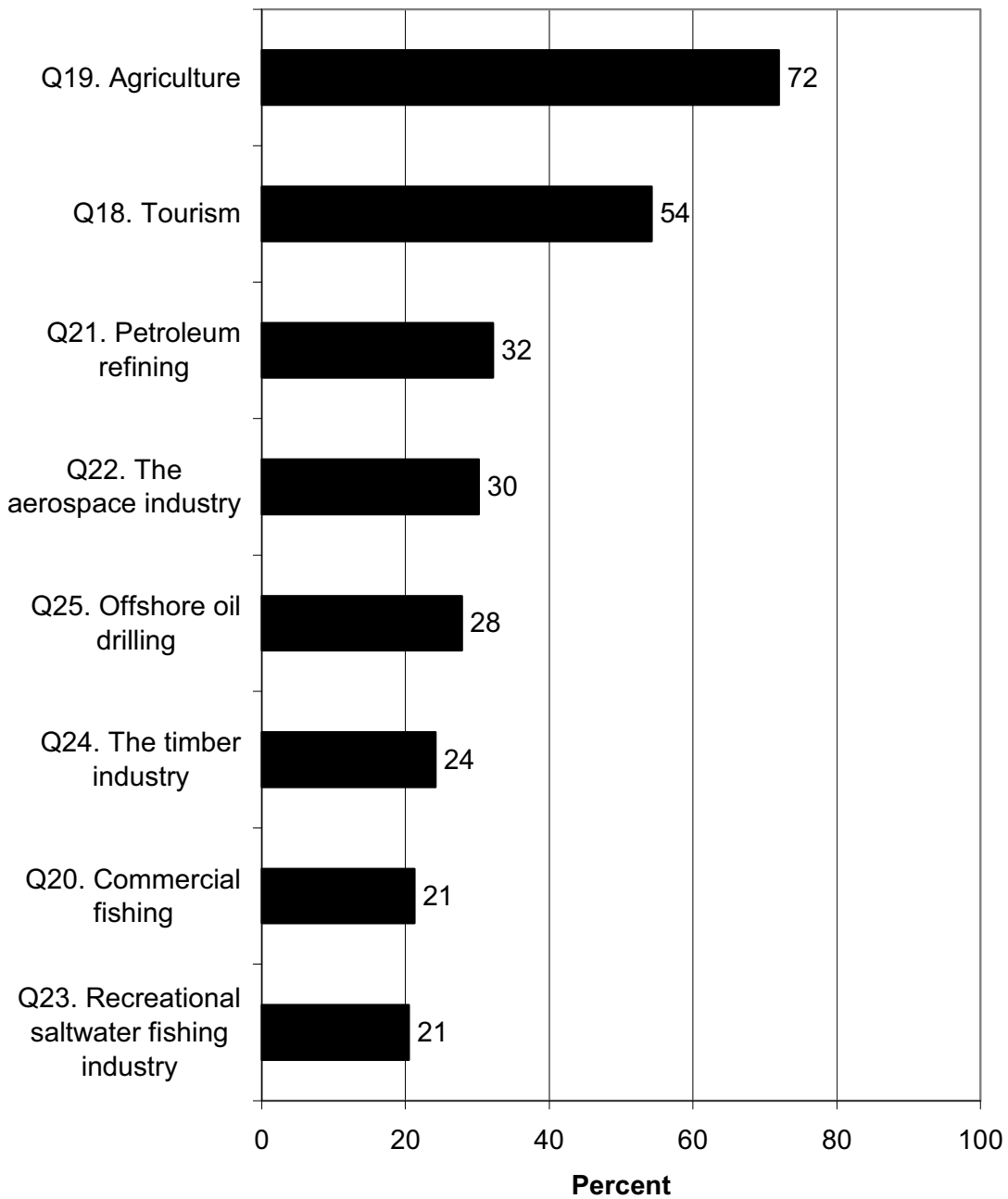
**Q18-25. Mean ratings of importance of the following industries for California's economy. (Don't know responses removed.)**



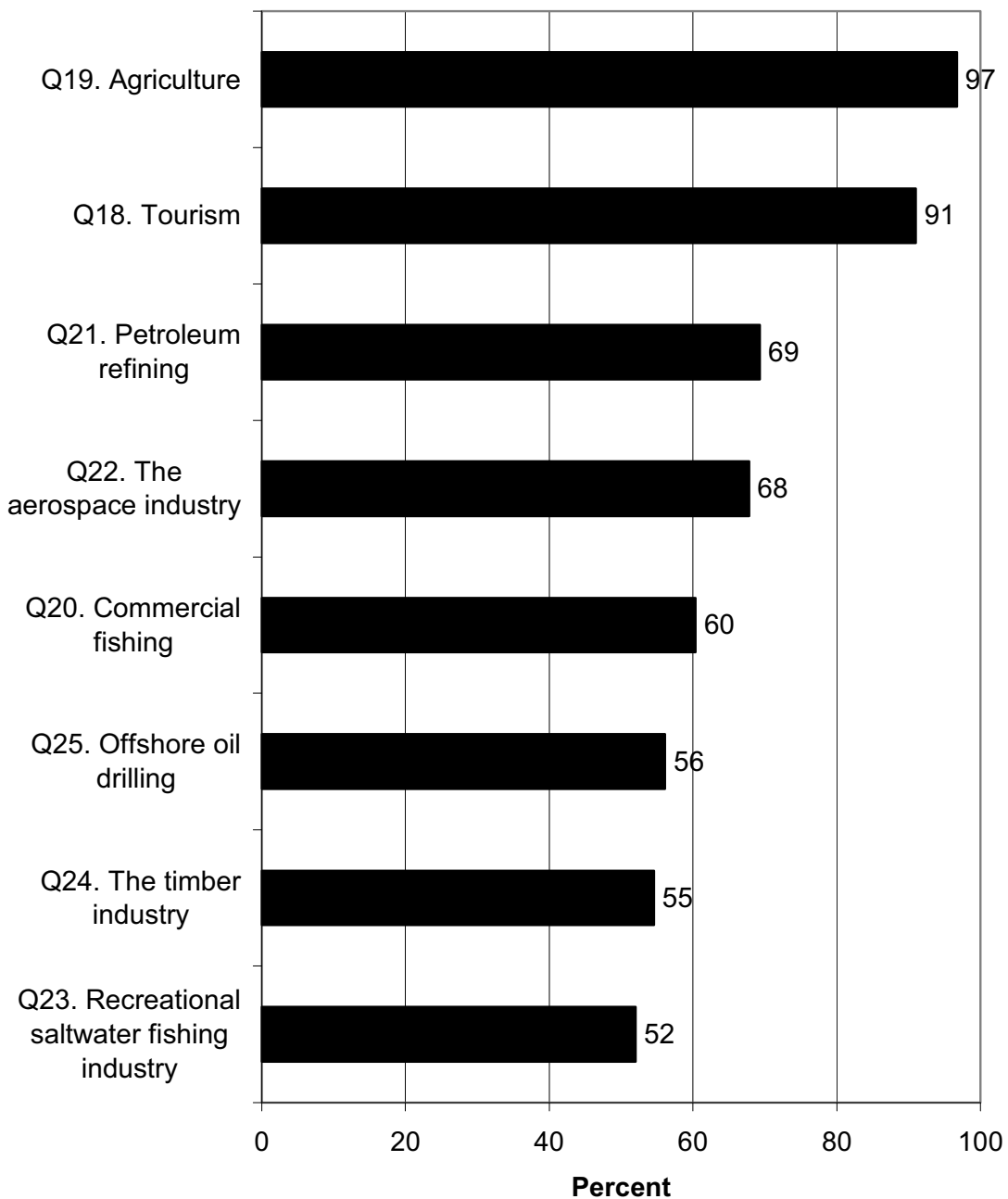
**Q18-25. Percent giving a rating of 10 in importance of the following industries for California's economy.**



**Q18-25. Percent giving a rating of 9 or 10 in importance of the following industries for California's economy.**



**Q18-25. Percent giving a rating of greater than the midpoint (5) in importance of the following industries for California's economy.**





## **OPINIONS ON CALIFORNIA'S COASTAL FISHERIES AND MARINE WILDLIFE**

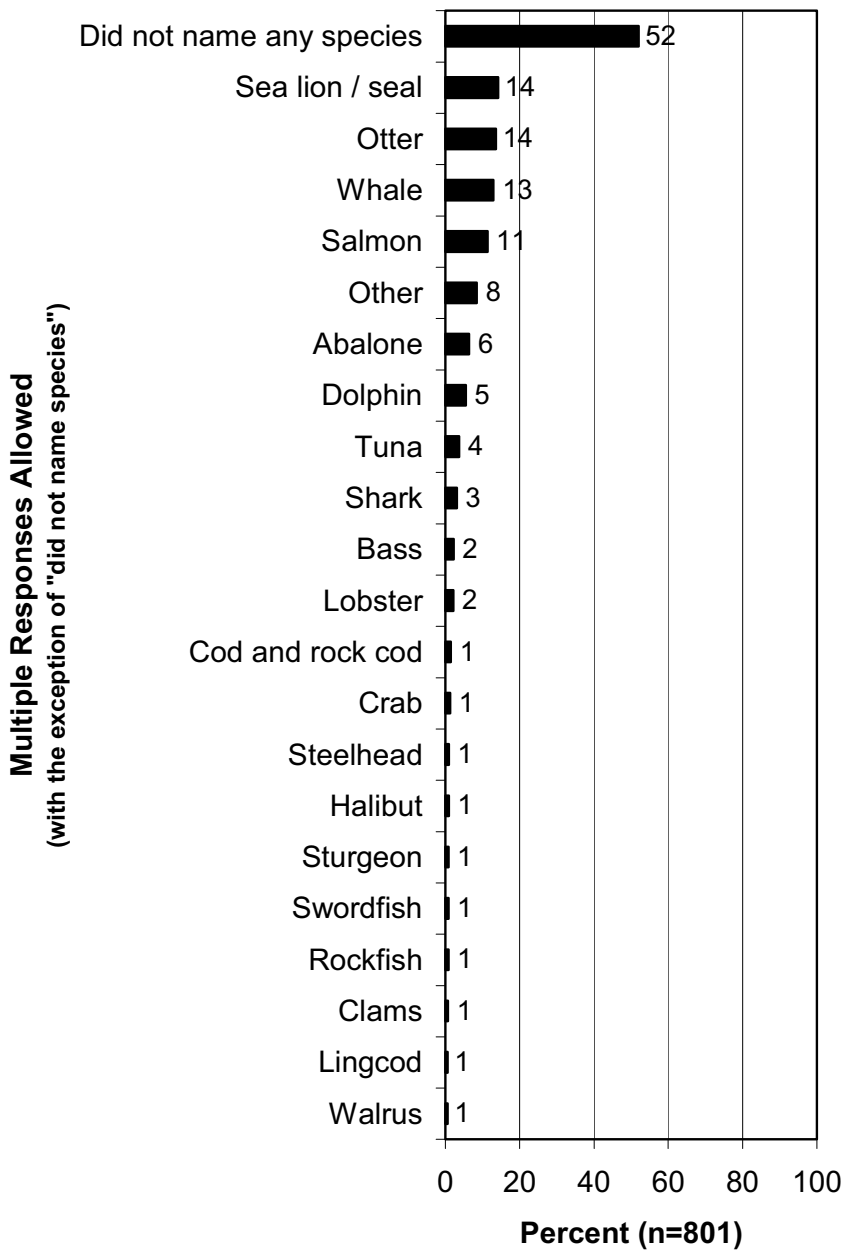
### **PERCEPTIONS OF ECOLOGICAL HEALTH OF FISHERIES AND MARINE WILDLIFE**

- Nearly half of California residents (48%) say that they can name a type of fish or sea mammal off the coast of California that is depleted, threatened, or endangered (note that some of these 48% named species that may not be depleted, threatened, or endangered, with a few naming species that do not exist in California, such as penguin or walrus; also note that “depleted, threatened, or endangered” was subjective, as the survey instructed interviewers to say, if the respondent asked about the definitions, “that you, personally feel are depleted, threatened, or endangered, regardless of any possible federal or state listing”). The most commonly named species are sea lion/seal, otter, whale, salmon, abalone, dolphin, tuna, and shark (all named by 3% or more).
  - When asked what is causing the species to be depleted, threatened, or endangered, the most commonly named culprits are pollution (25% of all respondents gave this answer) and overfishing or overhunting (19%). (Note that among those who named a species, 53% said pollution was causing the problem, and 41% said overfishing or overhunting.)
- In a direct question about the health of California's wildlife, ratings are for the most part in the middle, with 48% giving a rating of 4 through 6 (on a scale of 0 to 10, with 0 being not healthy at all and 10 being very healthy). Only 5% give a rating of 9 or 10.
- The results regarding the health of California's sea mammals are similar to the results reported above regarding California's wildlife: the ratings of the health of California's sea mammals are generally in the middle, with the peak at the midpoint (5). Furthermore, 48% gave a middle rating from 4 to 6, and only 8% gave a rating of 9 or 10 regarding the health of California's sea mammals.
- Again, the results regarding the health of California's coastal fisheries are similar to the results reported above regarding California's wildlife and sea mammals: the ratings of the health of California's coastal fisheries, in general, are generally in the middle, with the peak

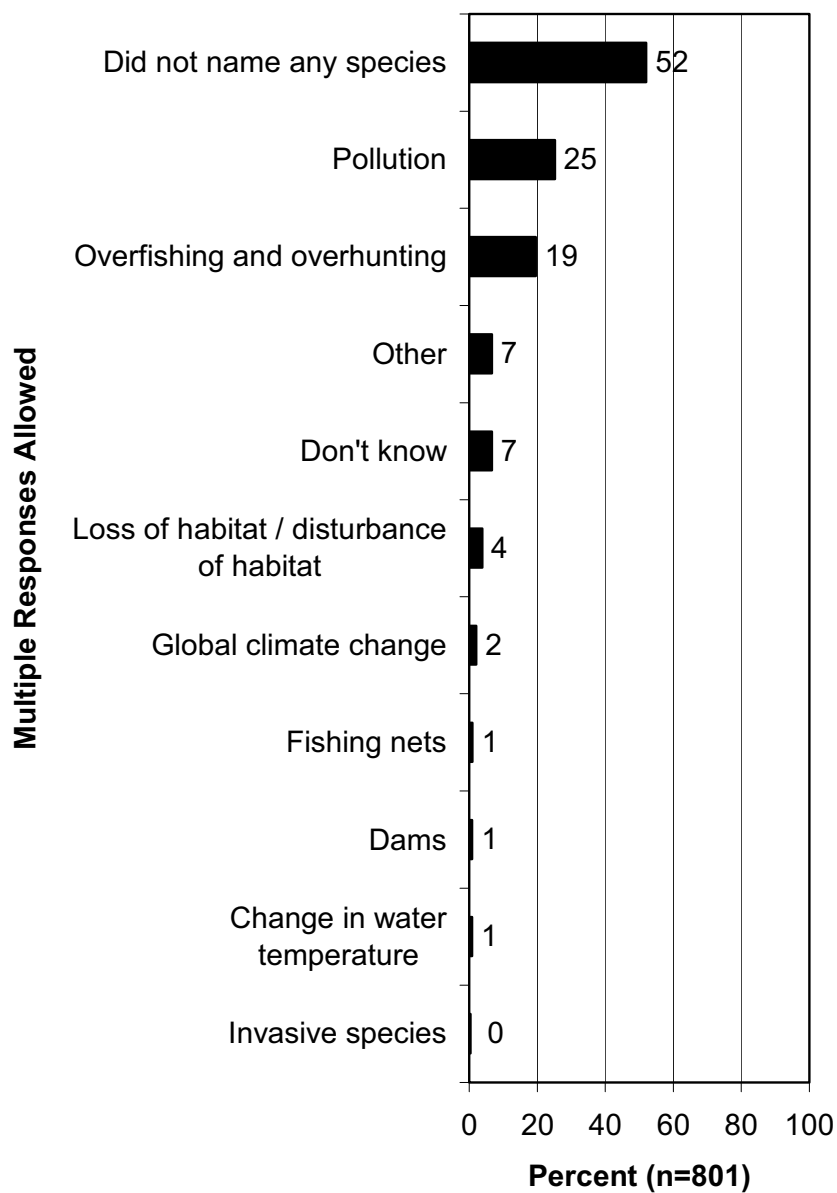
at the midpoint (5). Furthermore, 41% gave a middle rating from 4 to 6, and only 4% gave a rating of 9 or 10 regarding the health of California's coastal fisheries (the 4% does not appear to match the graph because of rounding).

- After asking respondents to name any types of fish that they could think of that are or were commercially fished in California's coastal waters, the survey asked them to indicate whether they think any of the types of fish they named are in trouble. Most commonly, respondents think that salmon, tuna, and abalone are in trouble. (This graph is shown in the section of this report titled, "Concerns Regarding Commercial Fishing in California.")

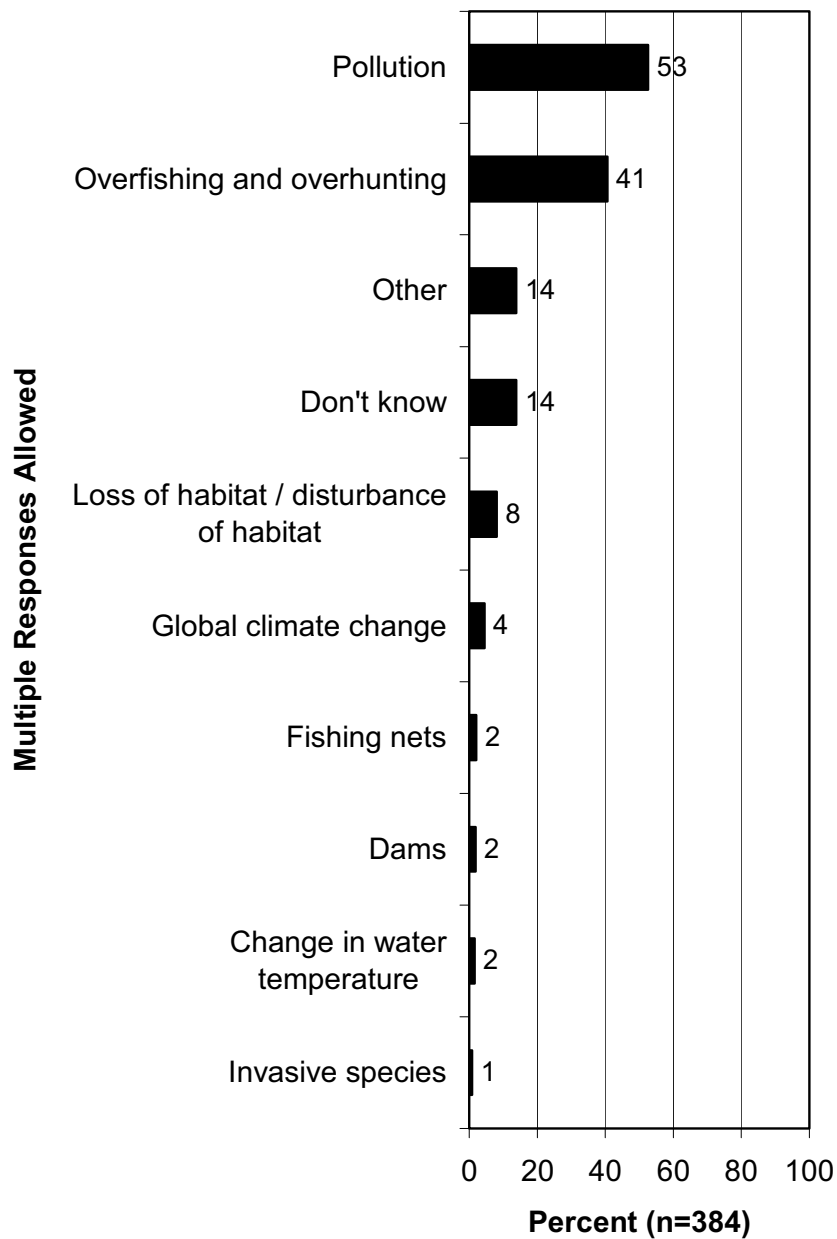
**Q35. Can you name any types of fish or sea mammals off the coast of California that are depleted, threatened, or endangered? Q36. If yes, what are they?**



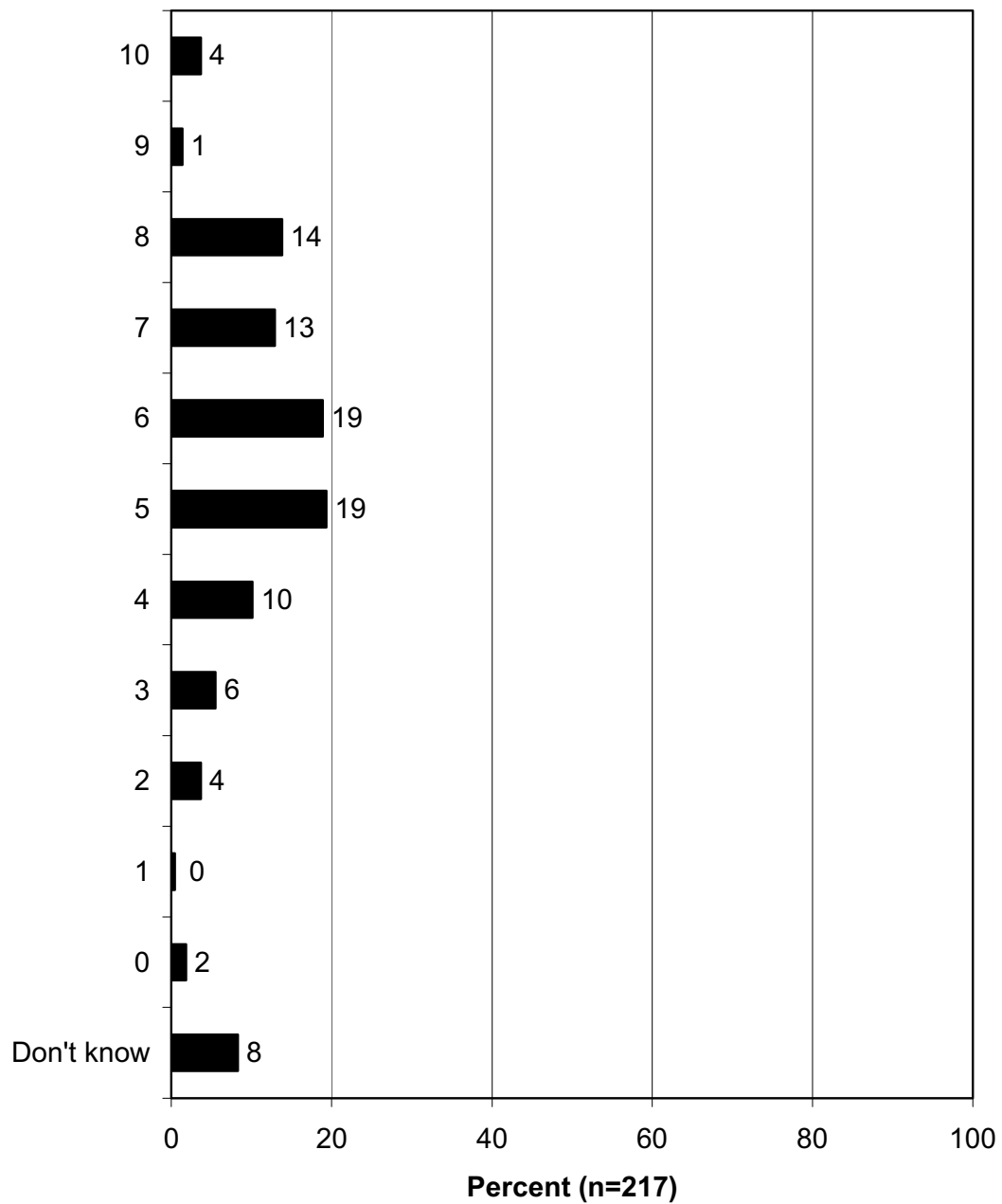
**(Follow-up to Q35. Can you name any types of fish or sea mammals off the coast of California that are depleted, threatened, or endangered? and Q36. If Yes, what are they?) Q37. What is causing them to be depleted, threatened, or endangered?**



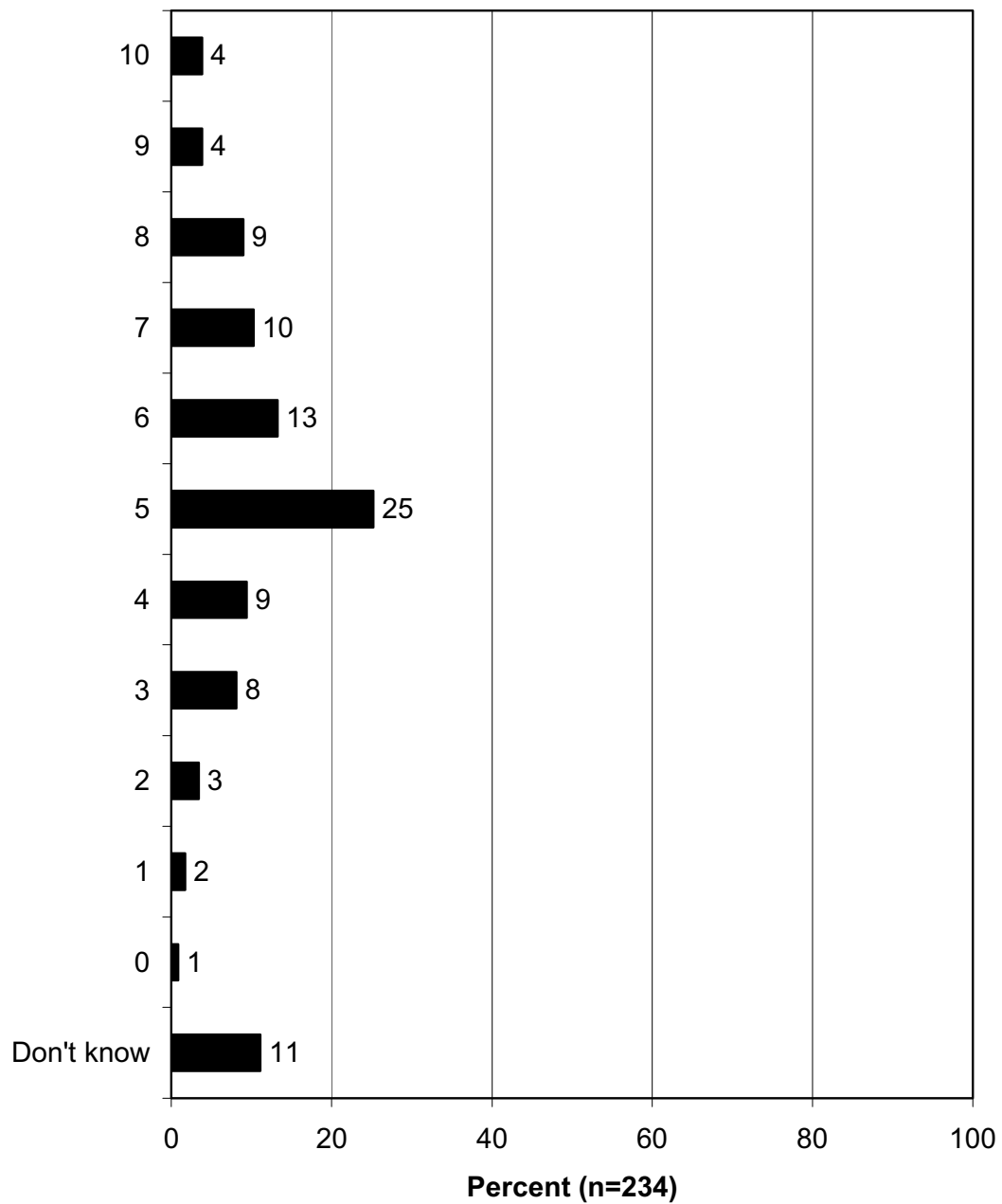
**Q37. What is causing them to be depleted, threatened, or endangered? (The types of fish or sea mammals you named off the coast of California that are depleted, threatened, or endangered.)**



**Q40. What about California's wildlife? (How healthy is this, on a scale of 0 to 10, where 0 is not healthy at all, and 10 is very healthy?)**

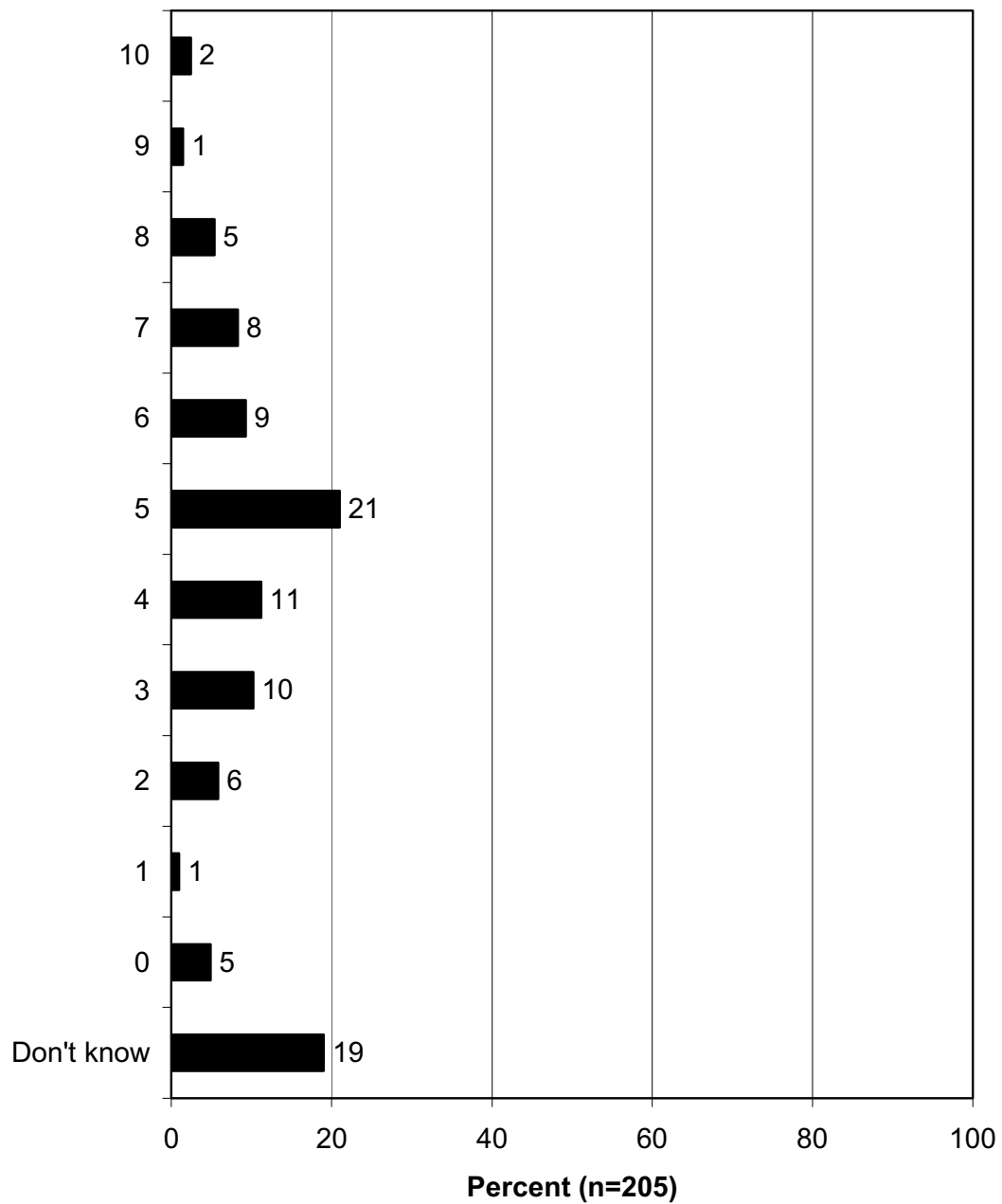


**Q42. What about California's sea mammals? (How healthy are these, on a scale of 0 to 10, where 0 is not healthy at all, and 10 is very healthy?)**





**Q45. What about California's coastal fisheries?  
(How healthy are these, on a scale of 0 to 10, where  
0 is not healthy at all, and 10 is very healthy?)**



## OPINIONS REGARDING UTILIZATION, HARVEST, AND MANAGEMENT OF FISHERIES

- The survey asked respondents to rate the importance of six values regarding coastal fisheries, on a scale of 0 to 10, where 0 is not important at all and 10 is extremely important. The highest mean rating was ensuring that California properly manages its coastal waters and coastal fisheries (8.31), markedly higher than the rest. However, knowing that fishermen can harvest fish sustainably from coastal waters in California (mean of 7.44) and that people have the opportunity to recreationally fish in coastal waters of California (mean of 7.42) were relatively important. At the bottom of the ranking were knowing that family-run commercial fishing boats can harvest fish sustainably and knowing that family-run fishing boats (without “commercial” in the term) can harvest fish sustainably (both with a mean of 6.93). Note, however, that even those at the bottom of the ranking have means above the midpoint.
  - These questions also tested respondents’ reaction to the term “commercial.” This was done by asking two sets of paired questions (part of the sample received one question of each pair, another part of the sample received the other question). In the paired questions, one question included the term, “commercial,” and the other question did not include “commercial.” In general, there was not a markedly negative reaction to the term “commercial.” In the first paired questions, the mean for “knowing that fishermen can harvest fish sustainably from coastal waters in California” was 7.44, and 26% gave a rating of 10 in importance, while the mean for “knowing that *commercial* fishermen can harvest fish sustainably from coastal waters in California” was 7.22, with 25% giving a rating of 10. The second set of paired questions (knowing that family-run *commercial* fishing boats can harvest fish sustainably from coastal waters in California and knowing that family-run fishing boats can harvest fish sustainably from coastal waters in California) had identical means at 6.93, and 22% and 21%, respectively, rated their importance at 10.
- The survey asked five questions related to what may harm the ocean, from fishing in general, to recreational fishing, to family-run commercial fishing boats, to large corporate commercial fishing companies, and even to personal consumer decisions. Looking at the results of the five questions together, large corporate commercial fishing companies are perceived most

negatively, with 59% agreeing that those companies are harming the ocean's fisheries. No other question had more than 29% agreeing. The results are further discussed below:

- In the most general question, 25% agree that fishing harms the ocean, but 65% disagree.
  - In the question allowing comparison between large corporate commercial fishing companies versus family-run commercial fishing boats, the large corporate commercial fishing companies (59% say they are harming the ocean's fisheries) fare poorly relative to family-run commercial fishing boats (29% say they are harming the ocean's fisheries).
  - Even consumers are perceived as harming the ocean's fisheries by some: 27% agree that people who consume frozen, packaged seafood from large supermarket chains are harming the ocean's fisheries.
  - Recreational fishing is not perceived negatively: only 16% agree that people who fish recreationally in California are harming the ocean's fisheries.
- Four questions explore opinions regarding possible causes of fishing declines and possible bans on (or reductions of) fishing. When overfishing is identified as a reason for declining fish populations, a large majority of Californians agree (72%) that commercial and recreational fishing should be banned. However, if the reason for the decline is undetermined or is shown to be caused by something other than fishing, agreement on a ban is much lower (52% and 58% agree, respectively). However, these latter results show that, even if fishing is not a problem but fisheries are declining, Californians show deference to the fisheries over commercial and recreational fishing. A final result of these questions demonstrates Californians moderate opinions: the most agreement, if fisheries are declining, is for a *reduction* in fisheries harvest rather than an outright ban.
- Another set of four questions explores opinions on harvesting California's coastal fisheries. Again, there is a split in opinions regarding the protection versus utilization dichotomy, but there is much concern about commercial fishermen's livelihoods, particularly family-run fishing boats.
- In one question, deference is again shown for family-run commercial fishing boats over corporate commercial fishing companies: 52% agree that if scientific evidence shows that fish populations are declining, only corporate commercial fishing companies should

be banned from fishing in California's coastal waters, but family-run commercial fishing boats should be allowed; disagreement for this is 36%.

- One question shows the split in opinion on commercial fishing: 50% agree that if scientific evidence shows that fish populations are declining, commercial fishing should be banned, but recreational fishing is okay; 40% disagree.
- When discussion of banning commercial fishing if scientific evidence shows that fish populations are declining includes the caveat that "even if it means that commercial fishermen's livelihood will be ended," more disagree (45%) than agree (39%).
- The least agreement is for a complete ban of fishing, both commercial and recreational, if scientific evidence shows that fish populations are declining: only 32% agree, but 59% disagree.

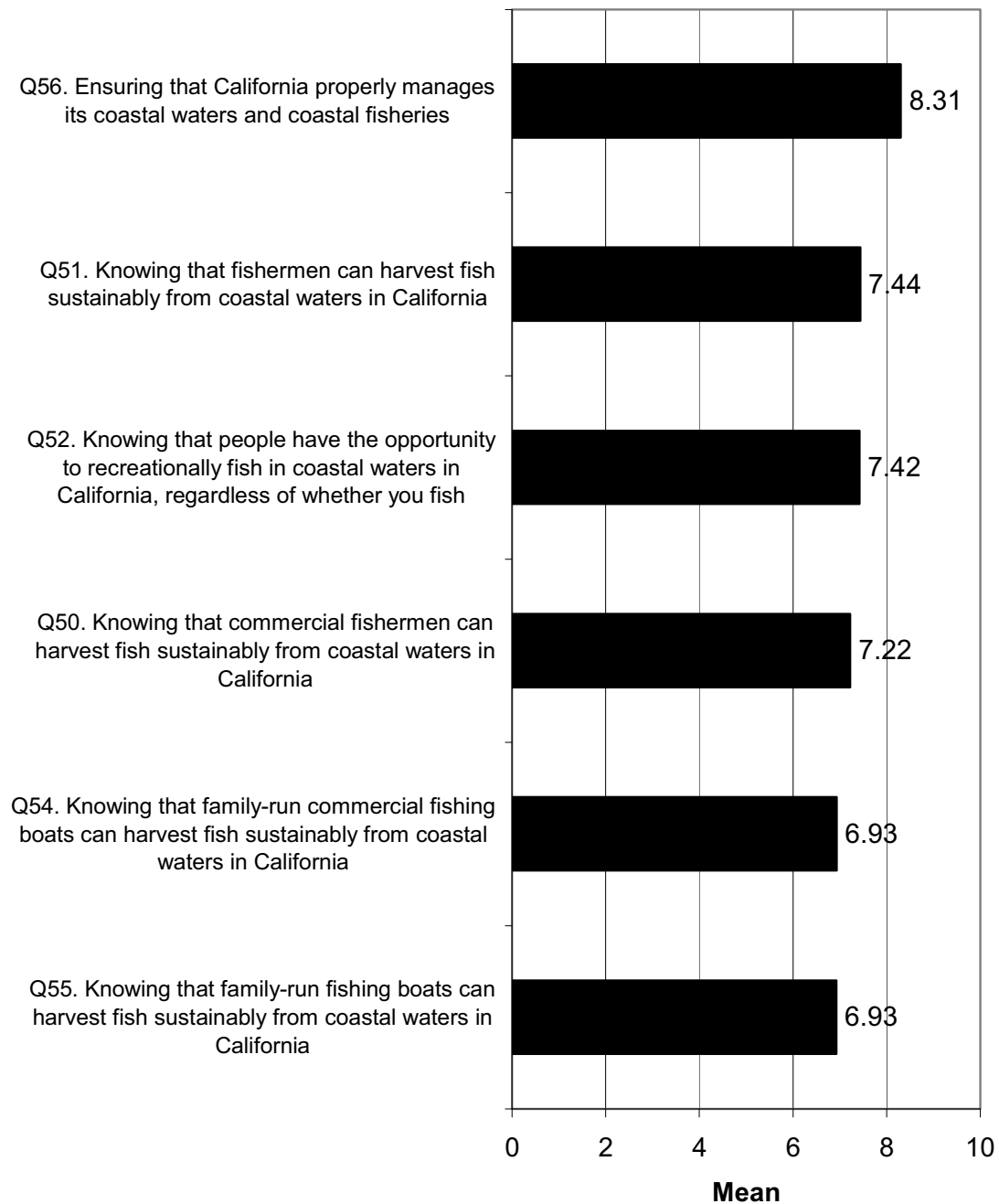
➤ Californians show concern both for having their seafood harvested sustainably as well as for ensuring that California's seafood industry not be unduly harmed. The survey asked seafood consumers (those who typically eat seafood at least once a month) five questions about their opinions on the harvesting of seafood. Overwhelming majorities agree that it matters to them that local seafood is harvested sustainably (86% agree) and that imported seafood is harvested sustainably (79% agree). They also overwhelmingly agree (82%) that they would buy California seafood over imported seafood when informed that California currently has more conservation safeguards in place than exist in most other countries. Seafood consumers show concern about California's fishing industry, with less than a majority agreeing that they would be willing to buy their seafood only from international markets to put the highest priority on protecting California's fisheries (37%), and even less than that saying that they would be willing to buy their seafood from non-California sources if they knew that doing so would likely force many family-run commercial fishermen out of business in California (23%). Regarding this last question, 63% disagree that they would be willing to buy their seafood from non-California sources if they knew that doing so would likely force many family-run commercial fishermen out of business in California.

➤ In a question directly about use or protection of California's coastal fisheries, Californians are in the middle: they favored the moderate answers ("utilized with just a few limitations"

and “mostly protected with just a little utilization”) over the extreme answers (“fully utilized with almost no limitations” and “fully protected with almost no utilization”). Furthermore, the two moderate answers are supported by nearly equal percentages. Overall, this question shows an almost even split between utilization and protection.

- Another question, like the one discussed above, asks about opinions on use versus protection of California’s coastal fisheries. There is much more support (by more than 2 to 1) for allowing fishing in all areas, with science-based limits on the total harvest (68% support this position) over fully protecting (i.e., prohibiting *all* harvesting in) some areas with the concomitant result that fishermen would concentrate their fishing in remaining open areas (24%). In simple terms, Californians support *harvest limitations* over *complete harvest bans*.
- More Californians oppose (38%) than support (27%) adding additional fishing restrictions to California coastal waters if it means that family-run commercial fishing boats may go out of business. As a demonstration of the difficulty in making this choice, nearly a third answered this question with “don’t know” (29%).
- Finally, the survey sought to determine exactly how Californians perceive the term, “protect,” as in “We should protect the ocean.” In this regard, they are, again, moderate in their opinions: they overwhelmingly (87%) perceive “protect” to mean that the resources can be used in a sustainable way rather than not used at all (8%). This is an important consideration when examining statements and statistics about whether Californians want to “protect” the ocean.

**Q50, 51, 52, 54, 55, 56. Mean ratings of importance of each of the following. (Don't know responses removed.)**



**Q50, 51, 52, 54, 55, 56. Percent giving a rating of 10 in importance for each of the following.**

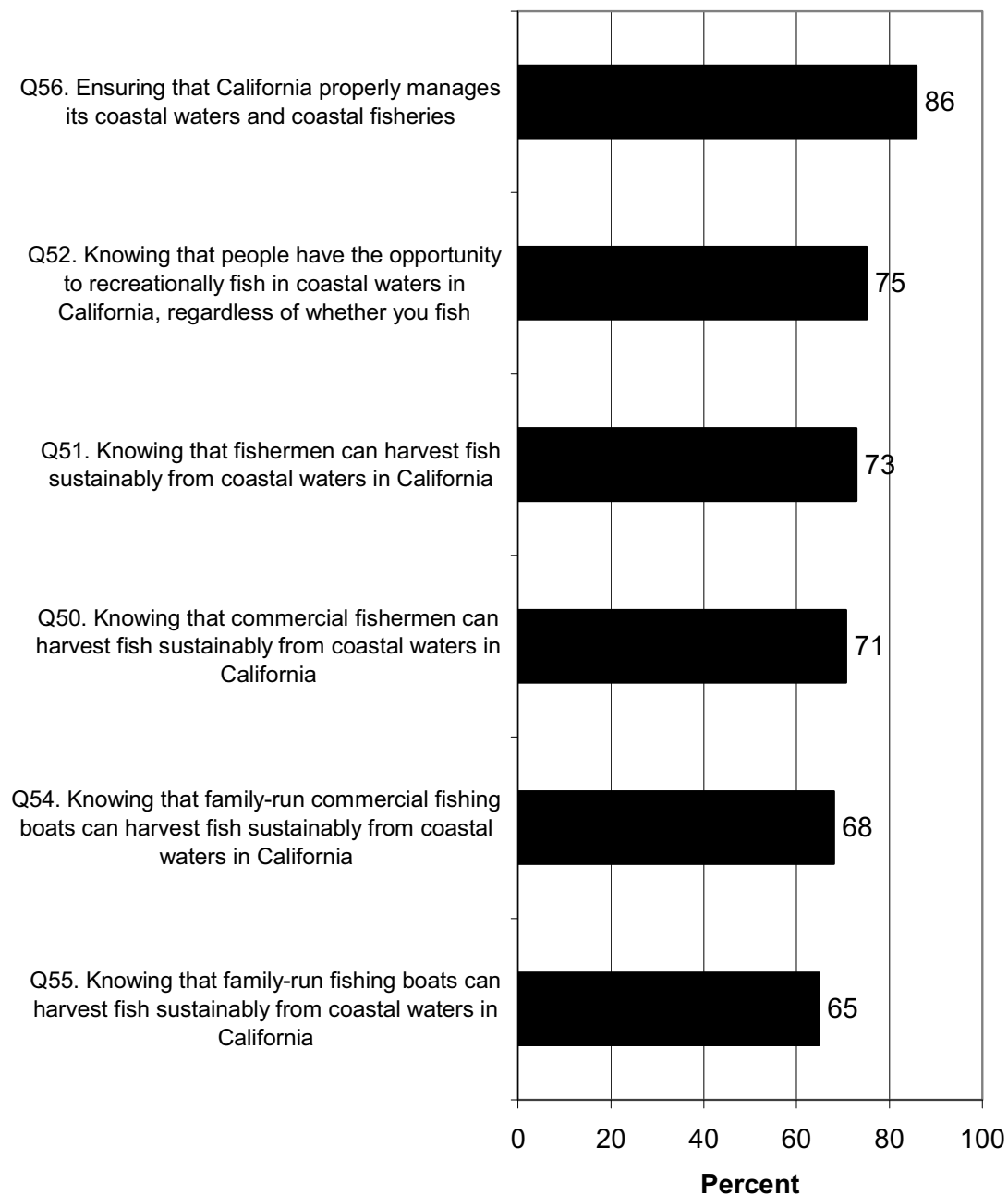


**Q50, 51, 52, 54, 55, 56. Percent giving a rating of 9 or 10 in importance for each of the following.**

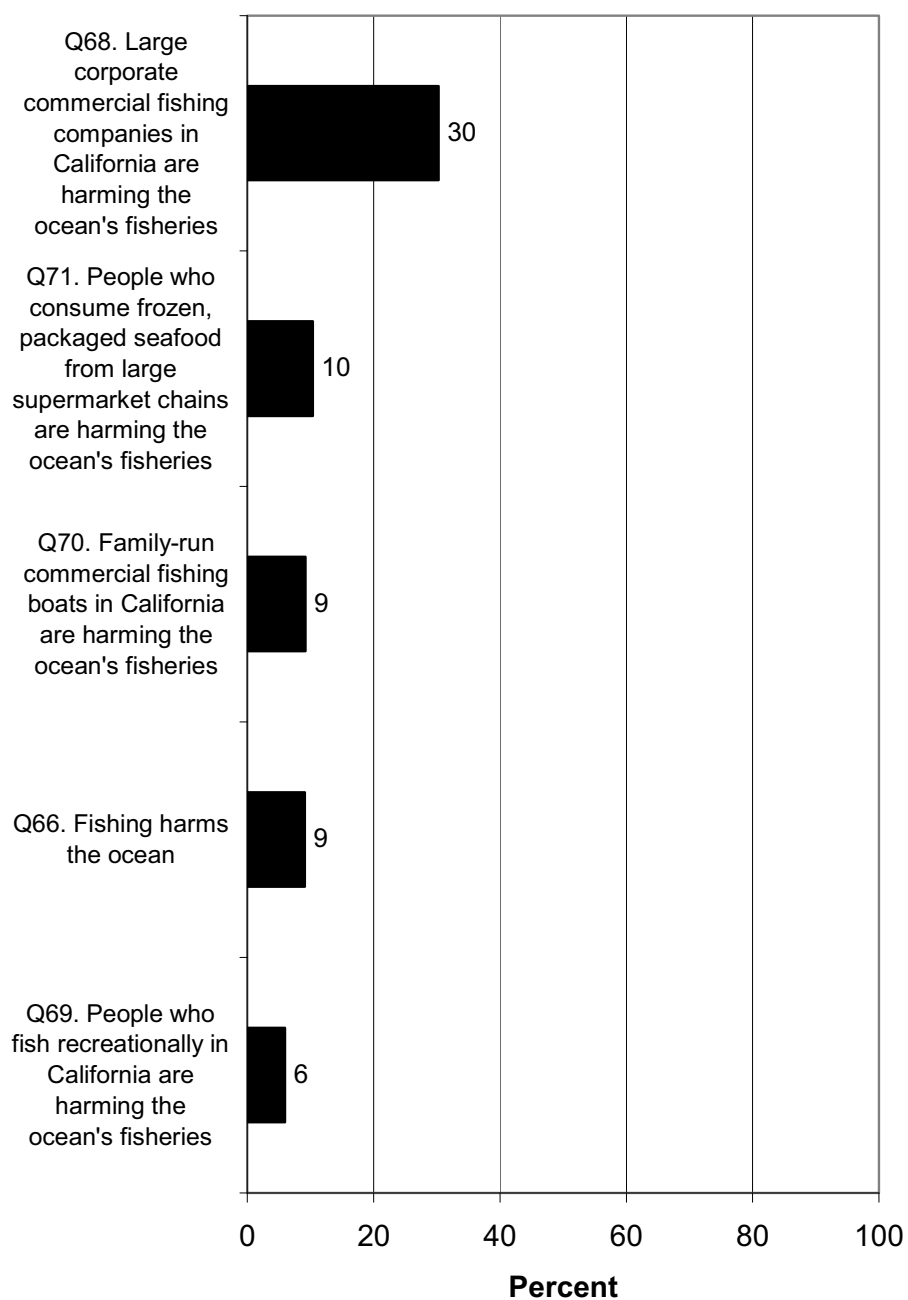




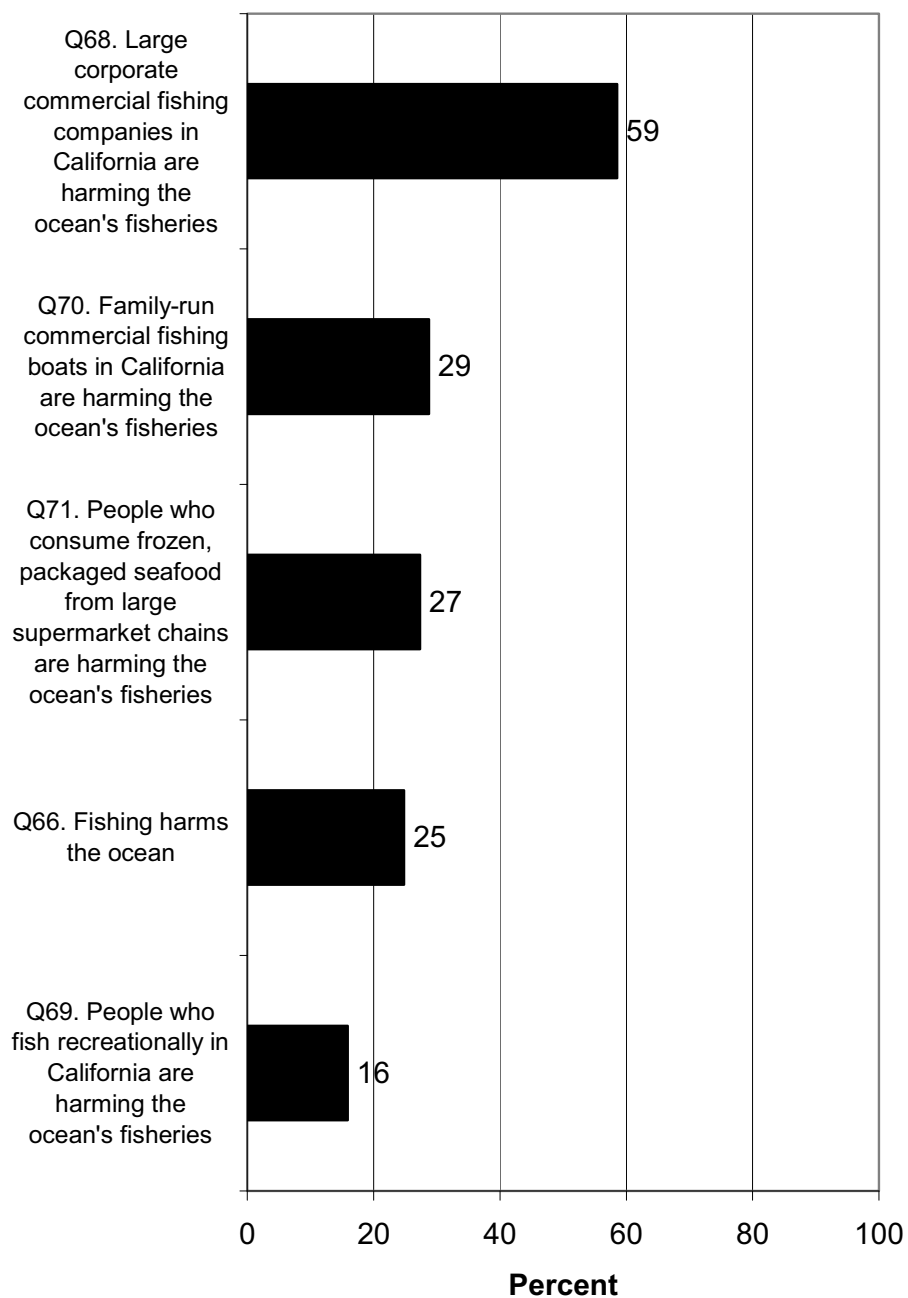
**Q50, 51, 52, 54, 55, 56. Percent giving a rating of greater than the midpoint (5) in importance for each of the following.**



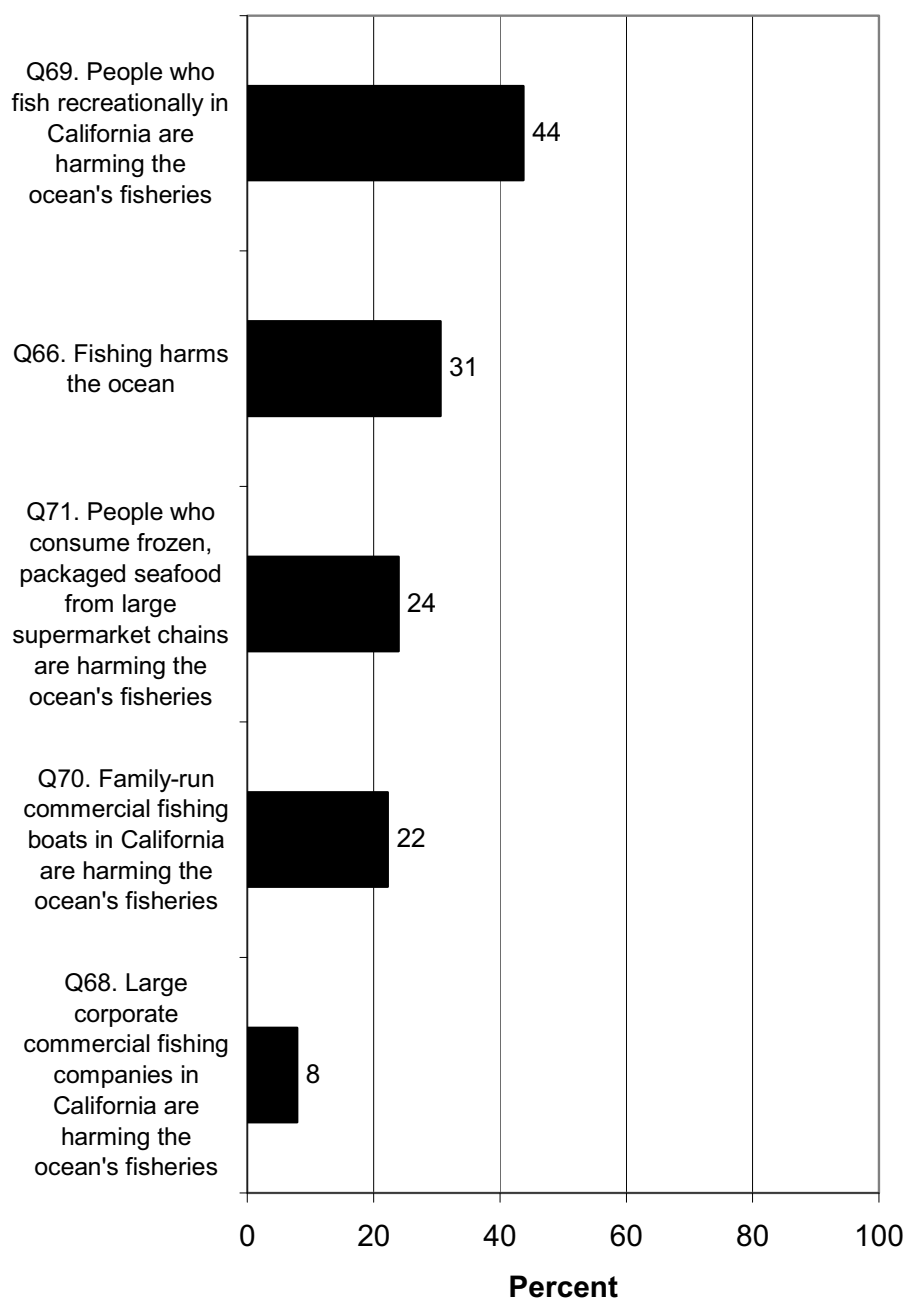
**Q66, 68-71. Percent who strongly agree with the following.**



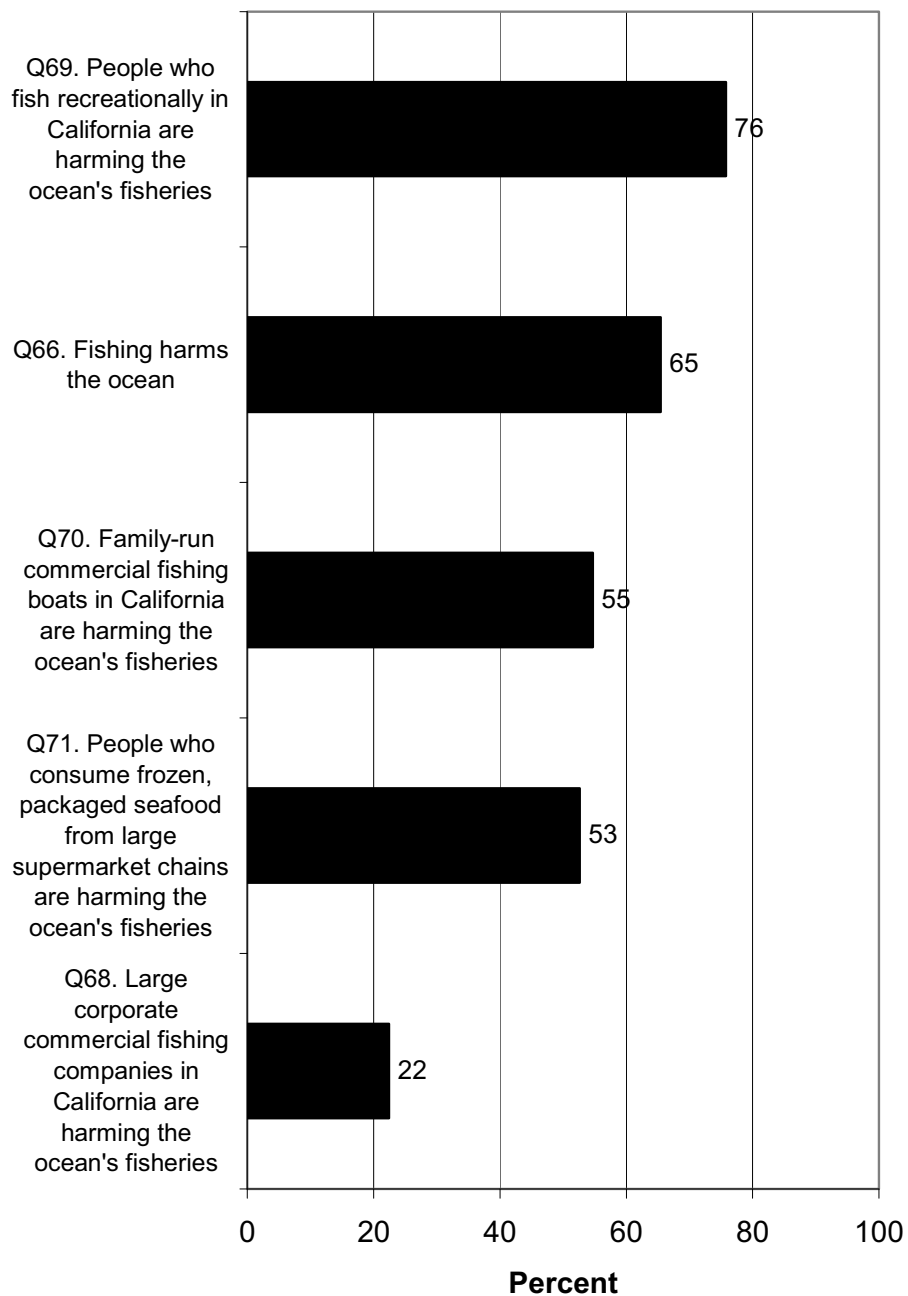
**Q66, 68-71. Percent who strongly or moderately agree with the following.**



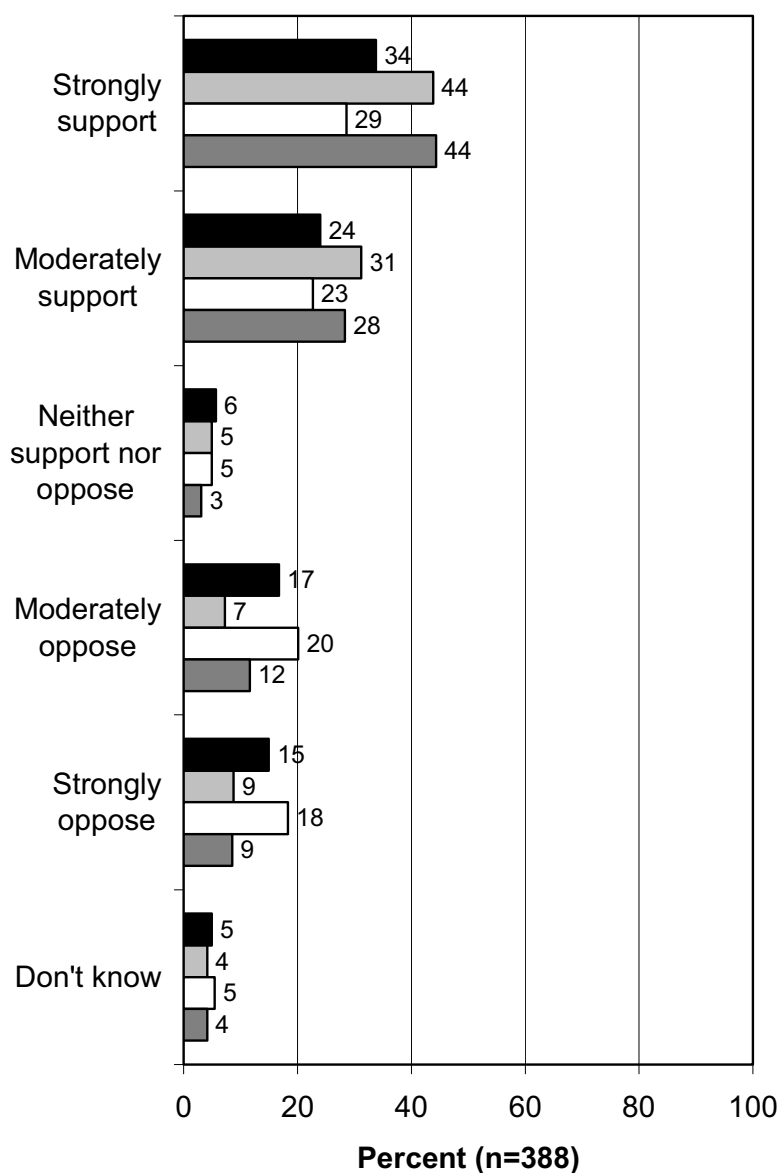
**Q66, 68-71. Percent who strongly disagree with the following.**



**Q66, 68-71. Percent who strongly or moderately disagree with the following.**



**Q95-98. If fisheries scientists determined that California's coastal fisheries are declining because of the following conditions, would you support a ban of the following until the populations recover?**



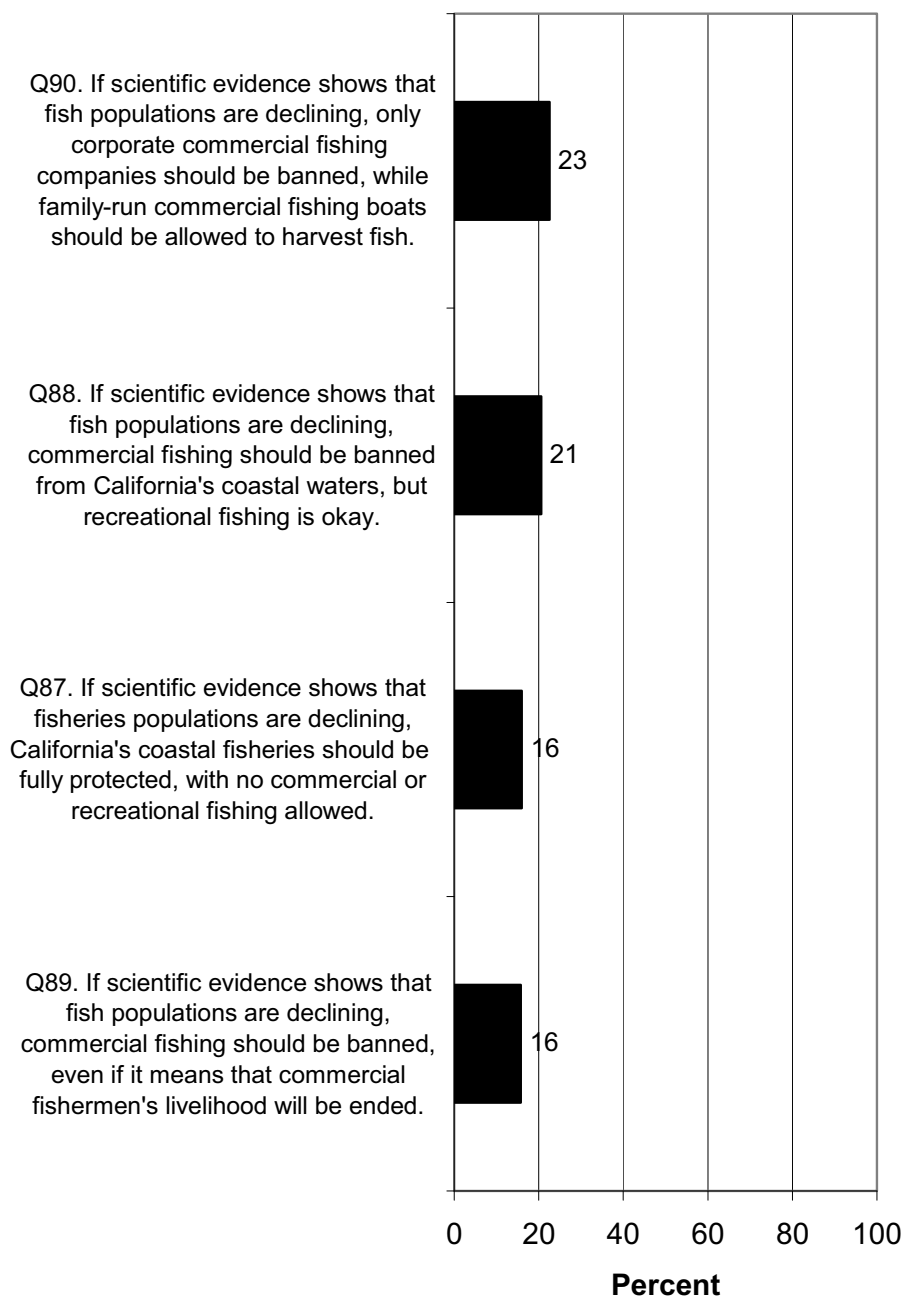
■ Q95. ...the decline is caused by reasons other than fishing, such as pollution, would you support a ban of commercial and recreational fishing until the populations recover?

□ Q96. ...the decline is caused by reasons other than fishing, would you support a reduction in the amount of fish that commercial and recreational fishermen can take until the populations recover?

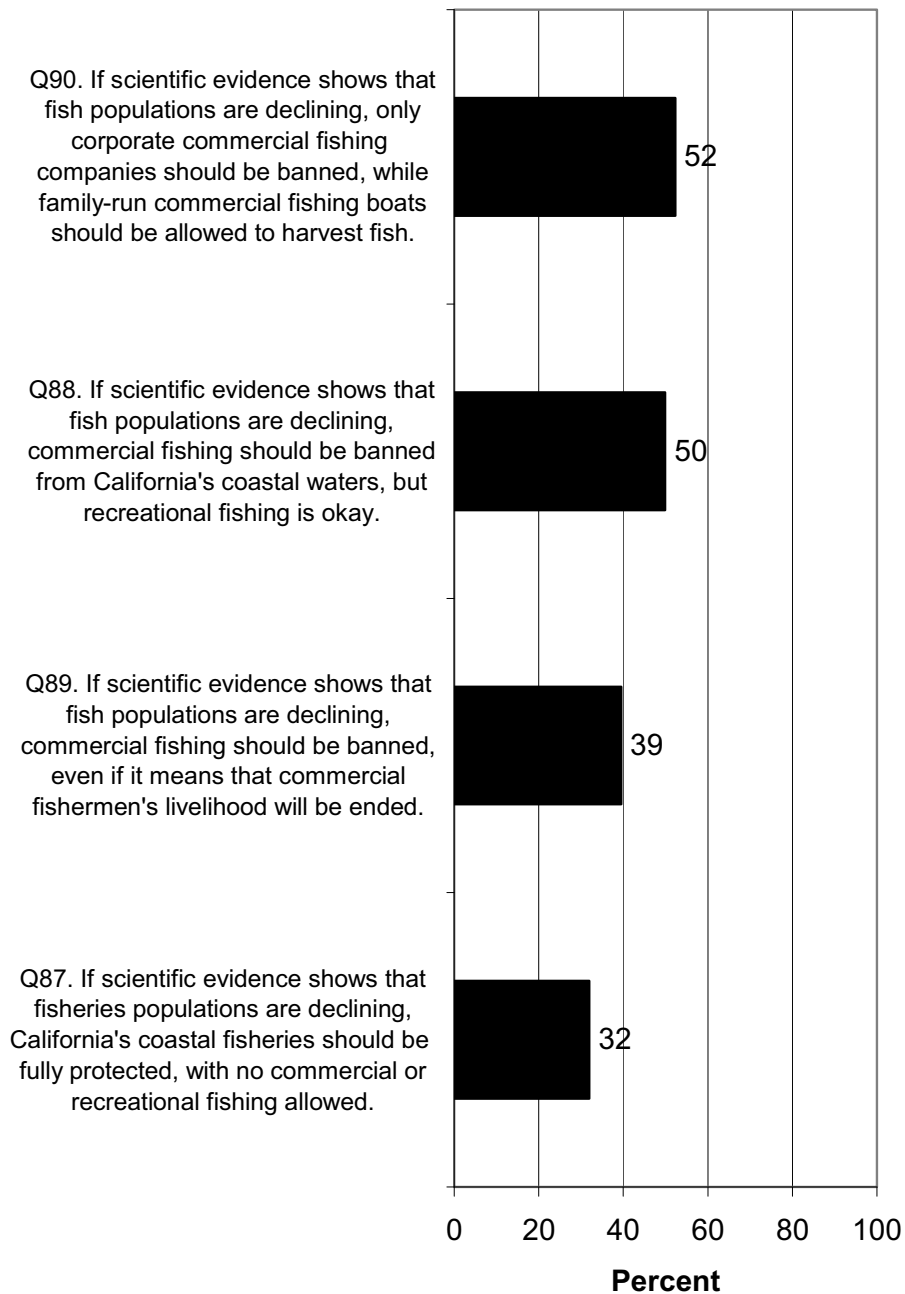
□ Q97. ...they cannot determine the cause of the decline, would you support a ban of commercial and recreational fishing until the populations recover?

■ Q98. ...they determine that overfishing is the primary reason, would you support a ban of commercial and recreational fishing until the populations recover?

### Q87-90. Percent who strongly agree with the following.

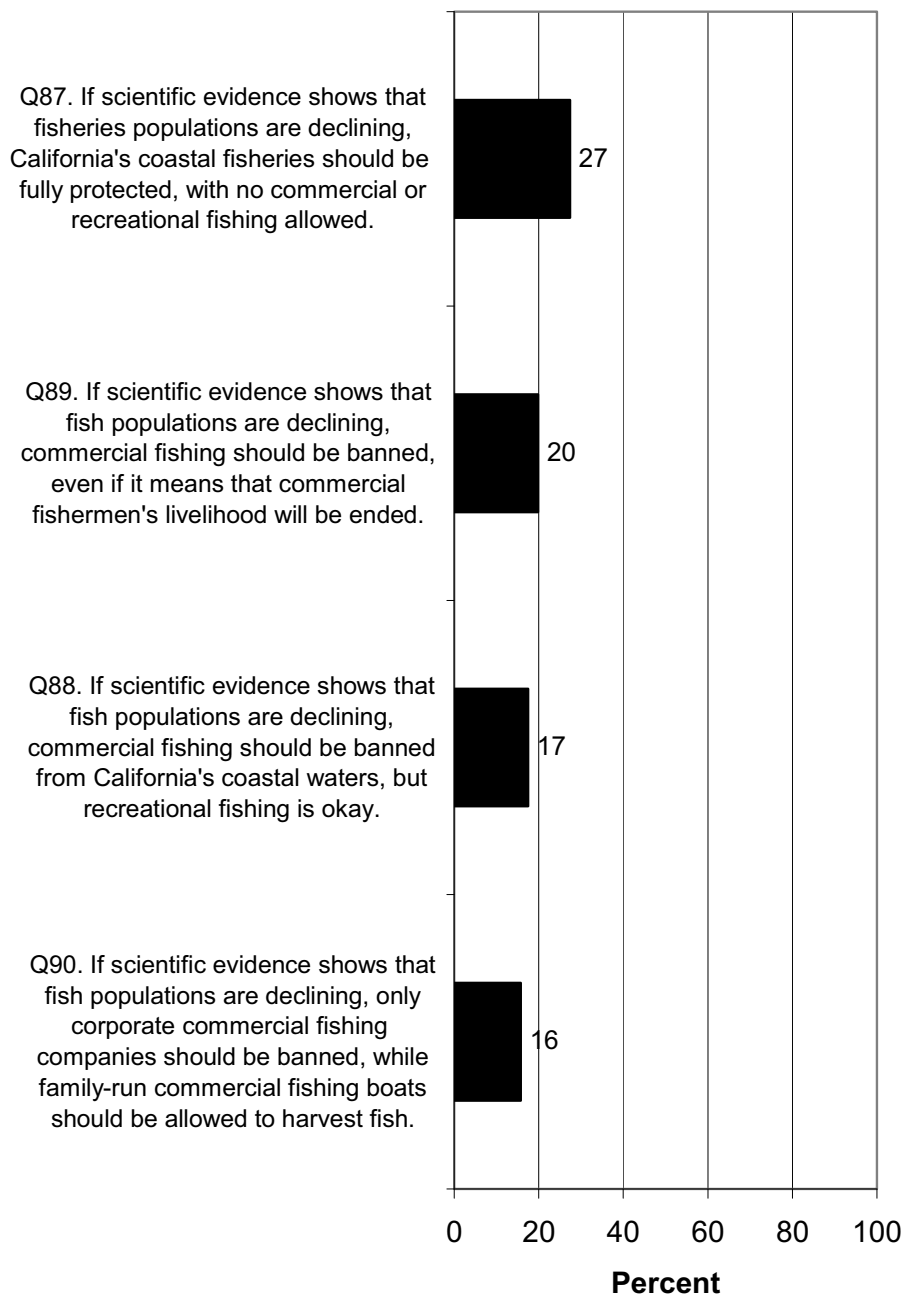


**Q87-90. Percent who strongly or moderately agree with the following.**

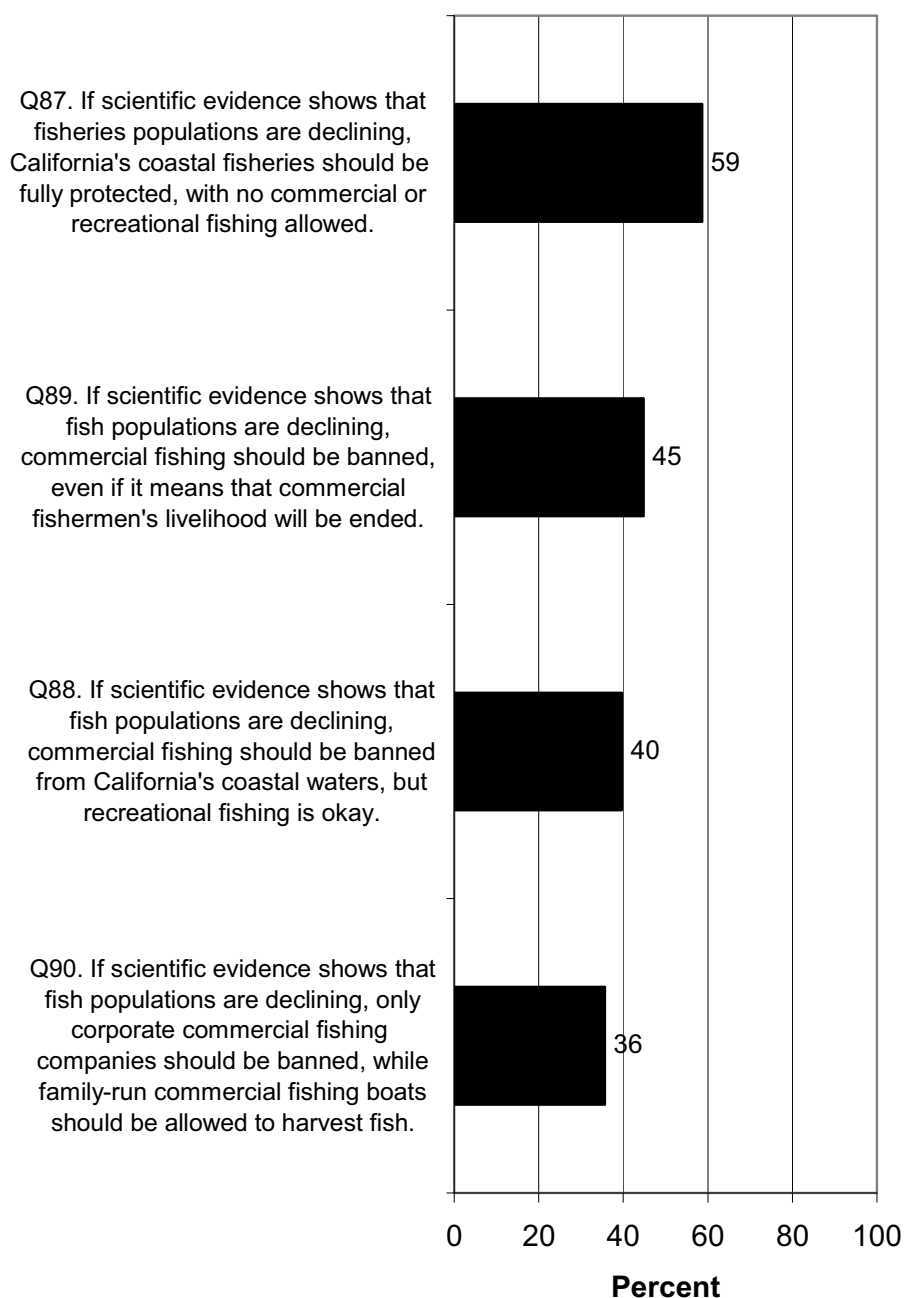




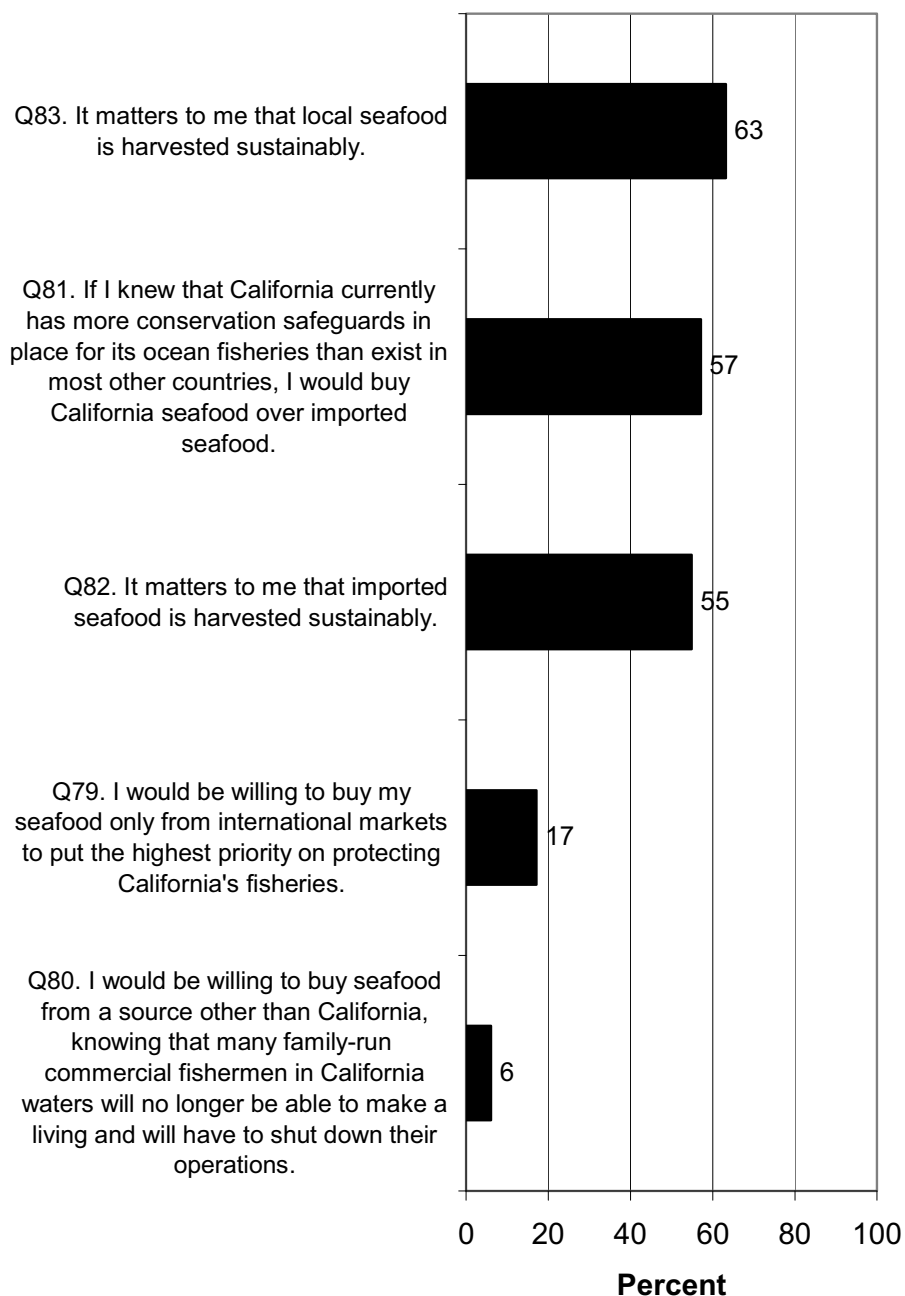
### Q87-90. Percent who strongly disagree with the following.



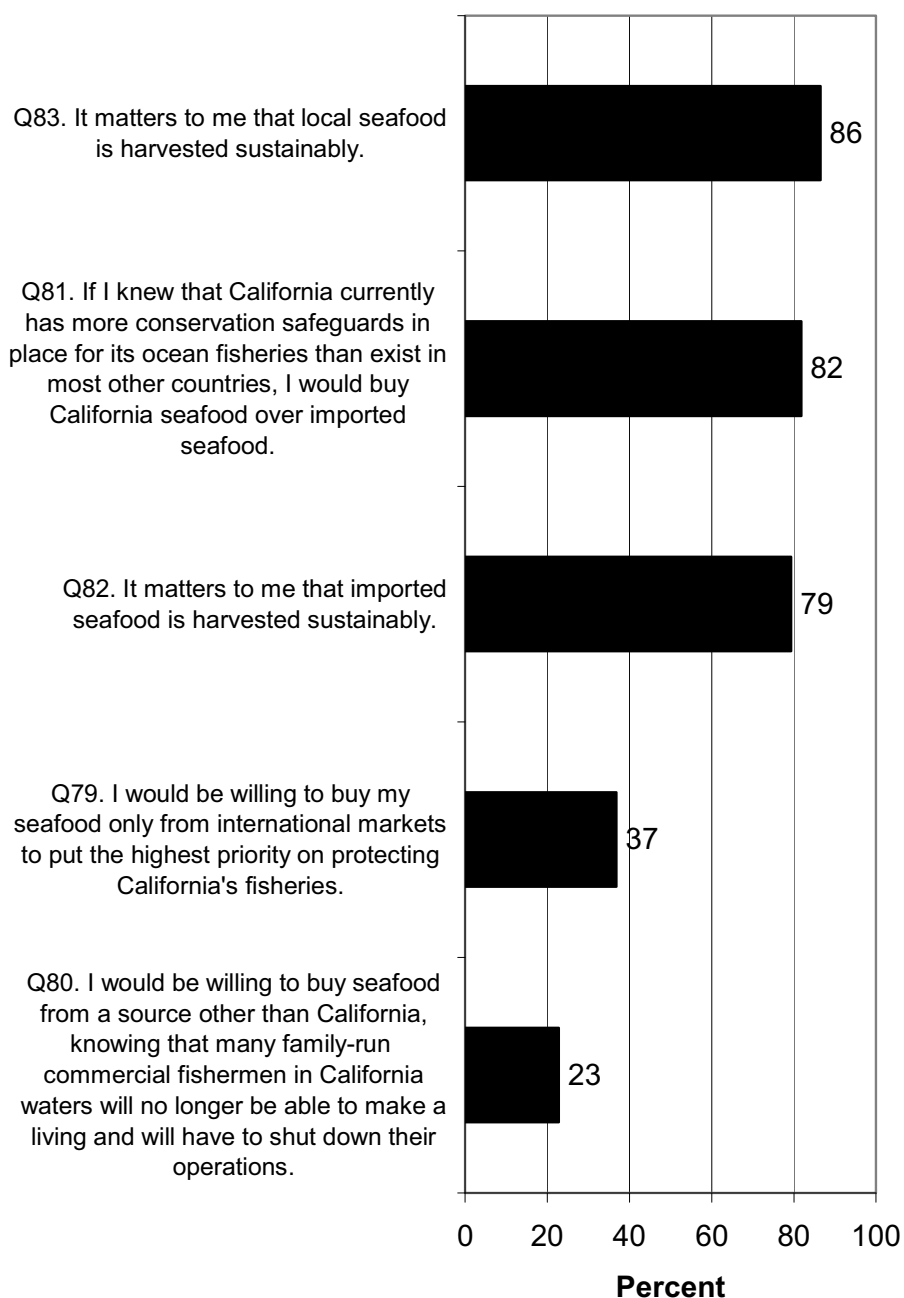
**Q87-90. Percent who strongly or moderately disagree with the following.**



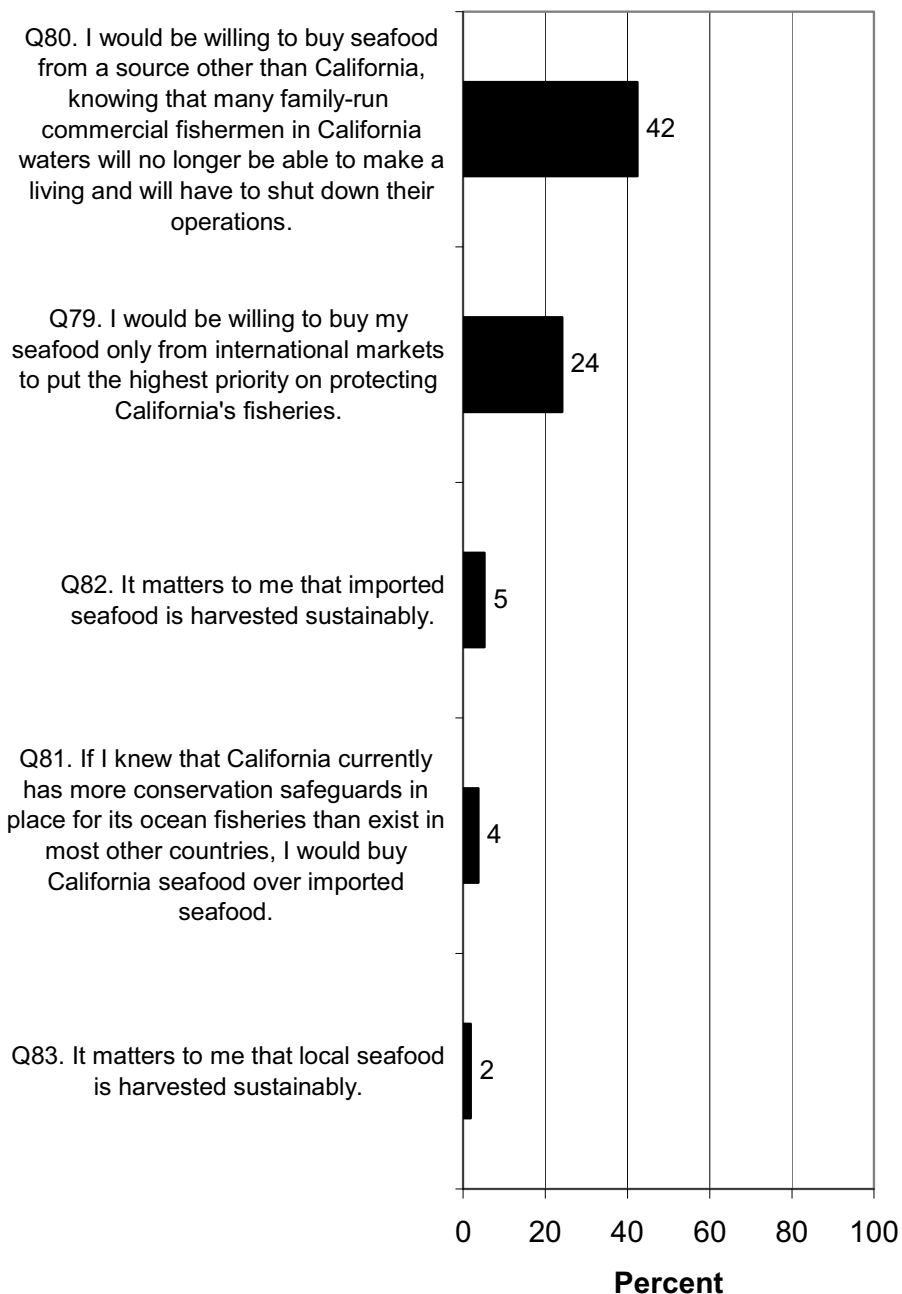
**Q79-83. Percent who strongly agree with the following.) (Asked of those who eat seafood at least once a month.)**



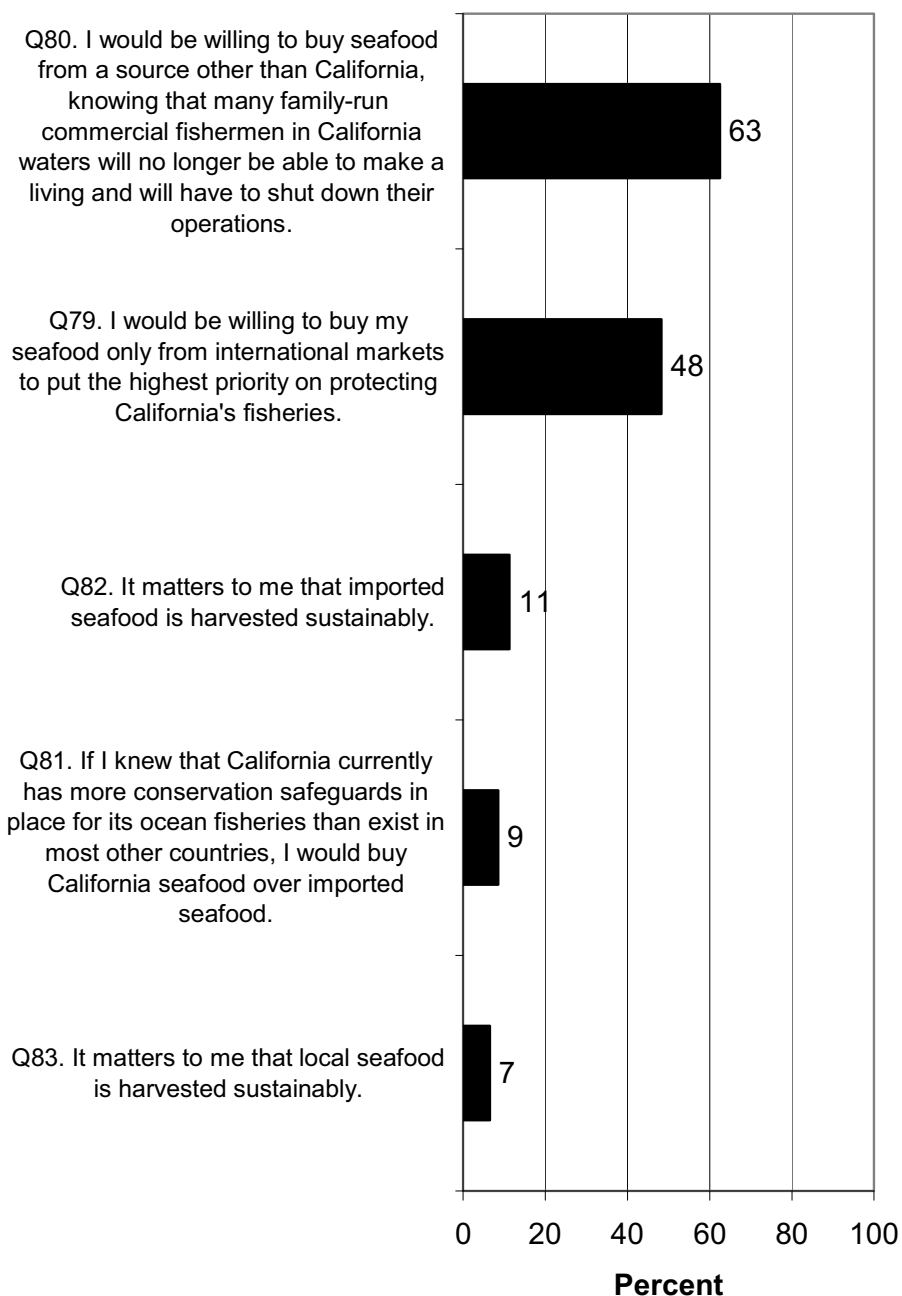
**Q79-83. Percent who strongly or moderately agree with the following.) (Asked of those who eat seafood at least once a month.)**



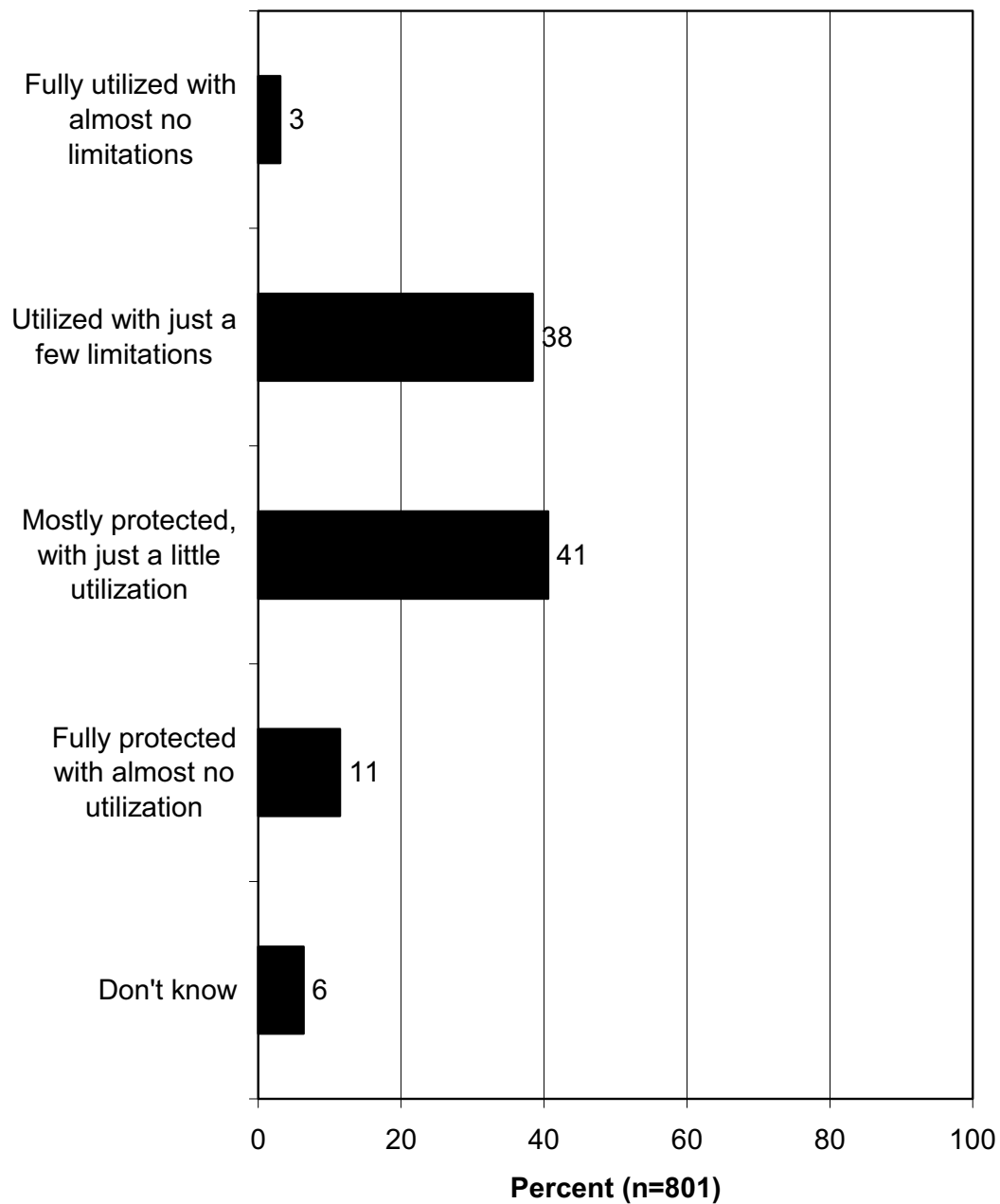
**Q79-83. Percent who strongly disagree with the following.) (Asked of those who eat seafood at least once a month.)**



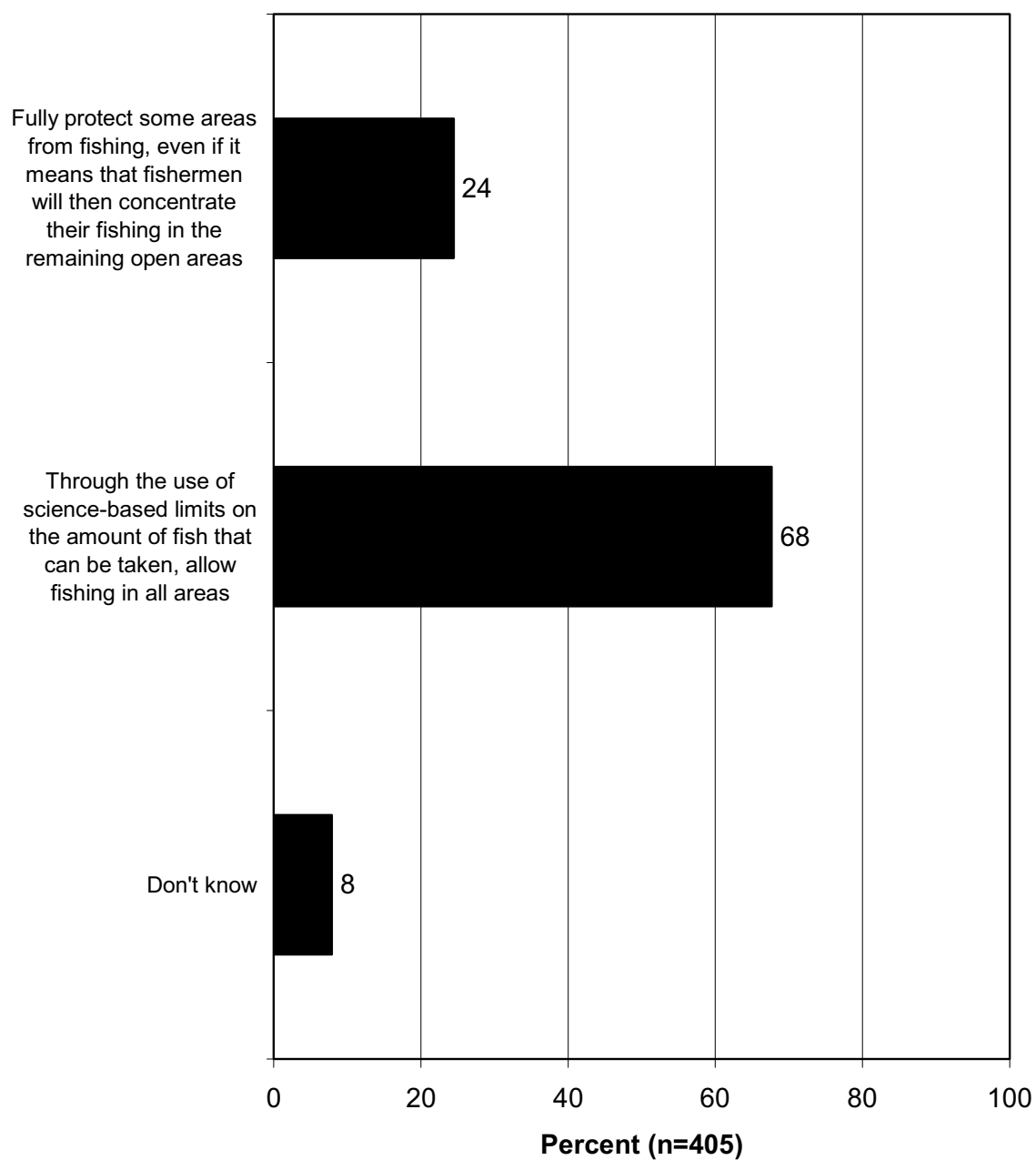
**Q79-83. Percent who strongly or moderately disagree with the following.) (Asked of those who eat seafood at least once a month.)**



**Q57. What position regarding use or protection of California's coastal fisheries comes closest to your personal views? California's coastal fisheries should be:**

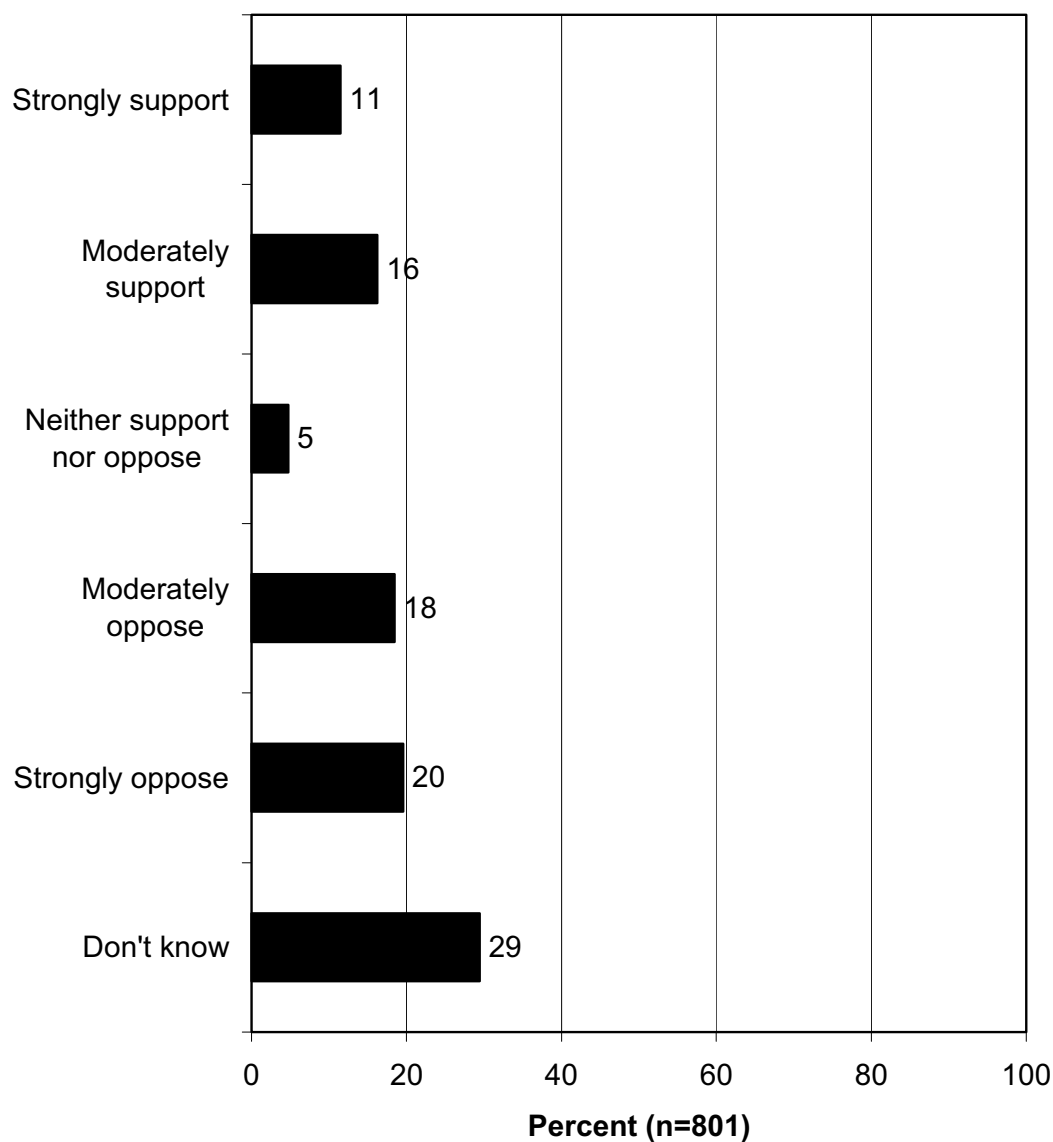


**Q59. Which of the following positions do you think is better for California's coastal fisheries?**

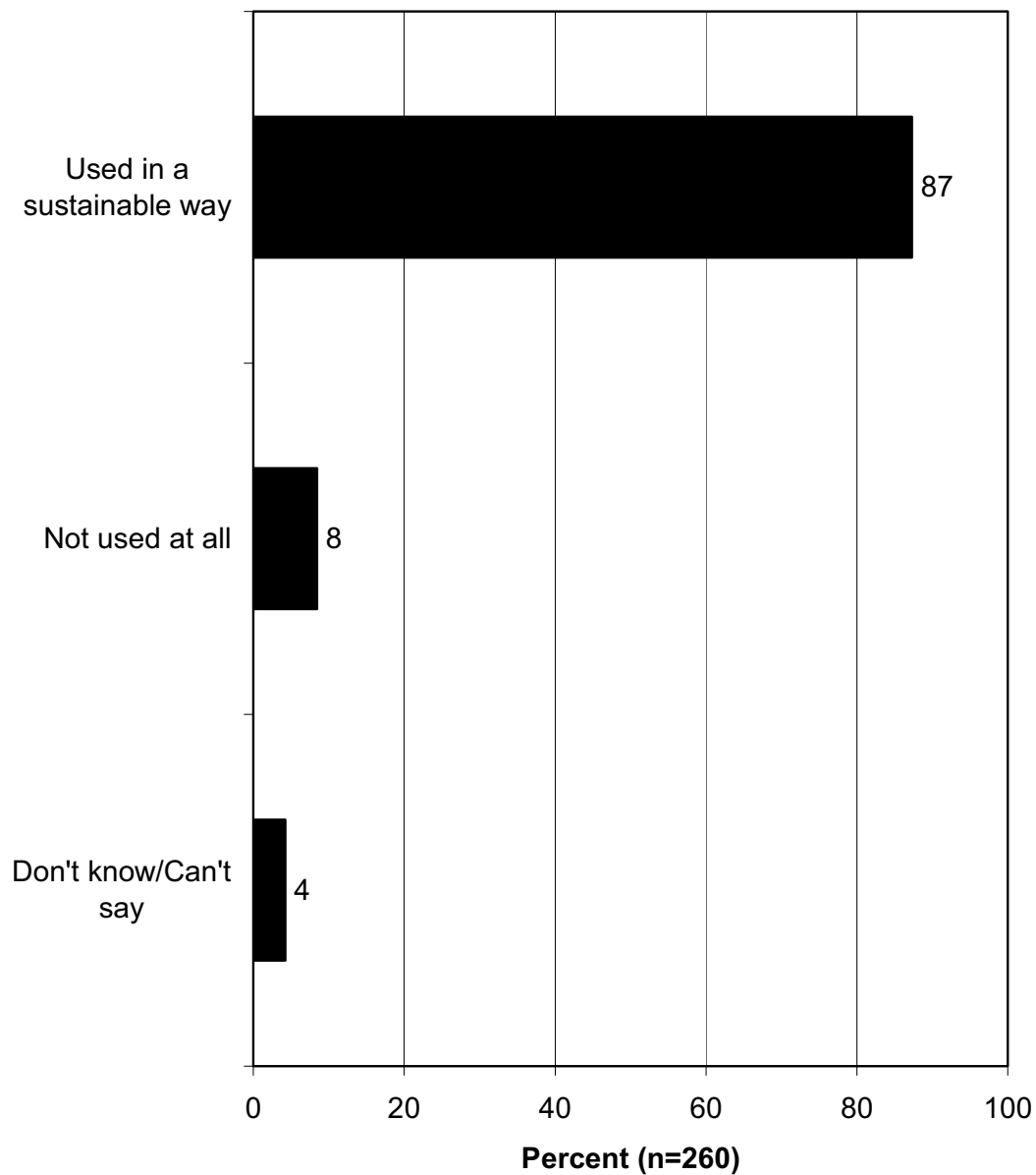




**Q101. About 3% of California's ocean waters are already fully protected, meaning that no fishing or other extractive activities are allowed. Another portion of California's ocean is closed to most fishing, and the amount of fish that can be taken elsewhere has been reduced. If fishing restrictions are increased, family-run commercial fishing boats may go out of business. Knowing this, do you support or oppose adding to the restricted areas in the ocean waters in California, or do you not know?**



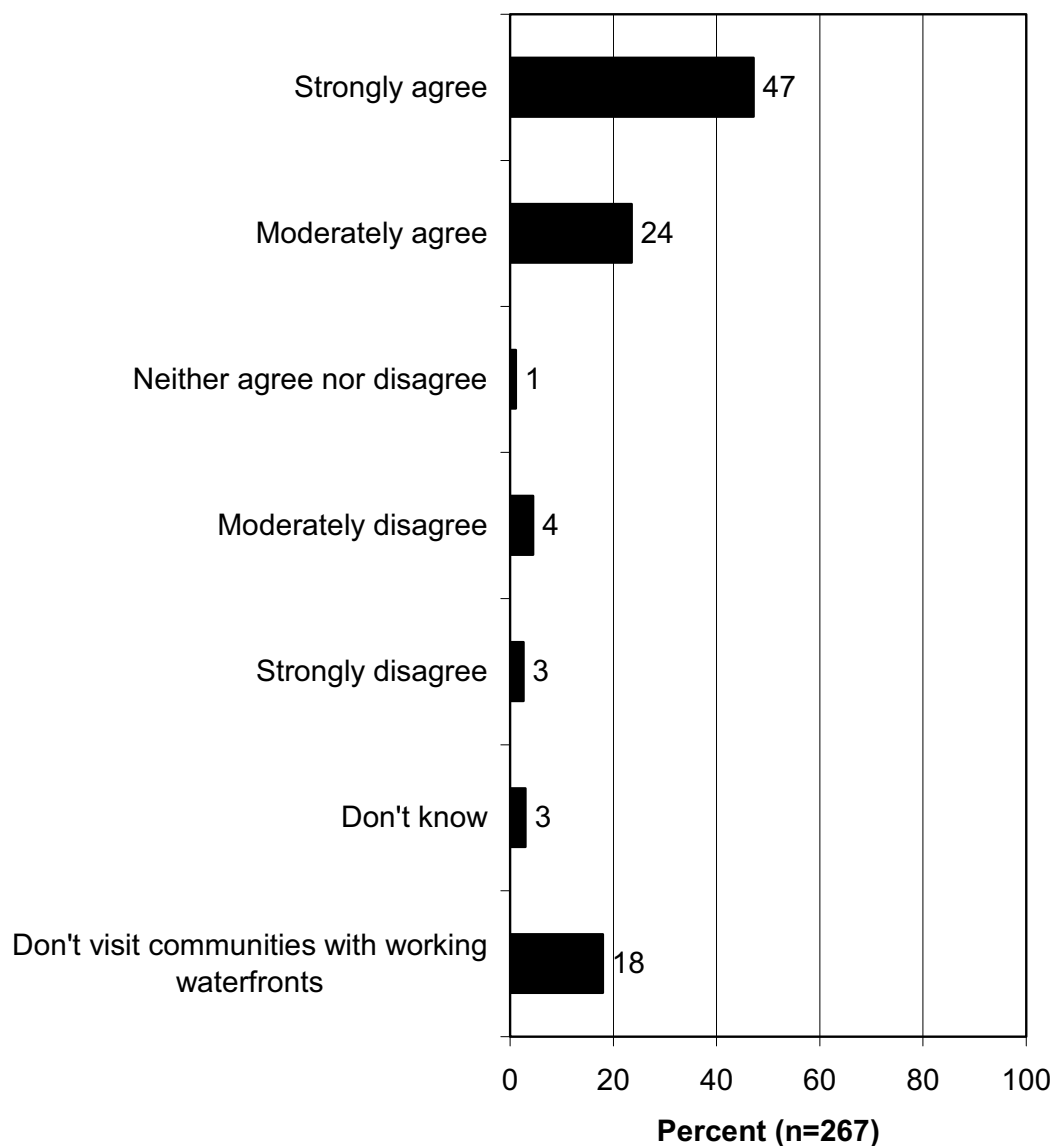
**Q62. When you hear the word, "protect," as in "We should protect the ocean," do you think it means that ocean resources should be used in a sustainable way, or do you think it means that ocean resources should not be used at all?**



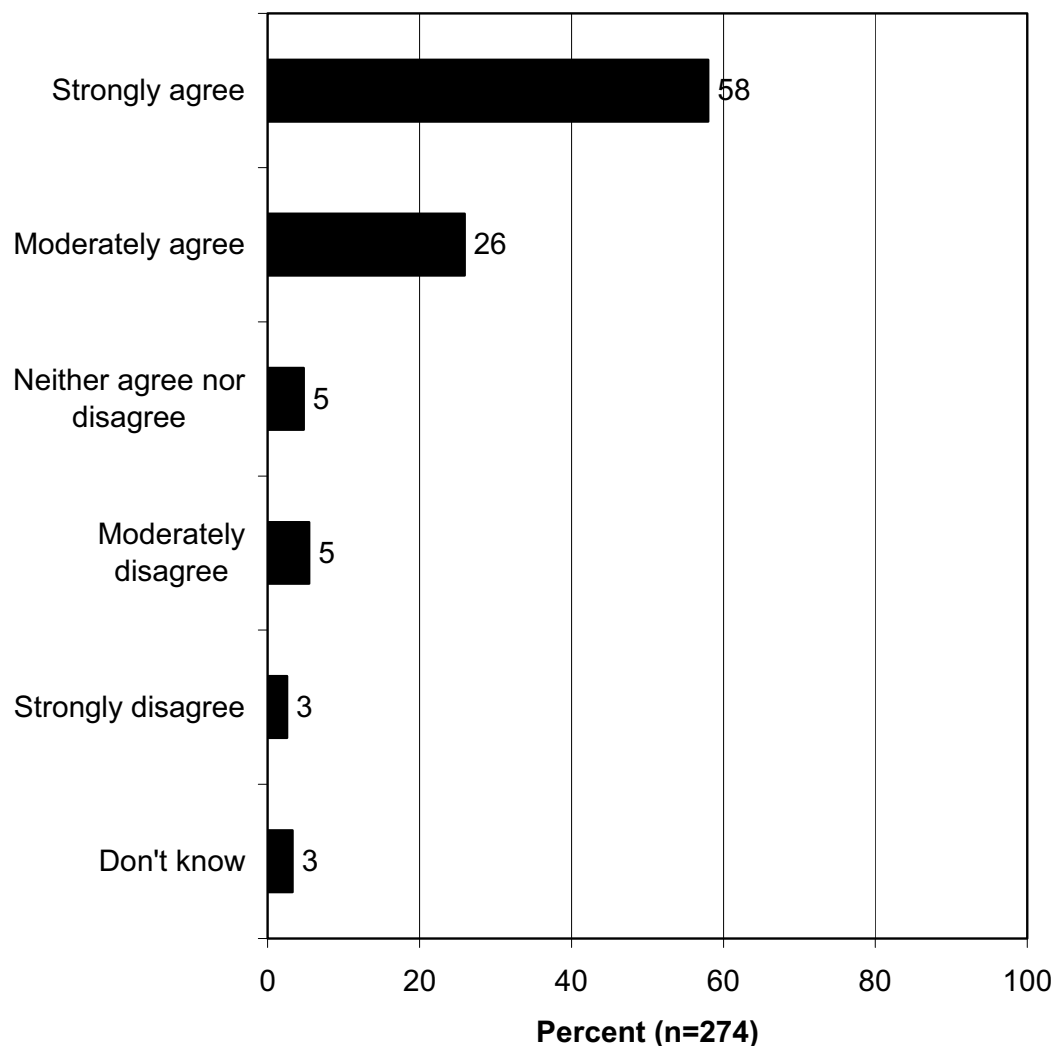
## **FISHERIES AND TOURISM**

- Working waterfronts are important for tourism in coastal towns, as a large majority of Californians (71%) agree that they seek out and enjoy going to working waterfronts in communities that have them; only 7% disagree.
  
- In another question that pertains to tourism, an overwhelming majority of Californians (84%) agree that the State of California and local governments should work to keep charter boat opportunities available to the public, given that charter boat businesses provide opportunities to people who otherwise would not be able to boat because they cannot afford a boat of their own.

**Q63. "Working waterfront" refers to places where ocean-dependent businesses are located. Do you agree or disagree that when visiting a coastal California community that has a working waterfront, you seek out and enjoy going to the waterfront?**



**Q64. Many coastal communities have charter boat businesses on their waterfront, which take people out on day trips. Typically, these charter boats enable people to go out on the water who otherwise cannot afford a boat of their own. Do you agree or disagree that the state of California and local governments should work to keep this type of opportunity available for the public?**



## CONCERNS REGARDING COMMERCIAL FISHING IN CALIFORNIA

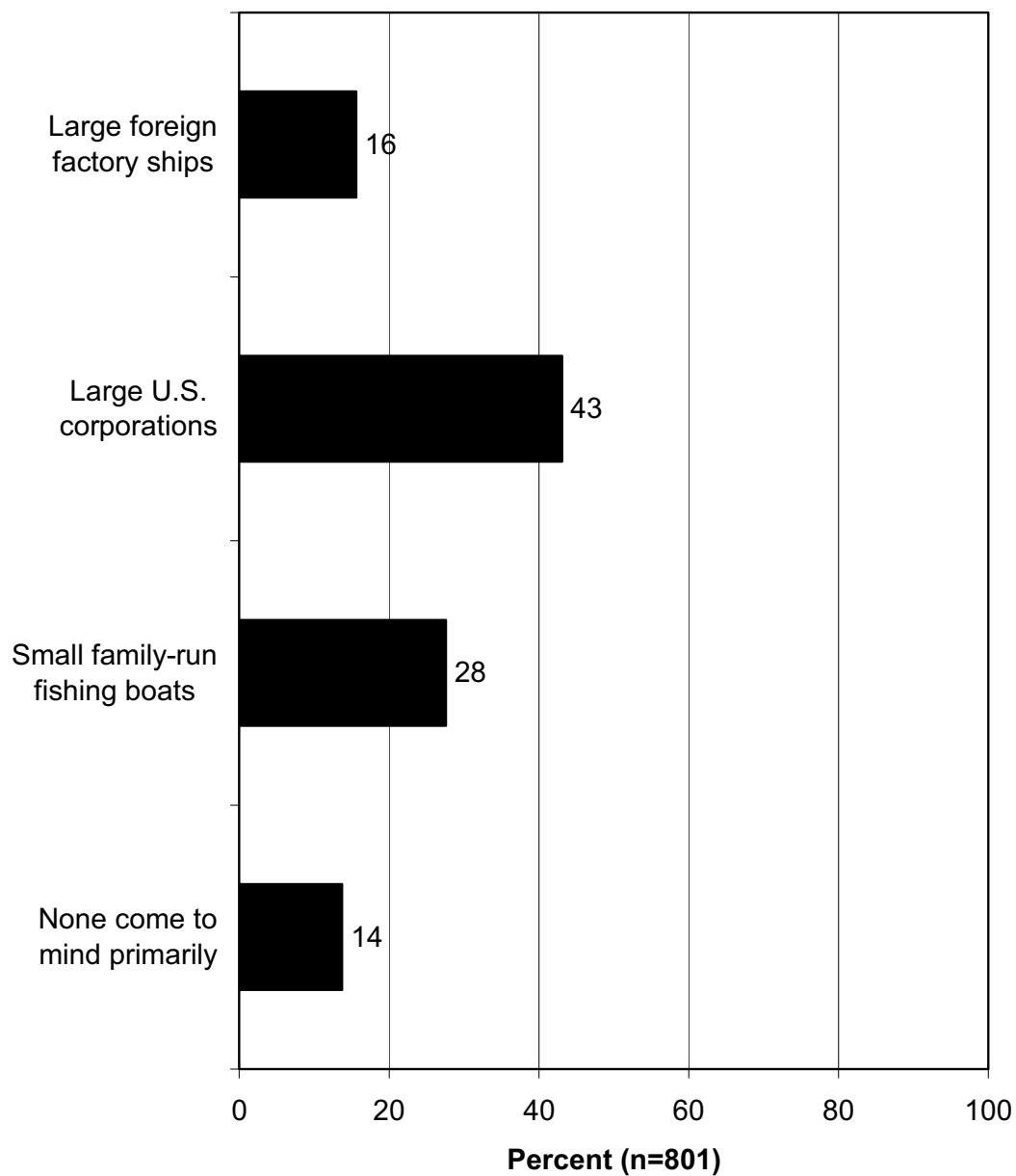
- The survey asked Californians what exactly they think of when the term, “commercial fishing,” is applied to California, and family-run commercial fishing boats are *not* primarily on their mind, as 59% think primarily of large foreign factory ships or large U.S. corporations; only 28% think primarily of small family-run fishing boats.
- The survey asked Californians directly to rate the importance of commercial fishing to California’s economy, and they think it is important: a large majority (60%) rated it above the midpoint, and 79% rated it at the midpoint or higher; only 17% rated it less than the midpoint.
- Californians do not perceive that fishing itself harms the ocean: in answer to a basic question, two-thirds of Californians (66%) disagree that fishing harms the ocean, and only 25% agree. However, when asked about large corporate commercial fishing companies, the perception is more negative: 58% agree that large corporate commercial fishing companies are harming the ocean’s fisheries.
- A large majority of Californians (73%) perceive corporate commercial fishing companies as being a high or moderate threat to California’s marine waters, habitat, and fisheries; conversely, only 5% say that they are not a threat at all, and 10% say that they are only a low threat. Family-run commercial fishing boats are not perceived as being as great a threat, with opinion evenly split: 44% see them as a high or moderate threat to California’s marine waters, habitat, and fisheries, and 44% see them as only a low threat or not a threat at all.

- Disagreement (59%) far exceeds agreement (32%) for a complete ban of fishing, *both commercial and recreational*, if scientific evidence shows that fish populations are declining. However, agreement is higher if *recreational* fishing is allowed while *commercial* fishing is still banned, if scientific evidence shows that fish populations are declining: 50% agree and 40% disagree. Finally, when a ban of commercial fishing is discussed with the caveat that commercial fishermen's livelihood will be ended, agreement erodes: only 39% agree, while 45% disagree. In short, Californians, in general, do not favor a complete ban, and they are concerned about commercial fishermen's livelihood, although substantial percentages, nonetheless, support a ban if scientific evidence shows that fish populations are declining.
- There is much more support (by more than 2 to 1) for allowing fishing in all areas, with science-based limits on the total harvest (68% support this position) over fully protecting (i.e., prohibiting *all* harvesting in) some areas with the concomitant result that fishermen would concentrate their fishing in remaining open areas (24%). In simple terms, Californians support *harvest limitations* over *complete harvest bans*. (This graph is shown in the section of this report titled, "Opinions Regarding Utilization, Harvest, and Management of Fisheries.")
- When presented with the scenario where fish stocks are stable or already recovering, there is little support for a ban, as only 24% agree that commercial fishing should still be banned if scientific evidence shows that fish stocks are stable or already recovering (66% disagree). Slightly higher agreement (37%) is found when it is suggested that commercial fishing be banned while allowing recreational fishing, if scientific evidence shows that fish stocks are stable or already recovering (53% disagree).
- When asked to name commercially fished species off the coast of California, respondents most commonly named salmon (34%), tuna (28%), halibut (16%), and bass (13%). Note that 40% could not name a species. In a follow-up question asking if any of the named species is in trouble, salmon, tuna, and abalone are most commonly named.

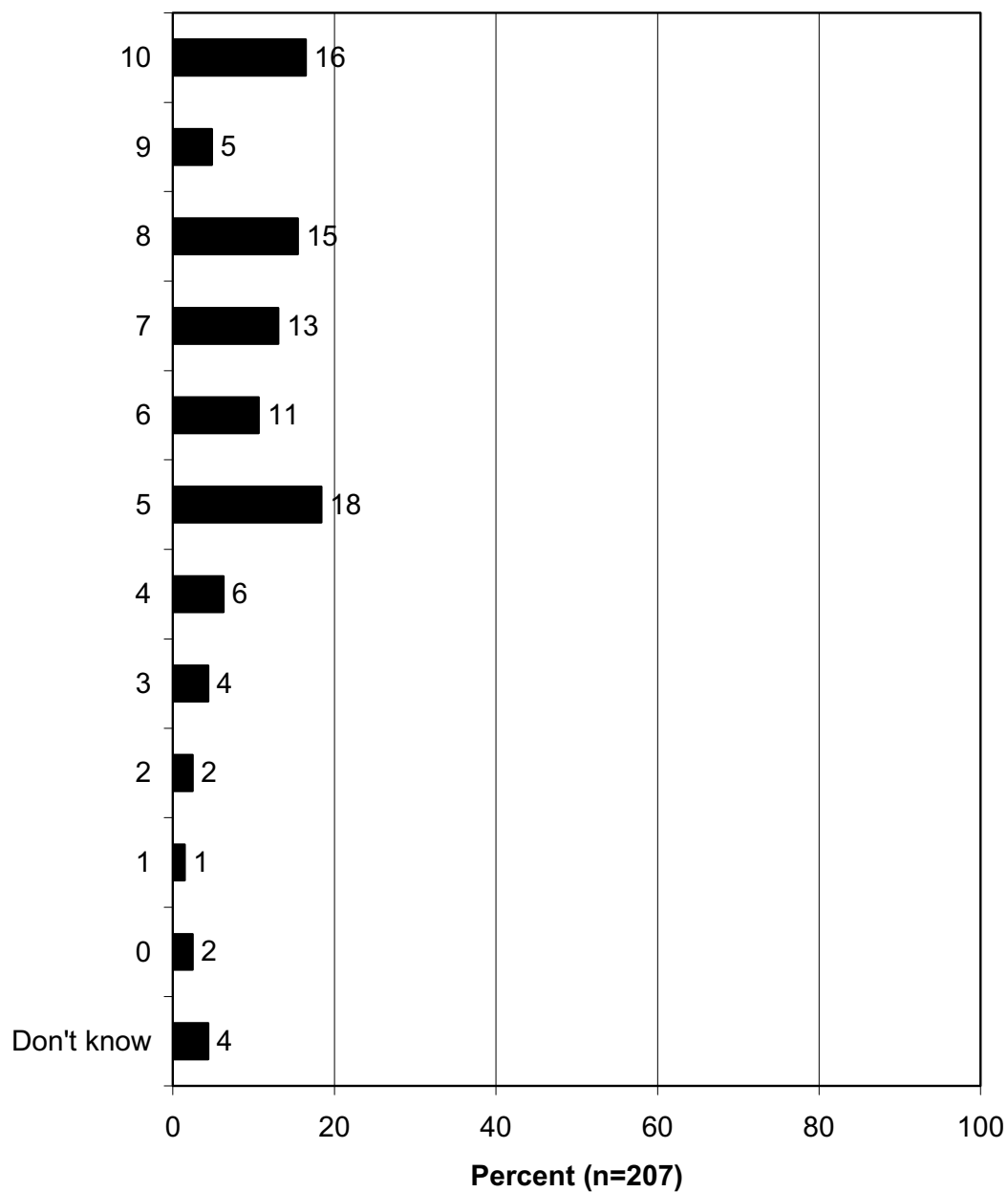
- Of the 801 respondents to the survey, 6 respondents (0.75%) personally work in the commercial or recreational fishing industry or a closely related field. These include recreational fishing, restaurant, seafood processing, fishing equipment retail, and a government agency. Additionally, 1.75% have family who work in the commercial or recreational fishing industry or a closely related field, including commercial fishing, recreational fishing, aquaculture, harbor activities, seafood processing, and a government agency. Finally, 5.5% have one or more friends who work in the commercial or recreational fishing industry or a closely related field, including commercial and recreational fishing, fishing equipment retail, seafood processing and retailing, and the restaurant industry.



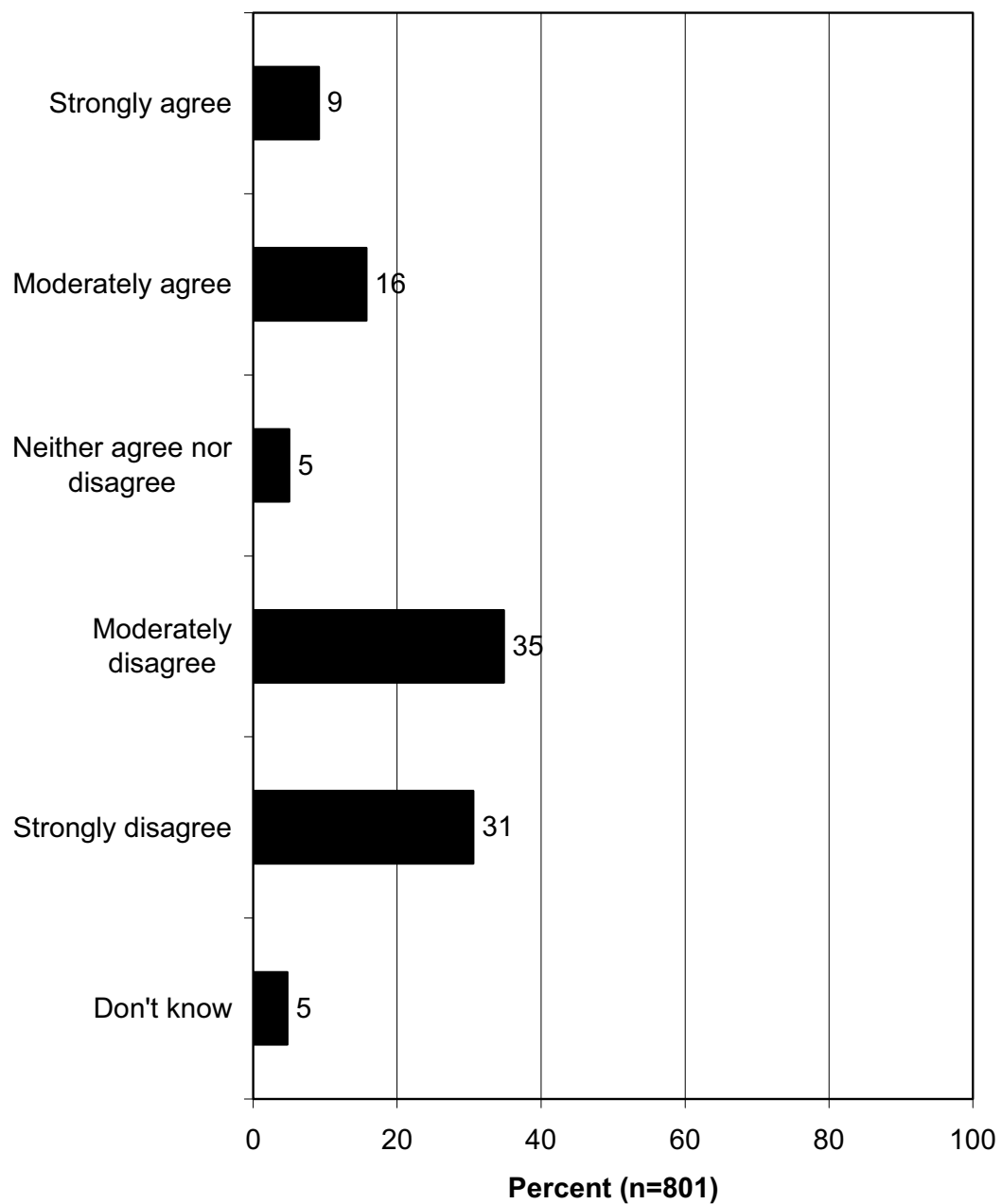
**Q75. When you think of the term, "commercial fishing," as it applies to California, do you think primarily of large foreign factory ships, large U.S. corporations, or small family-run fishing boats?**



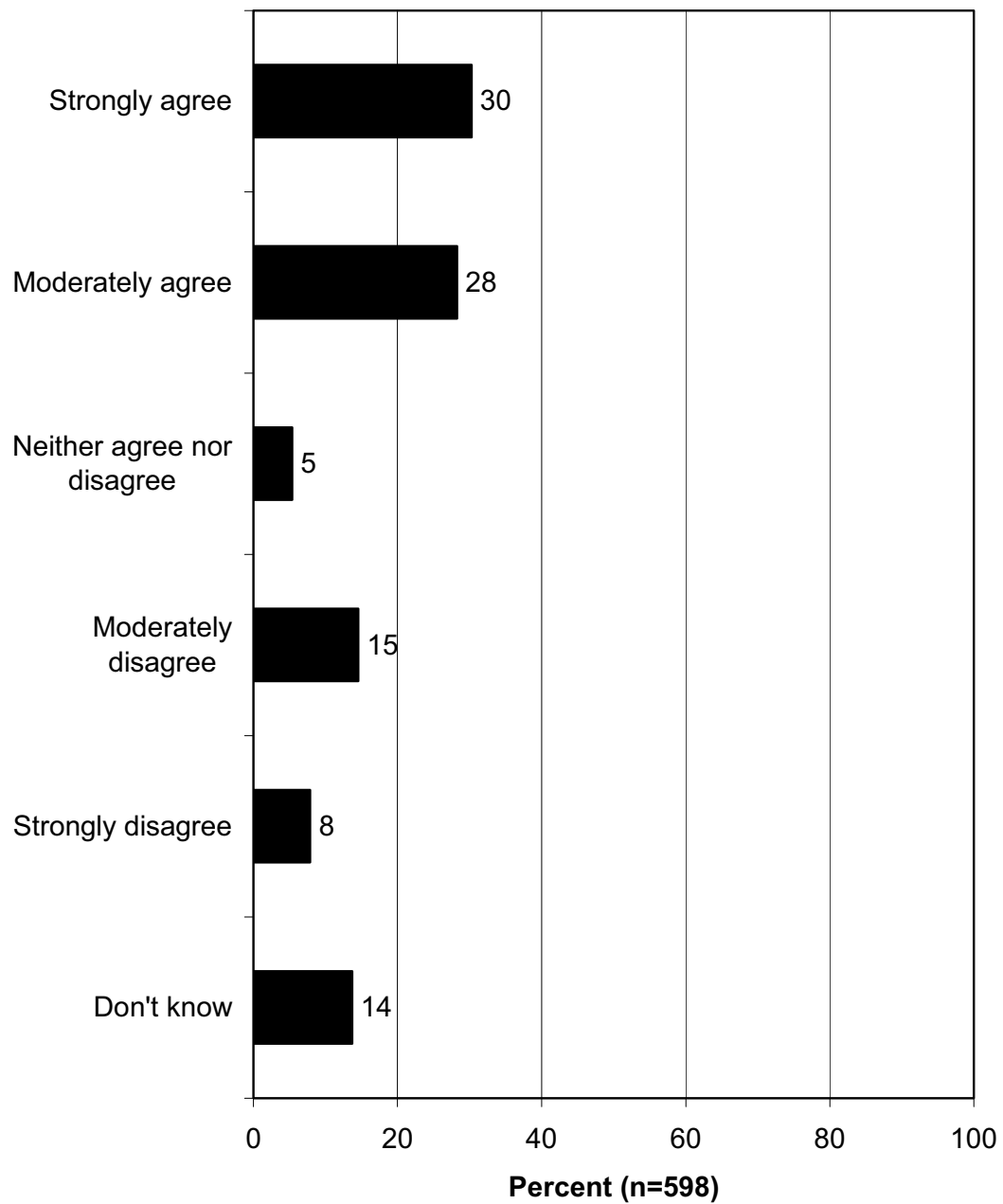
**Q20. What about commercial fishing? (How important is commercial fishing to California's economy?) (The scale is 0-10, where 0 is not at all important, and 10 is extremely important.)**



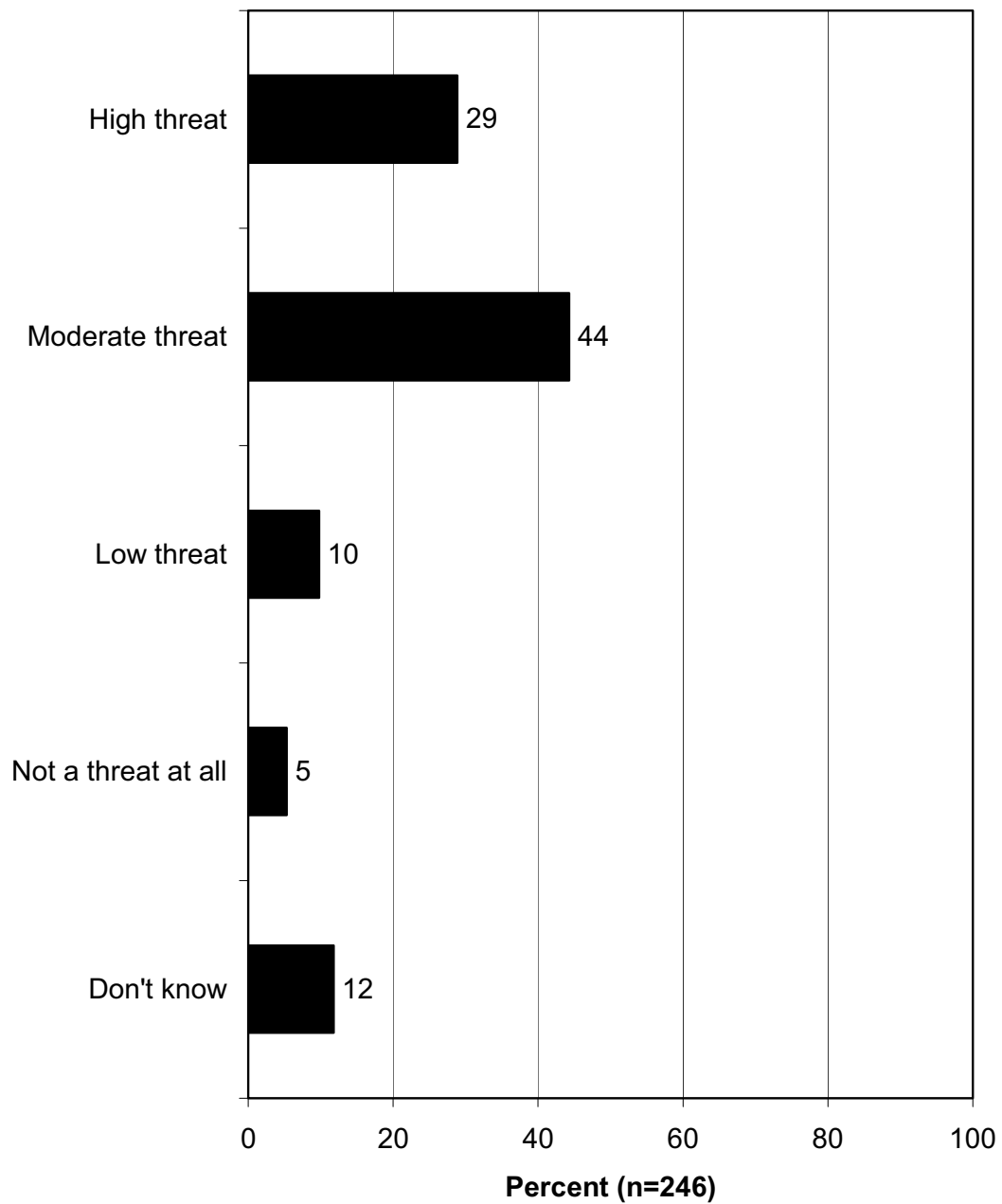
**Q66. Do you agree or disagree that fishing harms the ocean?**



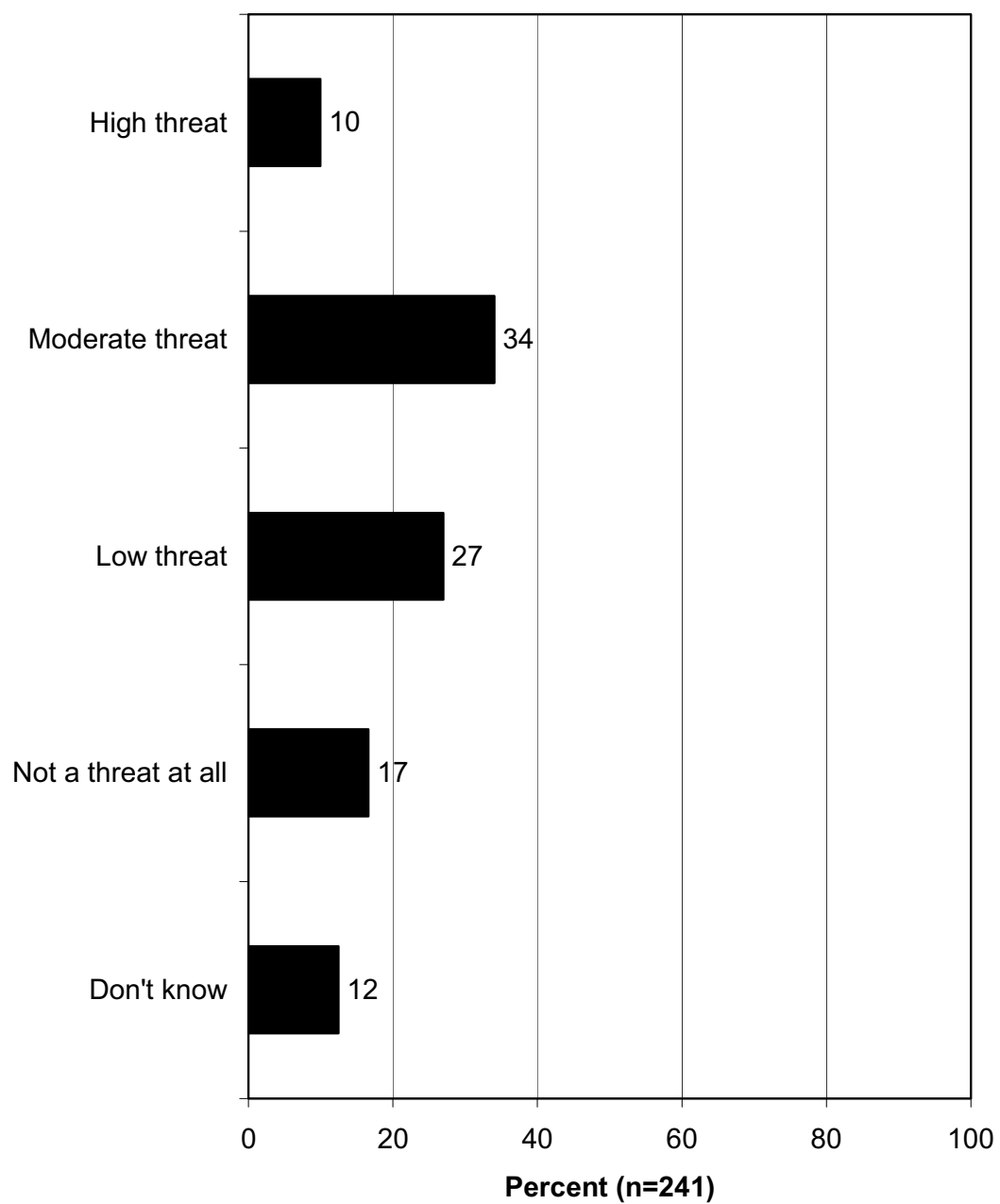
**Q68. Do you agree or disagree that large corporate commercial fishing companies in California are harming the ocean's fisheries?**



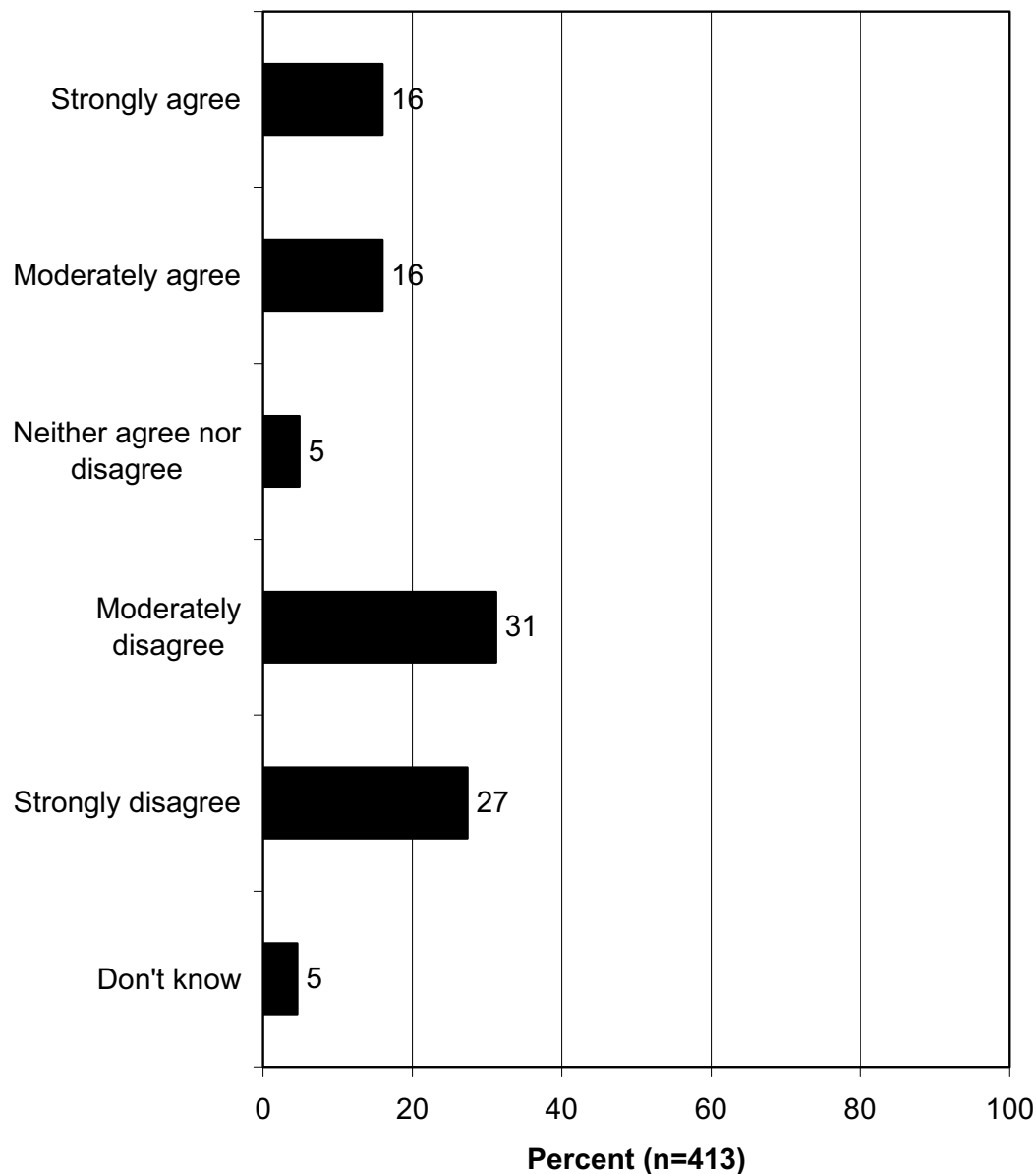
**Q30. What about corporate commercial fishing companies? (How much of a threat are these to California's marine waters, habitat, and fisheries?)**



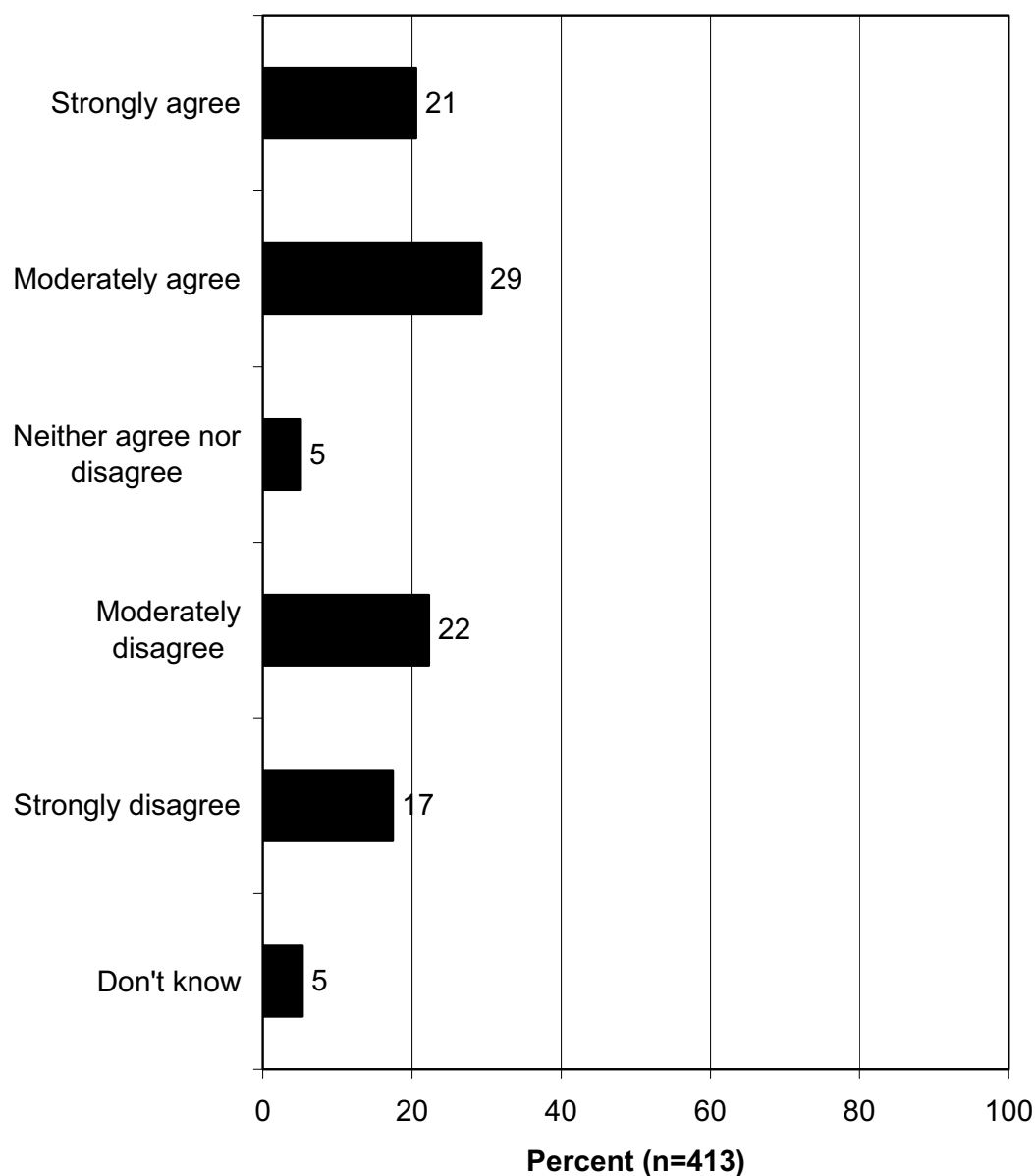
**Q32. What about family-run commercial fishing boats? (How much of a threat are these to California's marine waters, habitat, and fisheries?)**



**Q87. If scientific evidence shows that fisheries populations are declining, California's coastal fisheries should be fully protected, with no commercial or recreational fishing allowed. (Do you agree or disagree with this statement?)**

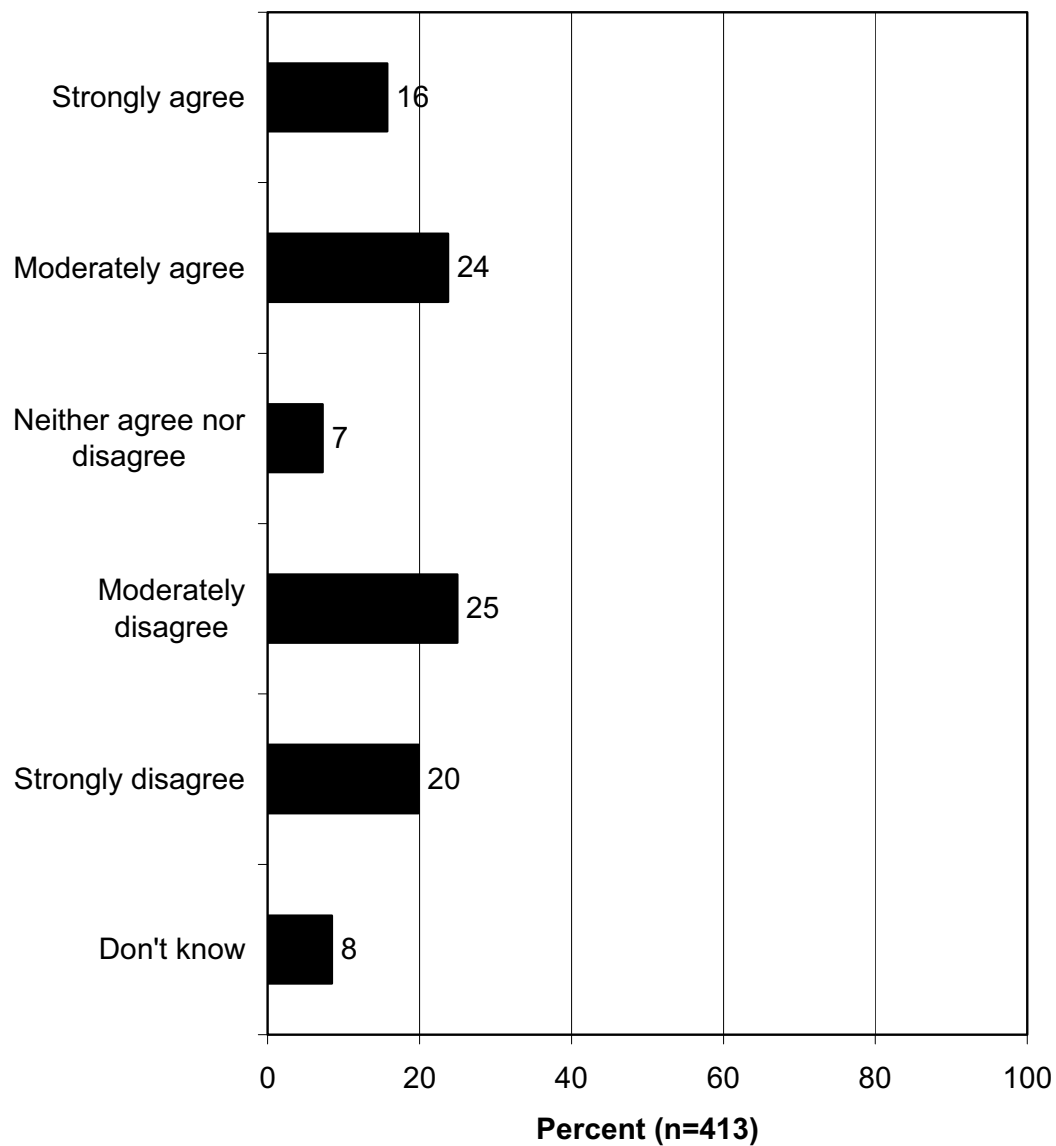


**Q88. If scientific evidence shows that fish populations are declining, commercial fishing should be banned from California's coastal waters, but recreational fishing is okay. (Do you agree or disagree with this statement?)**

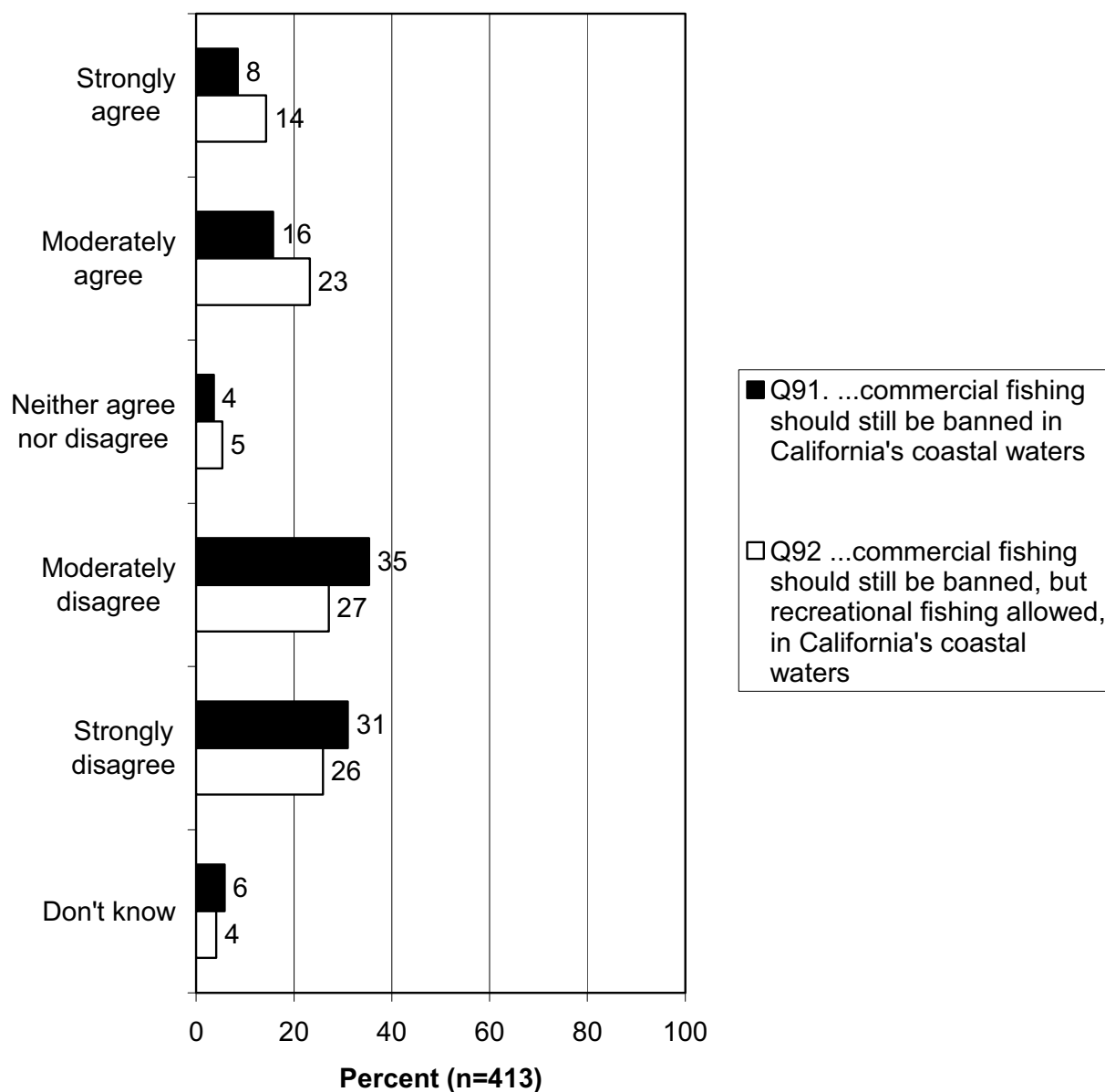




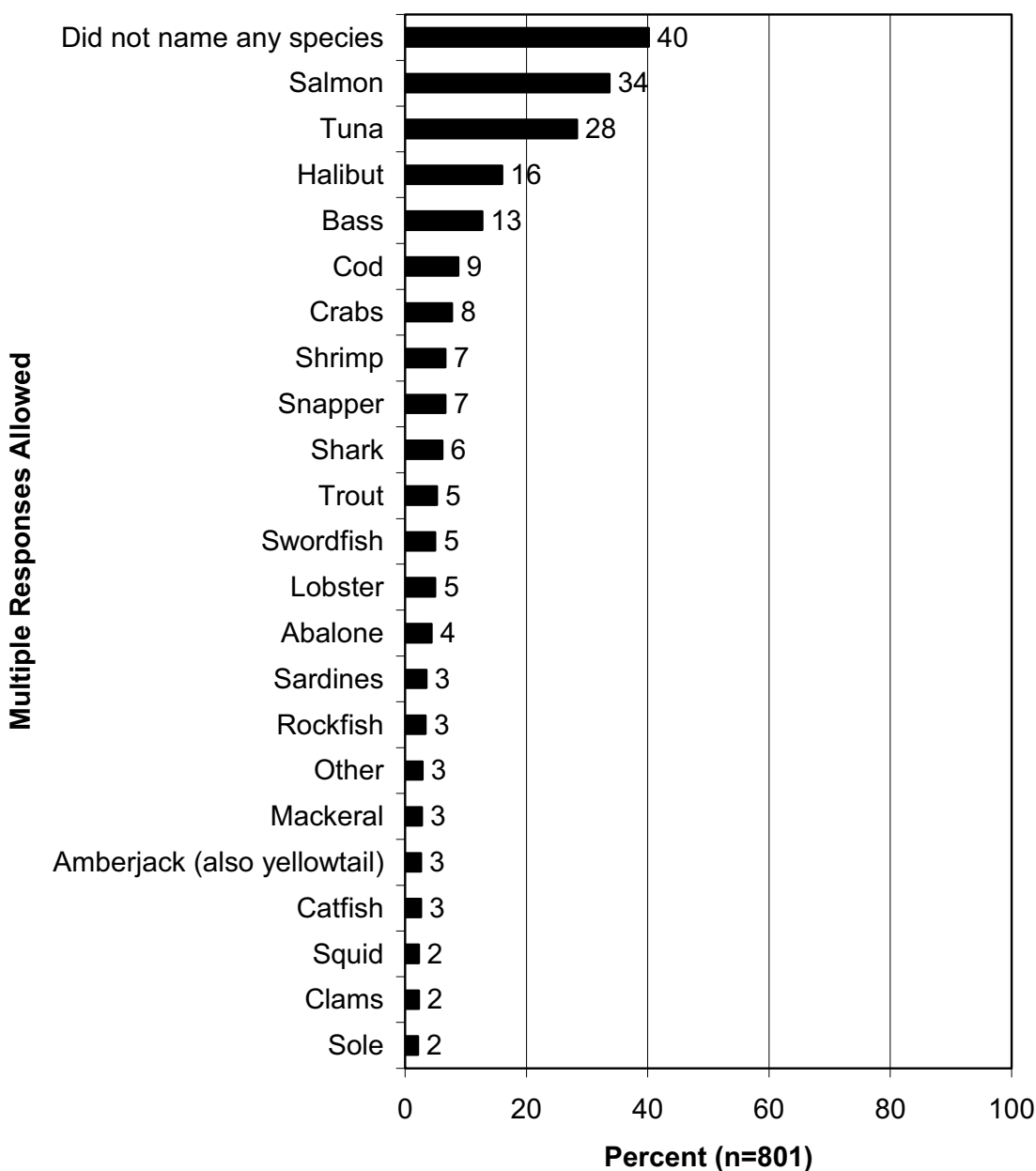
**Q89. If scientific evidence shows that fish populations are declining, commercial fishing should be banned, even if it means that commercial fishermen's livelihood will be ended. (Do you agree or disagree with this statement?)**



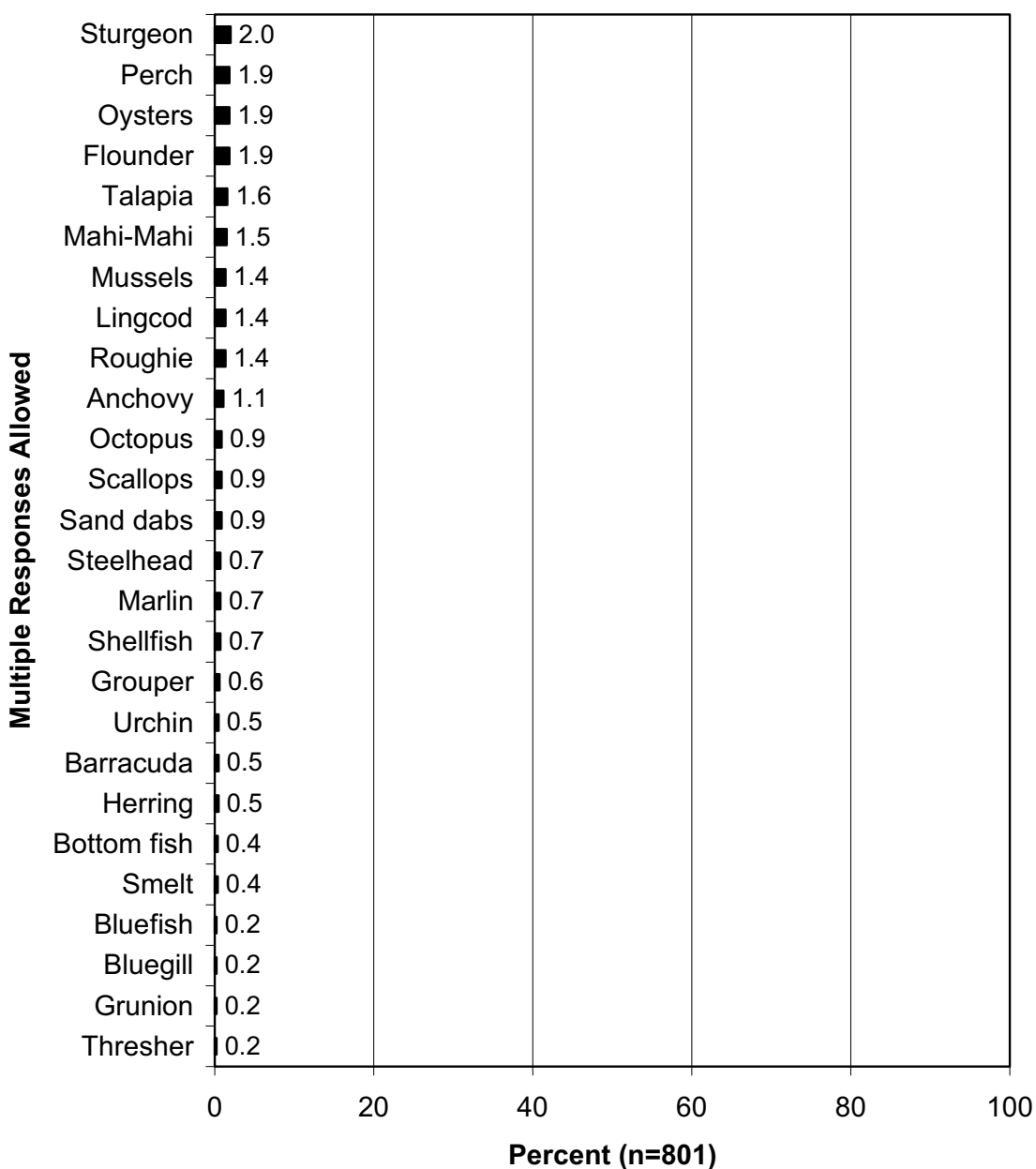
**Q91 and 92. If scientific evidence shows that fish stocks are stable or already recovering, do you agree or disagree that:**



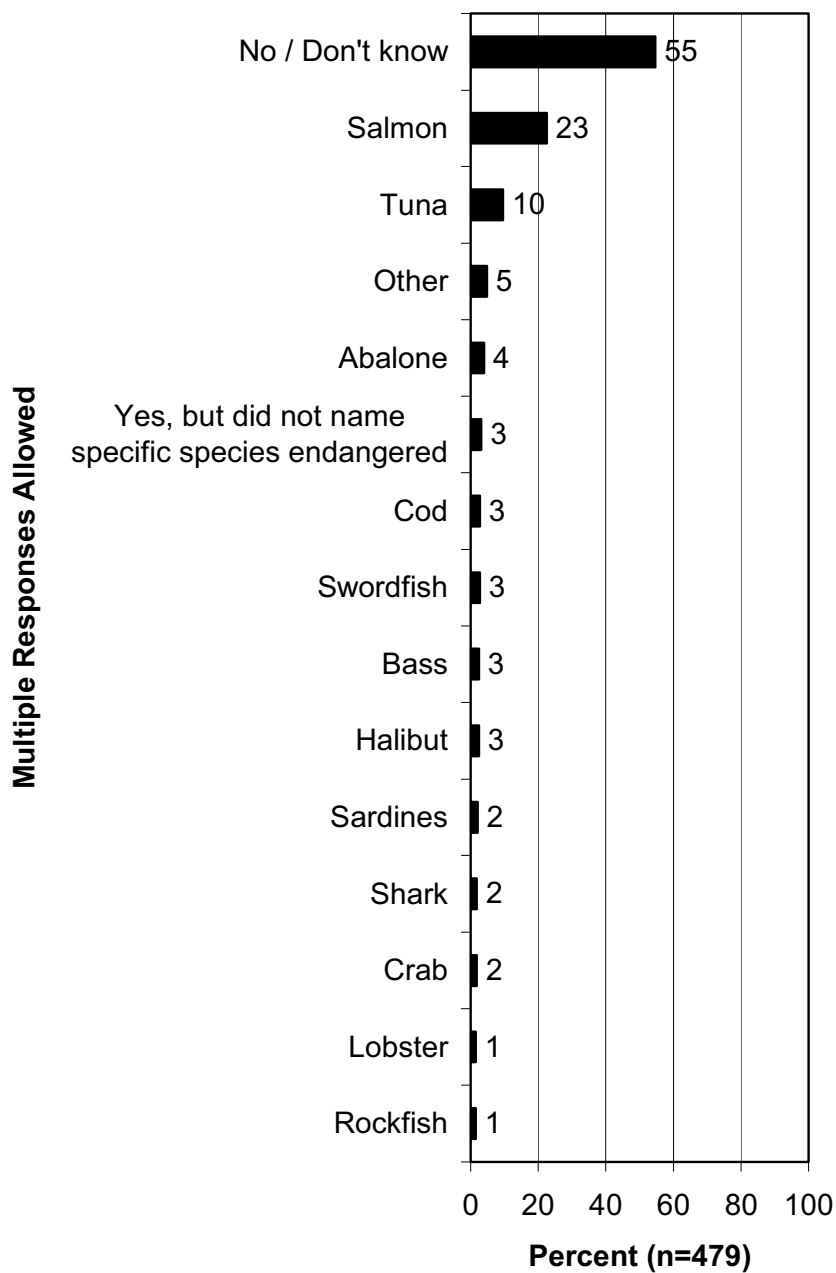
**Q99. Please tell me all the fish species that you can think of that are or were commercially fished in California's coastal waters. Remember that we are only discussing commercial fishing here, not recreational fishing. (Part 1.)**



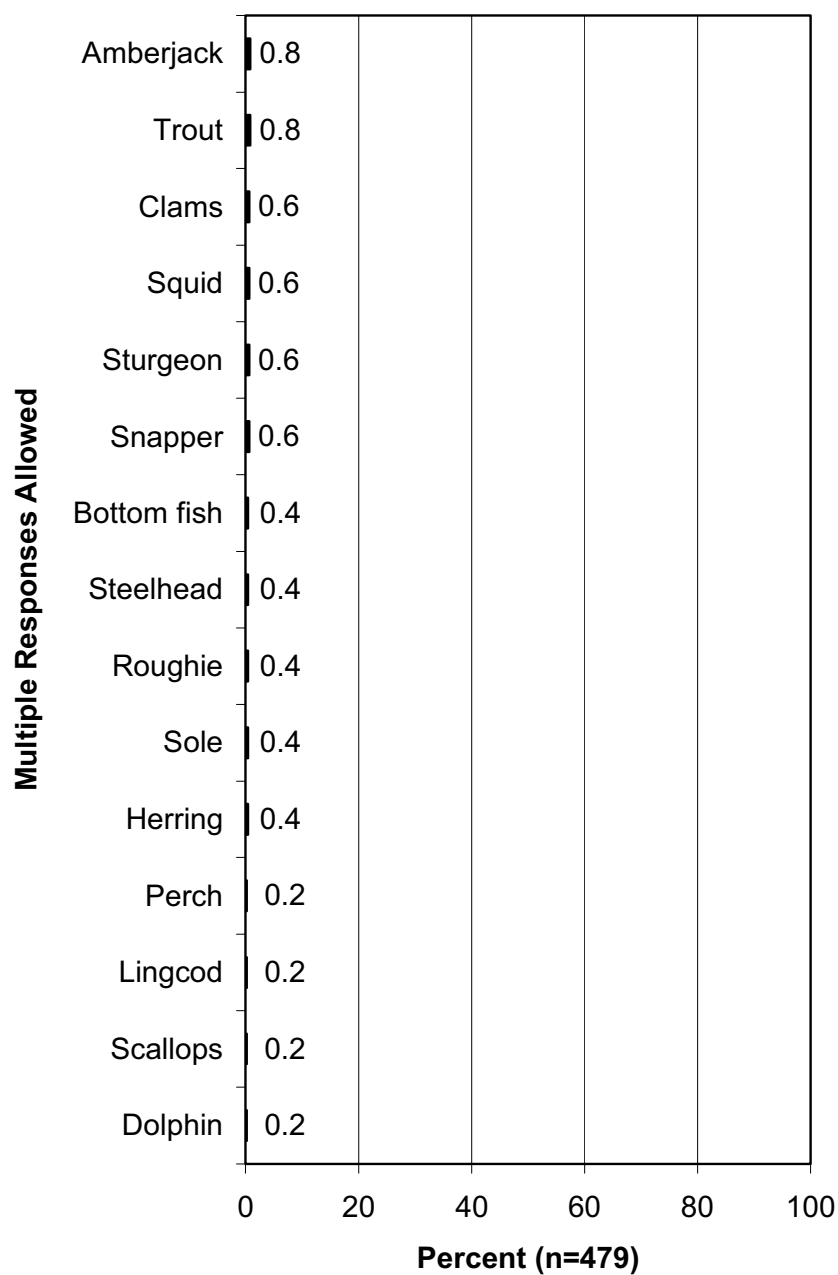
**Q99. Please tell me all the fish species that you can think of that are or were commercially fished in California's coastal waters. Remember that we are only discussing commercial fishing here, not recreational fishing. (Part 2.)**



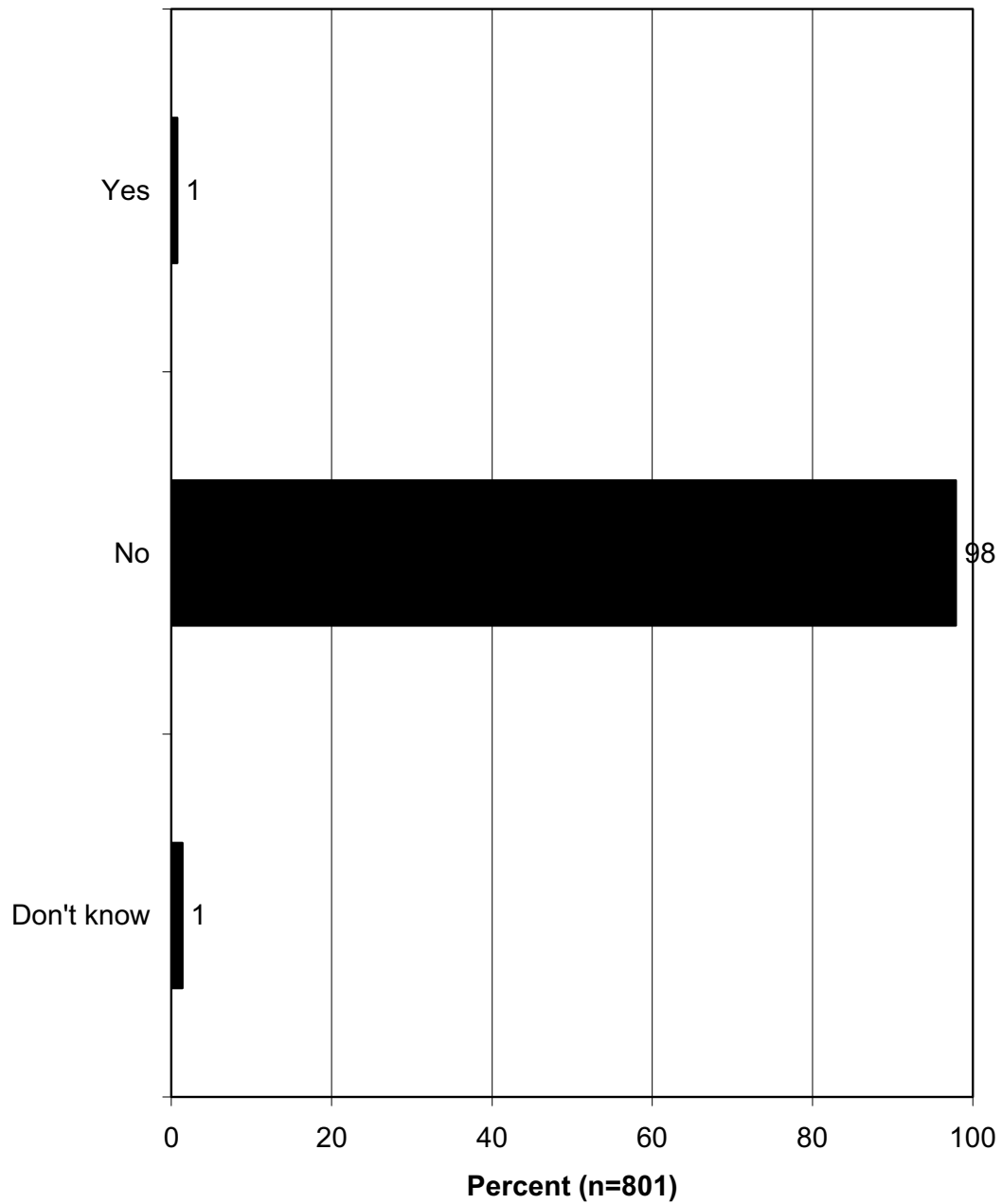
**Q100. Are any of the fisheries you just named in trouble? (Asked of those who named commercially fished species.) (Part 1.)**



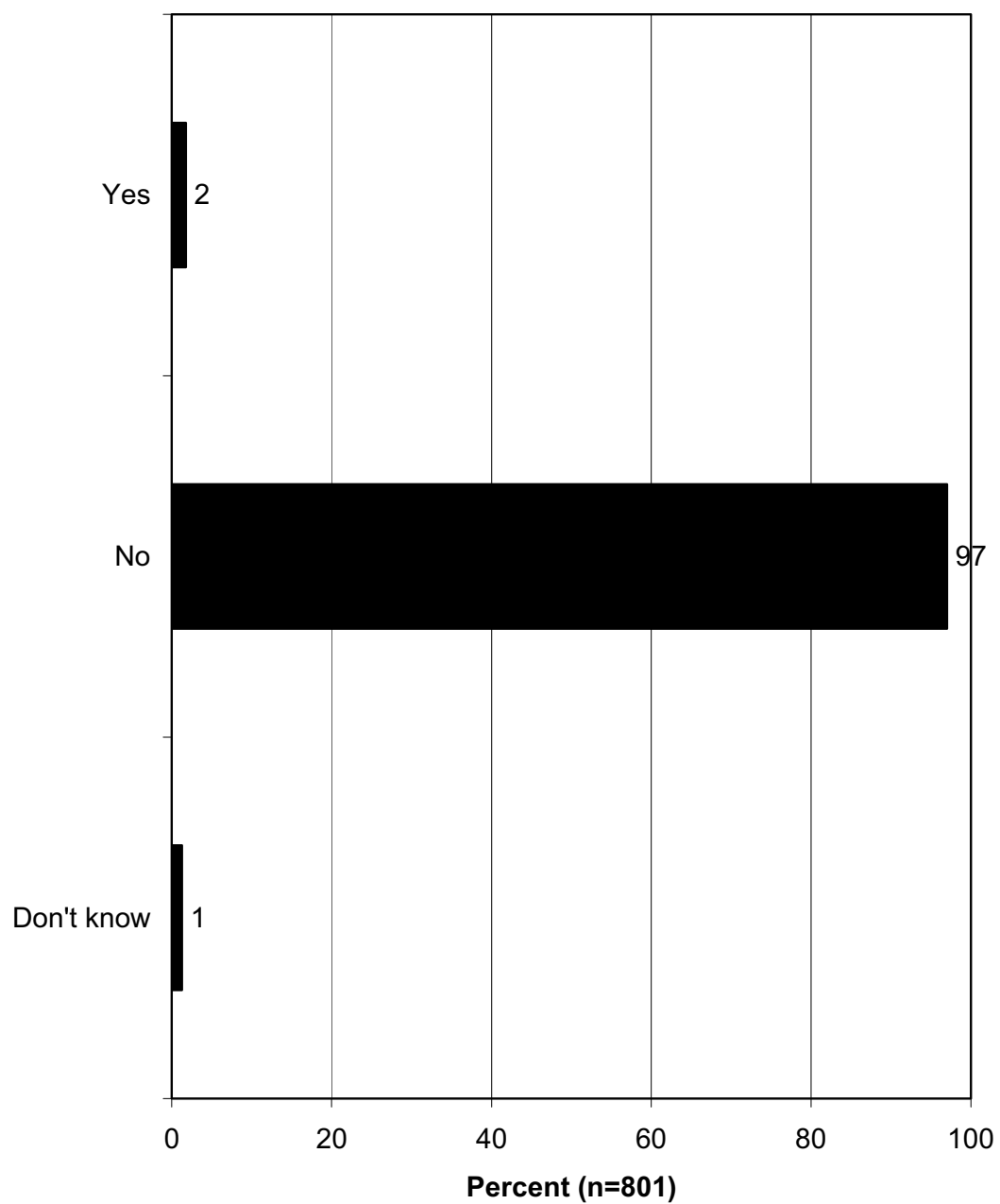
**Q100. Are any of the fisheries you just named in trouble? (Asked of those who named commercially fished species.) (Part 2.)**



**Q102. Do you personally work in the commercial or recreational fishing industry or closely related field?**

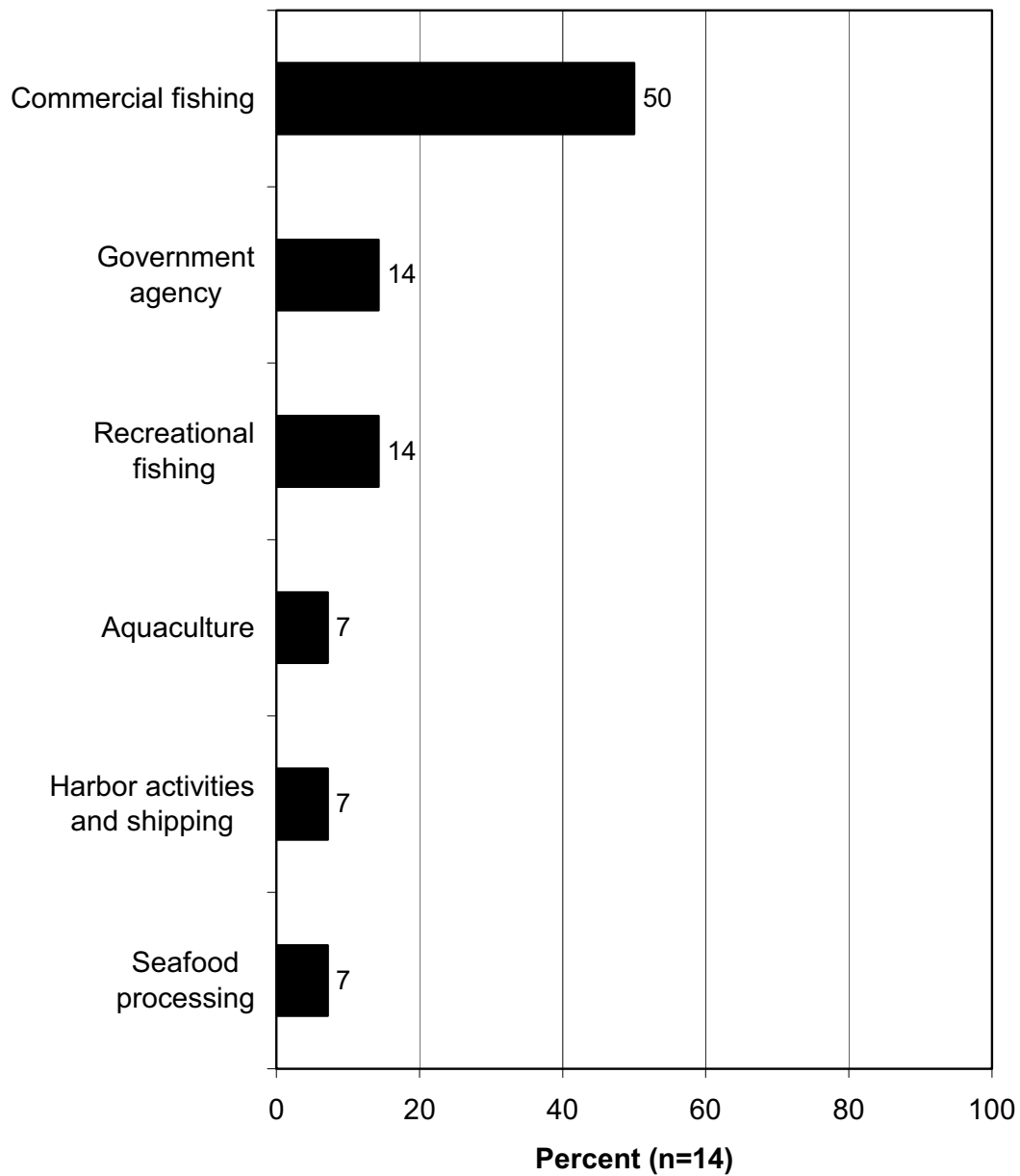


**Q104. Do any of your family work in the commercial or recreational fishing industry or a closely related field?**

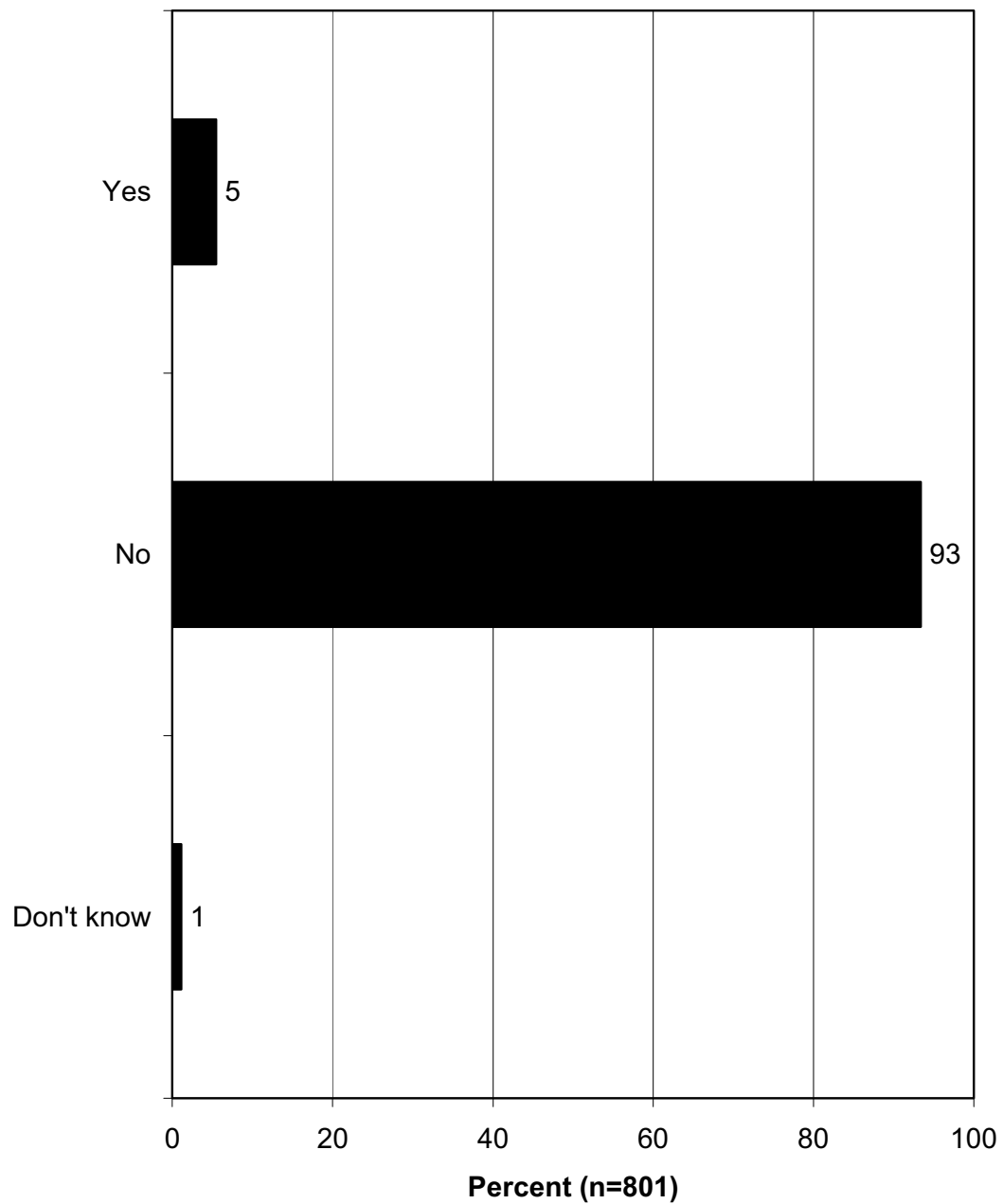




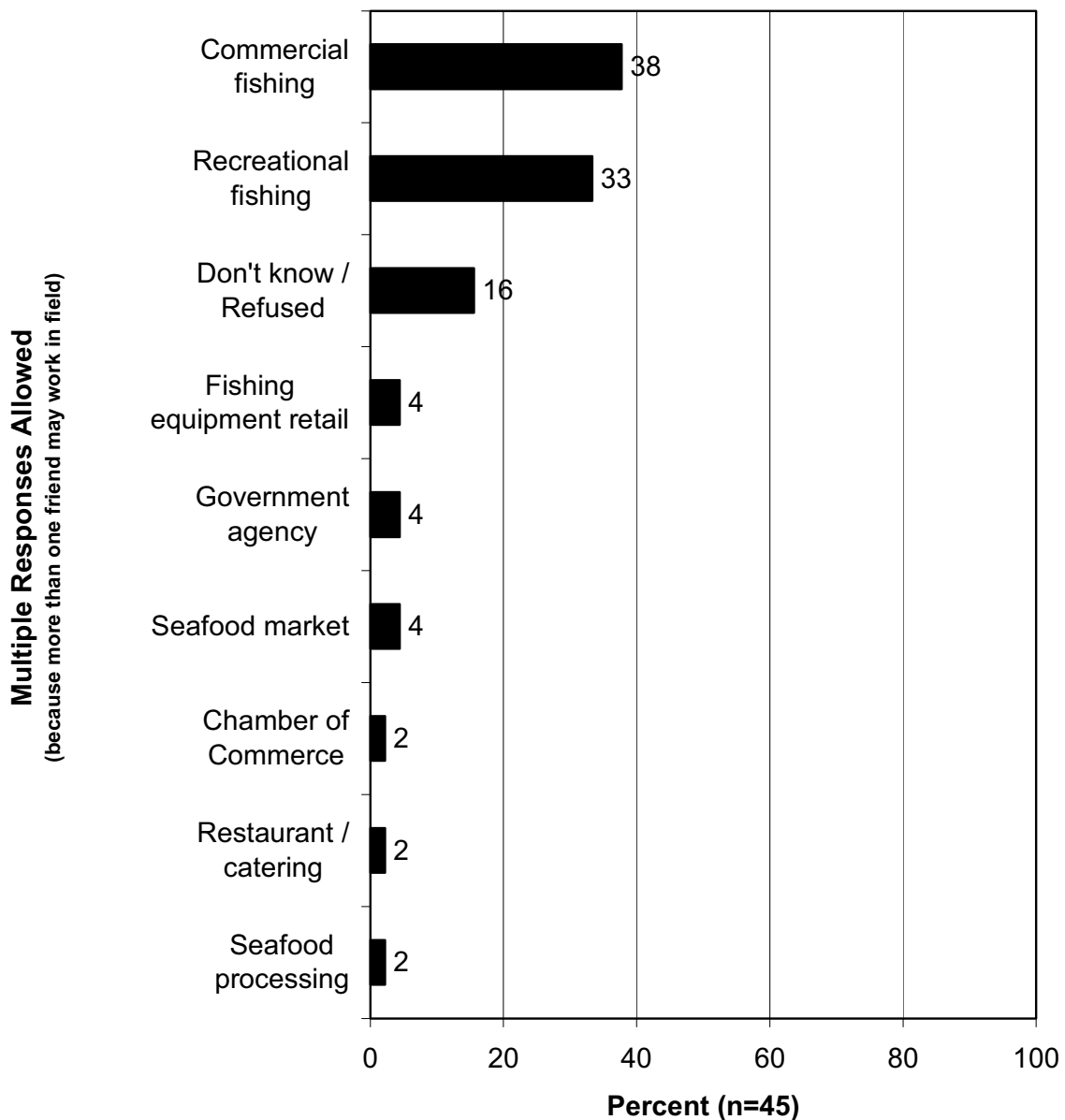
**Q105. What is the commercial or recreational fishing industry or closely related field in which your family works? (Asked of those who have family working in the commercial or recreational fishing industry or closely related field.)**



**Q106. Do any of your friends work in the commercial or recreational fishing industry or a closely related field?**



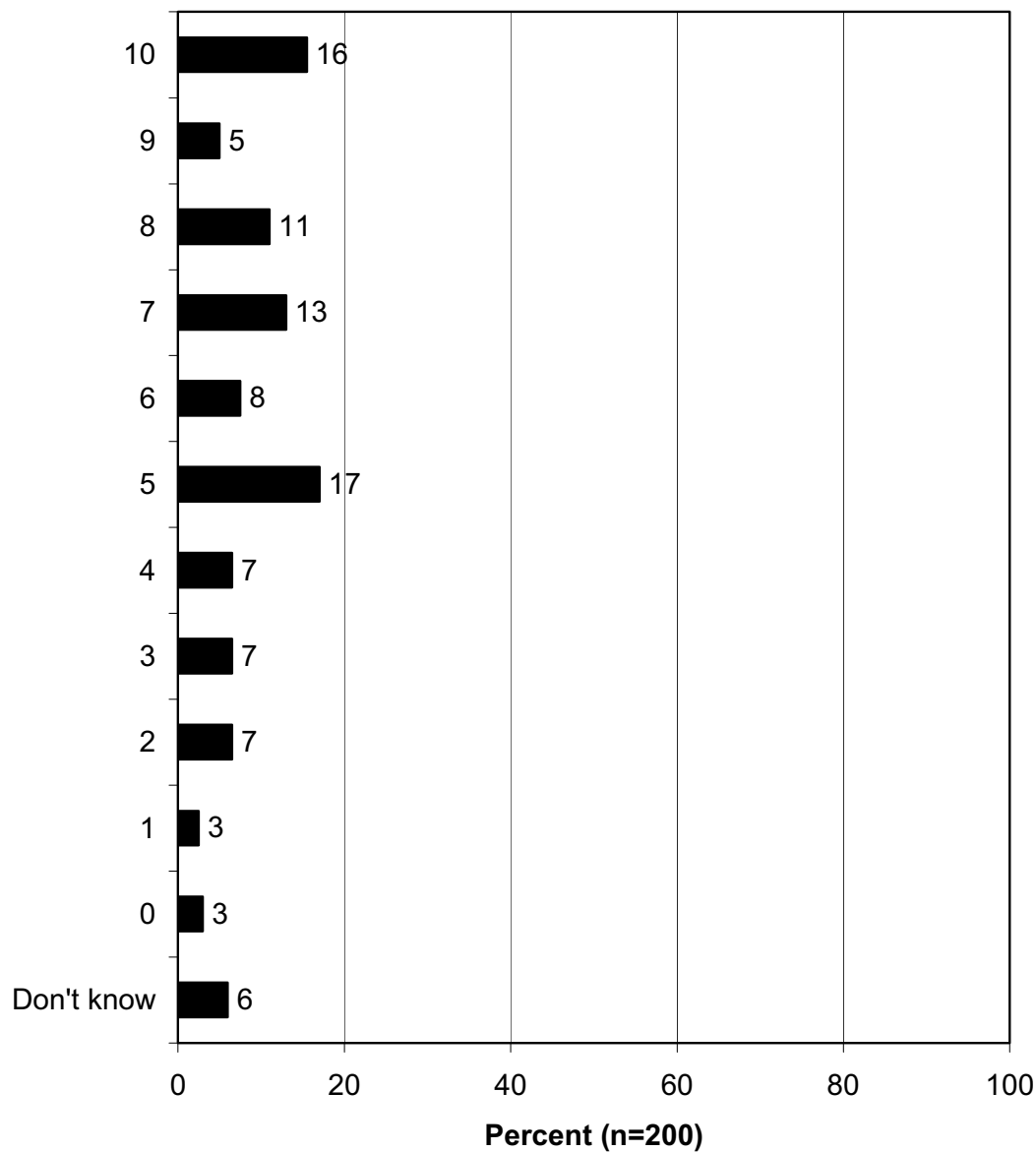
**Q107. What is the commercial or recreational fishing industry or closely related field in which your friend(s) work? (Asked of those who have friend(s) working in the commercial or recreational fishing industry or closely related field.)**



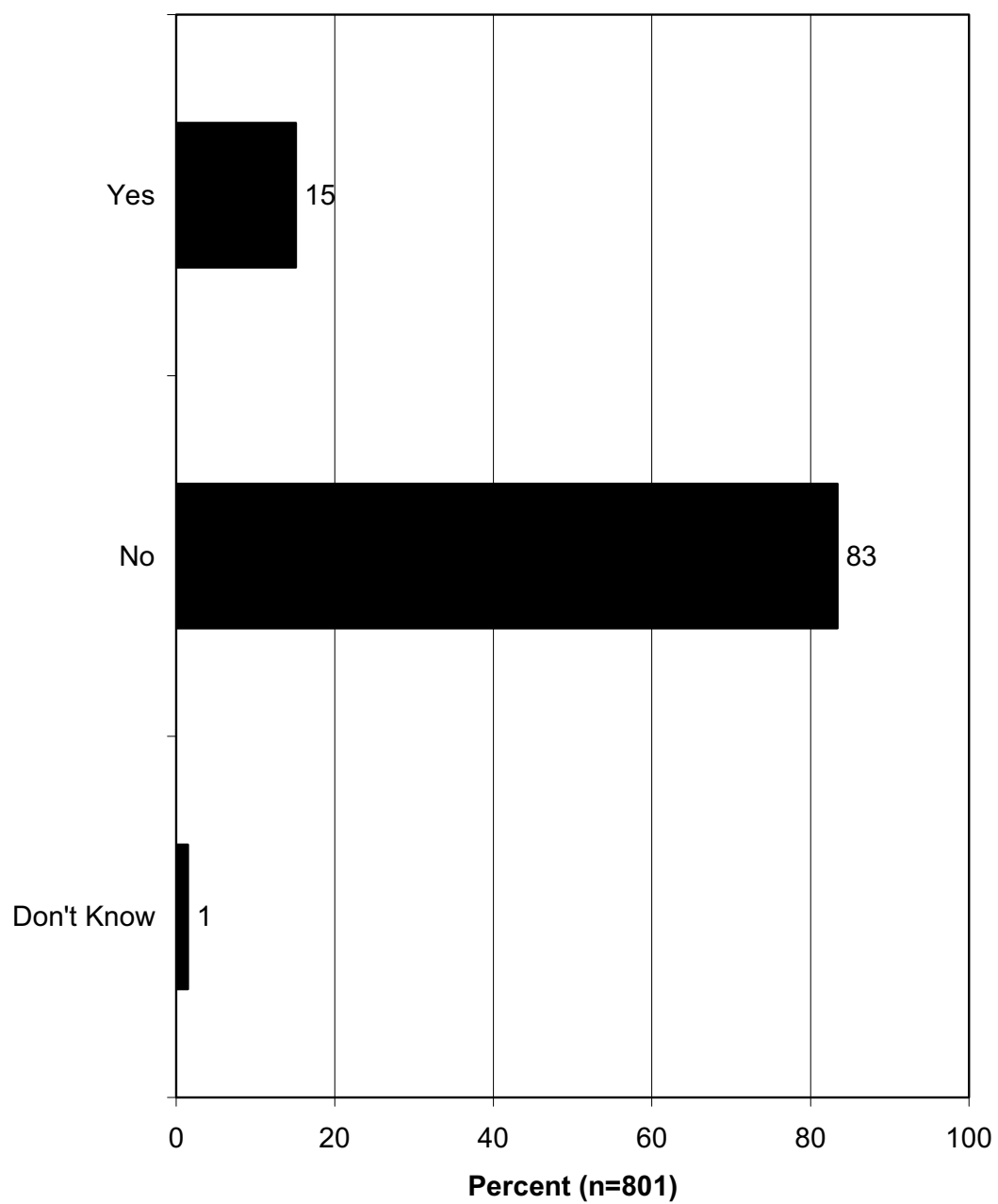
## CONCERNS REGARDING RECREATIONAL FISHING IN CALIFORNIA

- The survey asked Californians to rate the importance of recreational fishing to California's economy, and they think it is somewhat important: just barely a majority (52%) rated it above the midpoint, and 69% rated it at the midpoint or higher. However, a quarter (25%) rated it less than the midpoint in importance.
- A substantial percentage of California residents (15%) consider themselves to be recreational saltwater anglers.
- Recreational fishing is not perceived as a great threat to California's marine waters, habitat, and fisheries: only 5% rate it as a high threat, while 66% say it is a low threat or not a threat at all. Furthermore, 76% disagree that people who recreationally fish in California are harming the ocean's fisheries (only 16% agree). On the other hand, the opportunity to be able to recreationally fish is perceived as important (even if the respondent does not personally fish himself or herself): an overwhelming majority (88%) rate ensuring that the opportunity exists at the midpoint or higher in the rating scale, and 29% rate it 10.
- Disagreement (59%) far exceeds agreement (32%) for a complete ban of fishing, *both commercial and recreational*, if scientific evidence shows that fish populations are declining. However, agreement is higher if *recreational* fishing is allowed while *commercial* fishing is still banned, if scientific evidence shows that fish populations are declining: 50% agree and 40% disagree.
- An overwhelming majority of Californians (84%) agree that the State of California and local governments should work to keep charter boat opportunities available to the public, given that charter boat businesses provide opportunities to people who otherwise would not be able to boat because they cannot afford a boat of their own. While the question did not specifically state that people would be fishing while on these charter boats, many charter boats are hired for fishing excursions. (This graph is shown in the section of this report titled, "Fisheries and Tourism.")

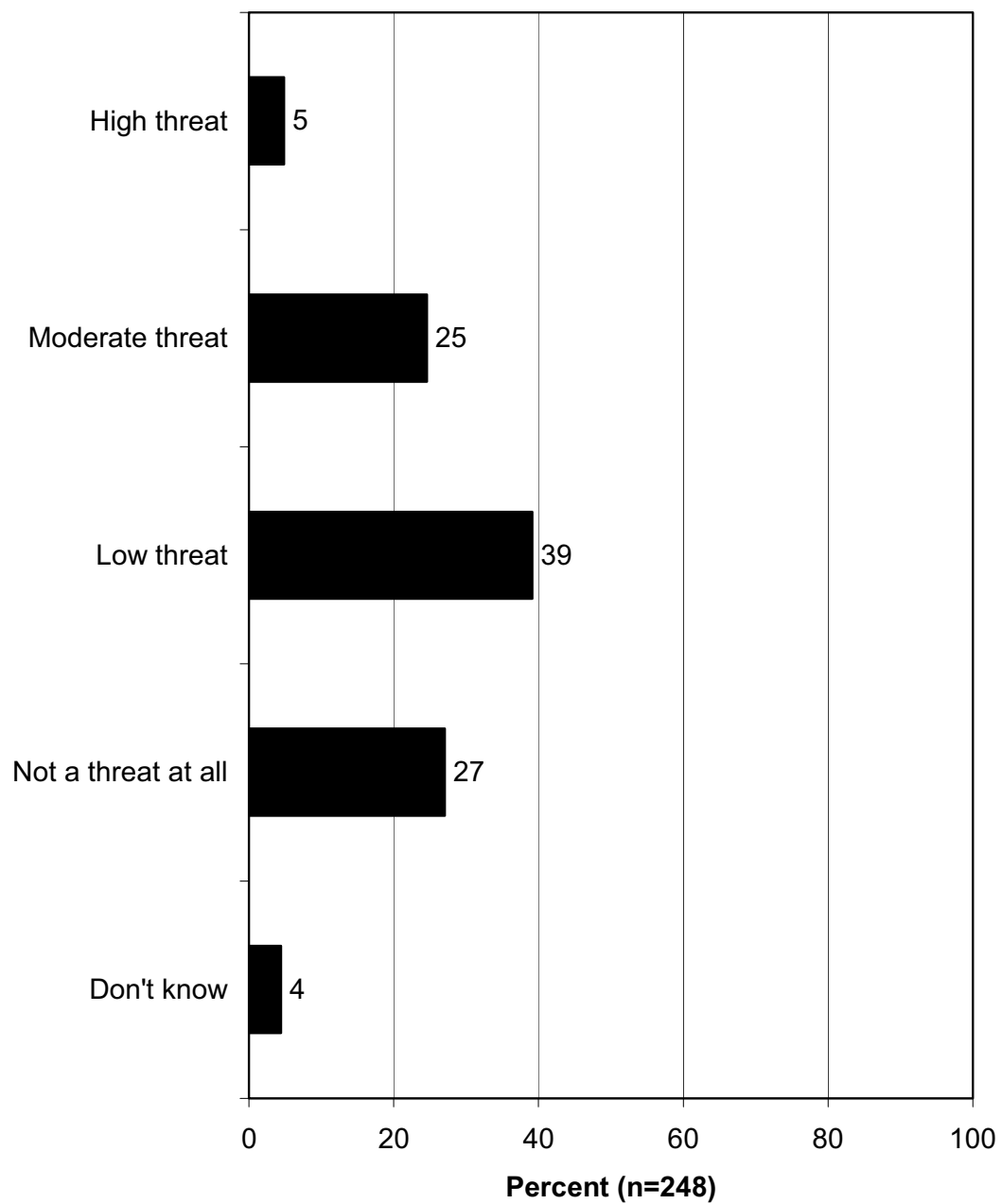
**Q23. What about the recreational saltwater fishing industry? (How important is the recreational saltwater fishing industry to California's economy?) (The scale is 0-10, where 0 is not at all important, and 10 is extremely important.)**



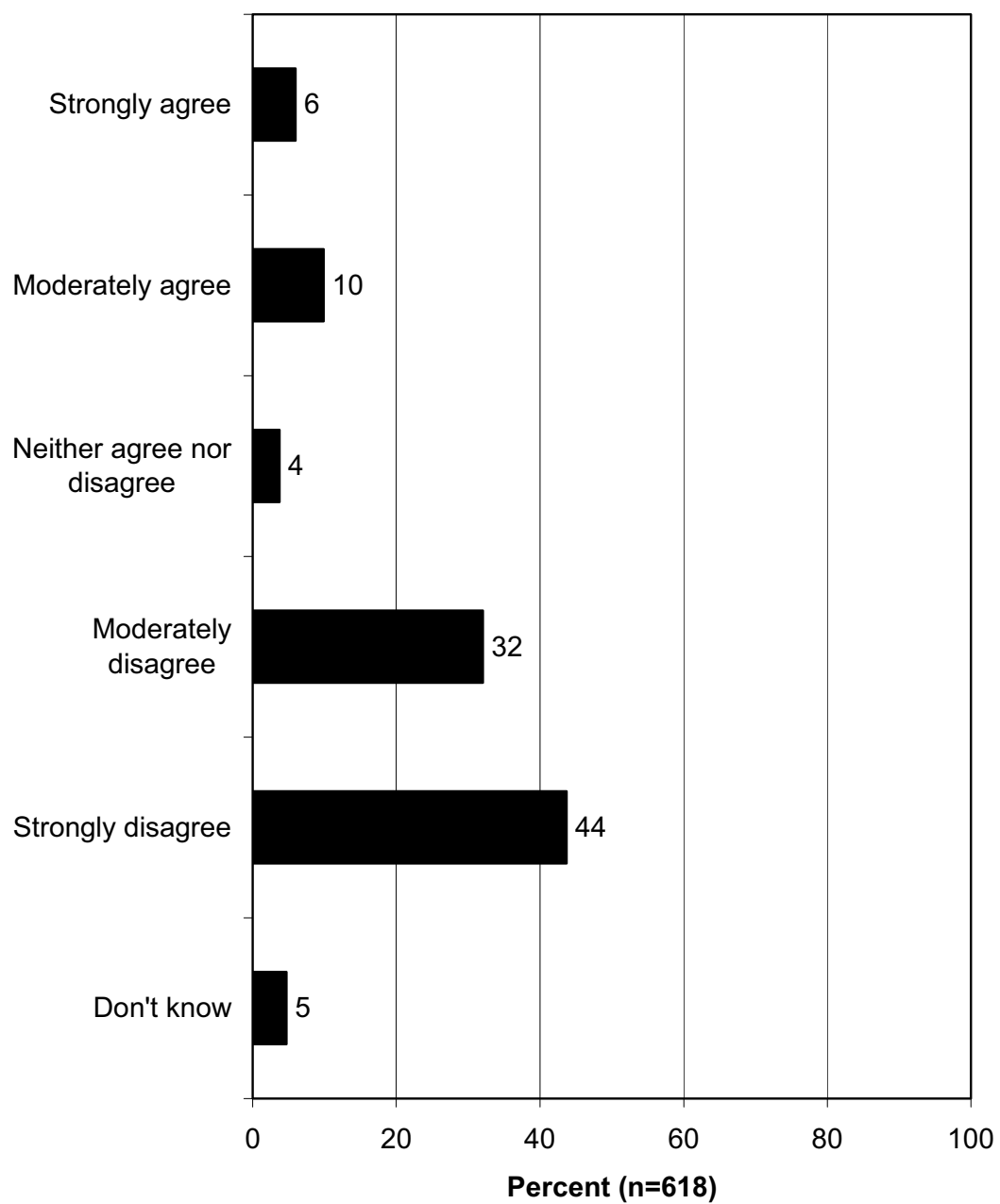
**Q108. Do you consider yourself a recreational saltwater angler?**



**Q31. What about recreational fishing? (How much of a threat is this to California's marine waters, habitat, and fisheries?)**

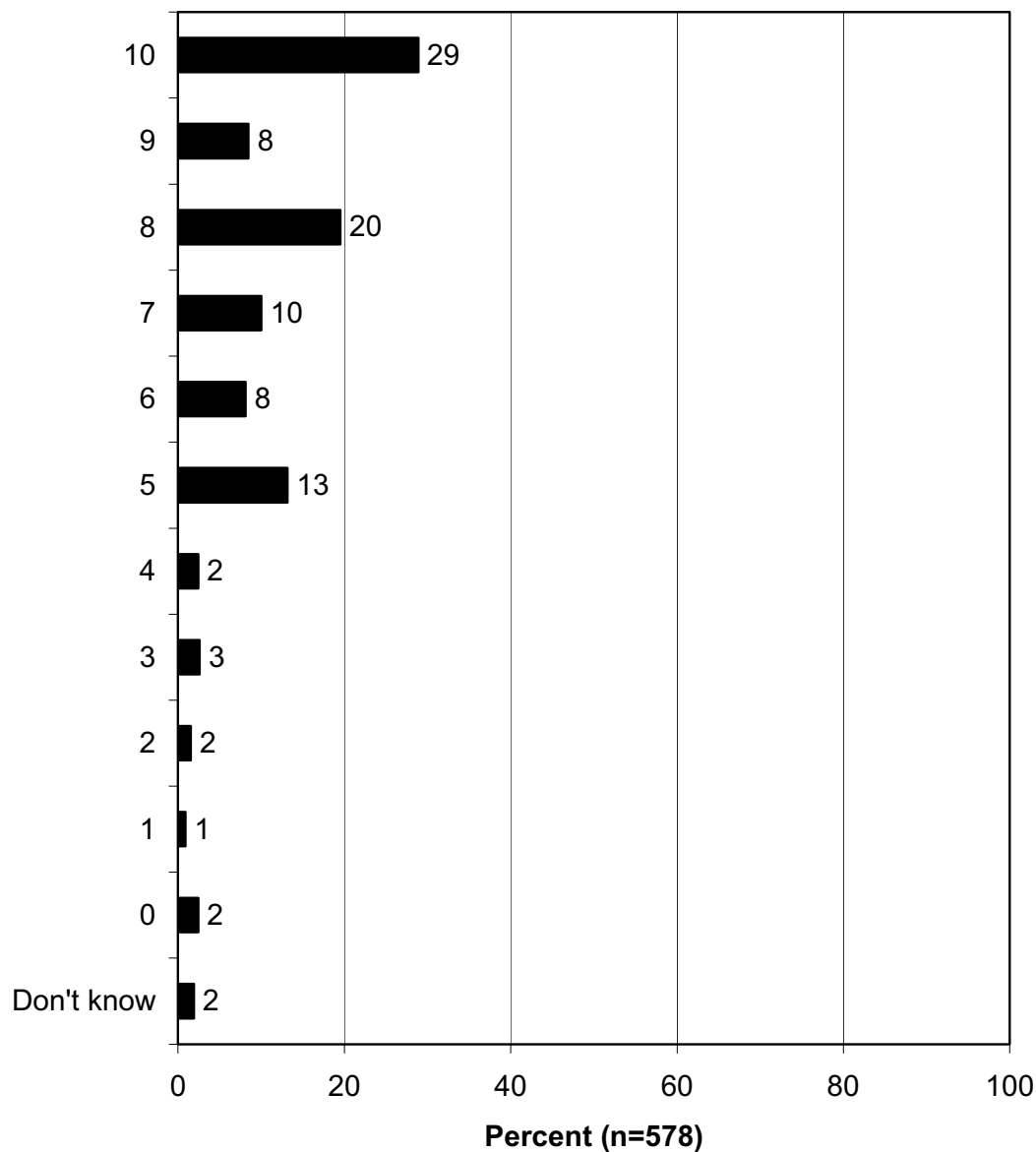


**Q69. Do you agree or disagree that people who fish recreationally in California are harming the ocean's fisheries?**

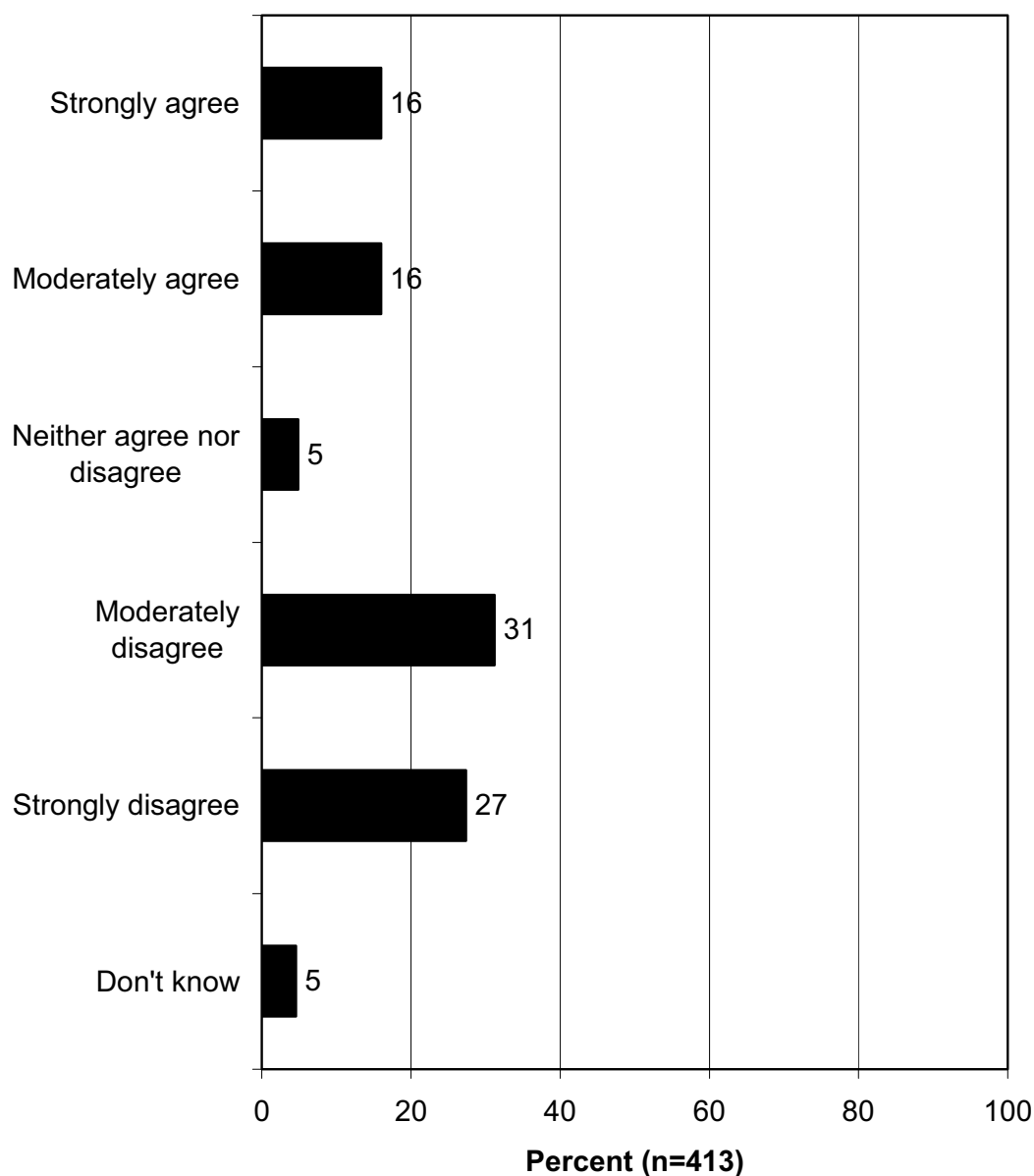




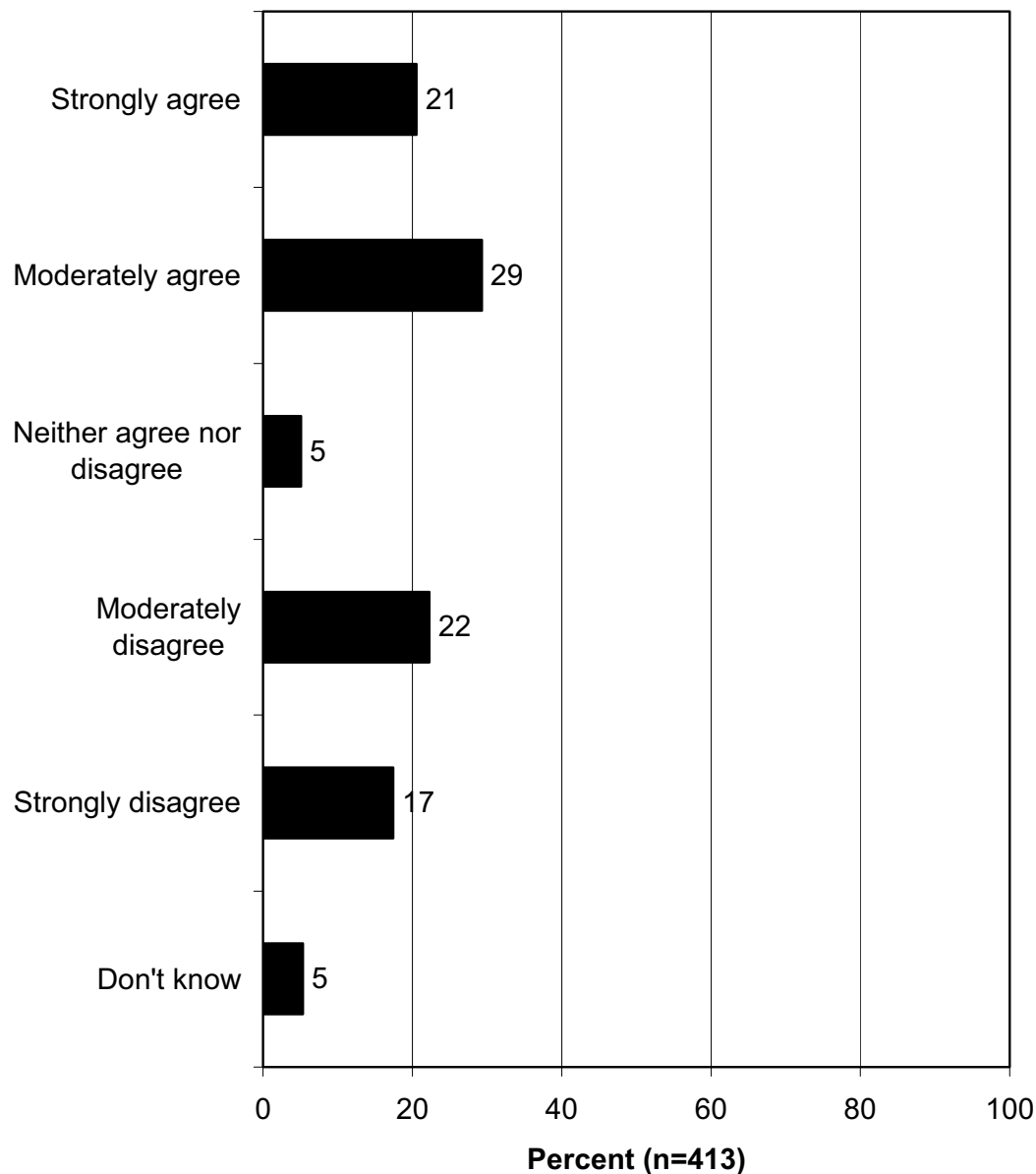
**Q52. What about knowing that people have the opportunity to recreationally fish in coastal waters in California, regardless of whether you fish? (How important is it to you personally, on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Q87. If scientific evidence shows that fisheries populations are declining, California's coastal fisheries should be fully protected, with no commercial or recreational fishing allowed. (Do you agree or disagree with this statement?)**



**Q88. If scientific evidence shows that fish populations are declining, commercial fishing should be banned from California's coastal waters, but recreational fishing is okay. (Do you agree or disagree with this statement?)**

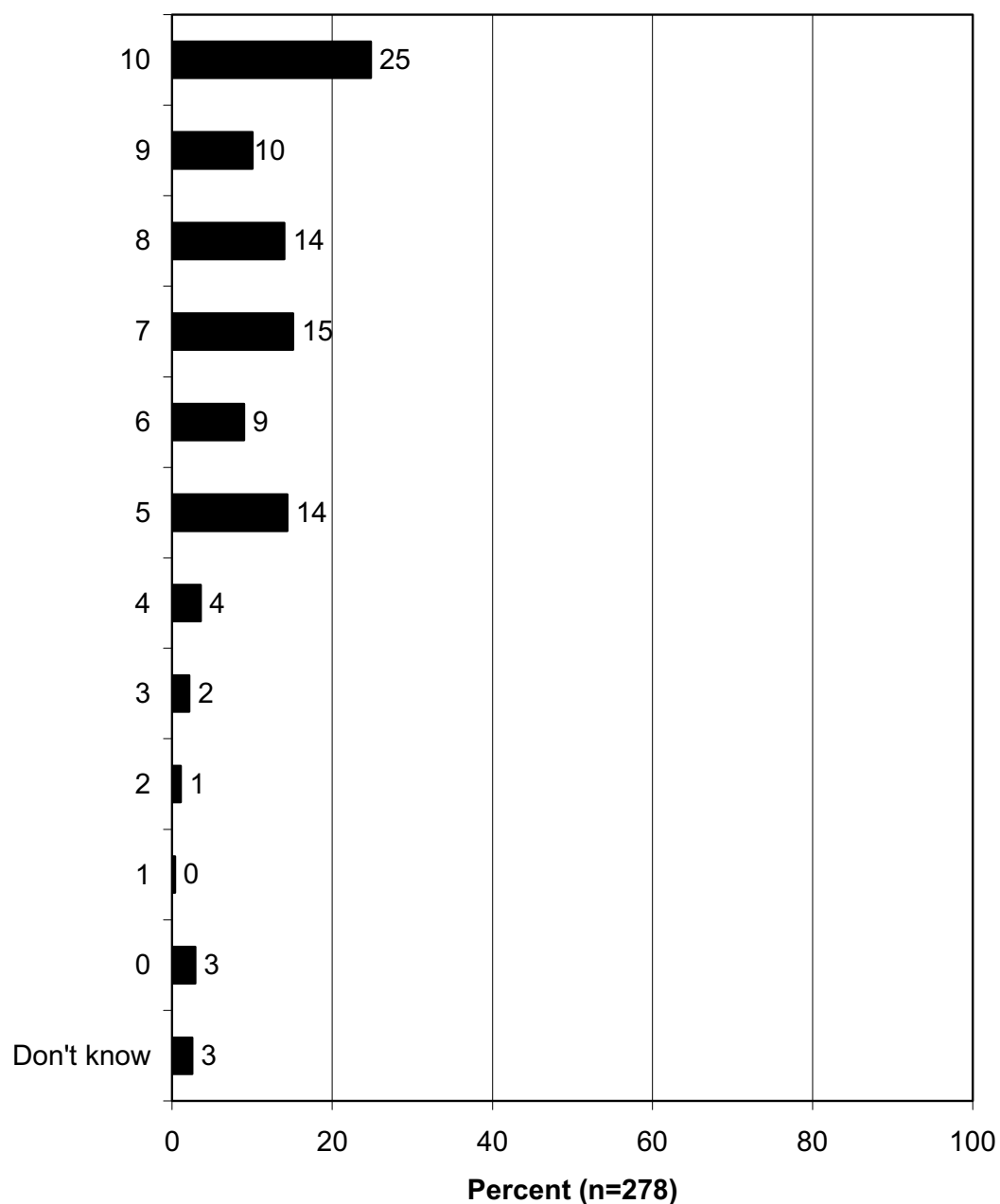


## CONCERNS REGARDING FAMILY-RUN BUSINESSES IN CALIFORNIA

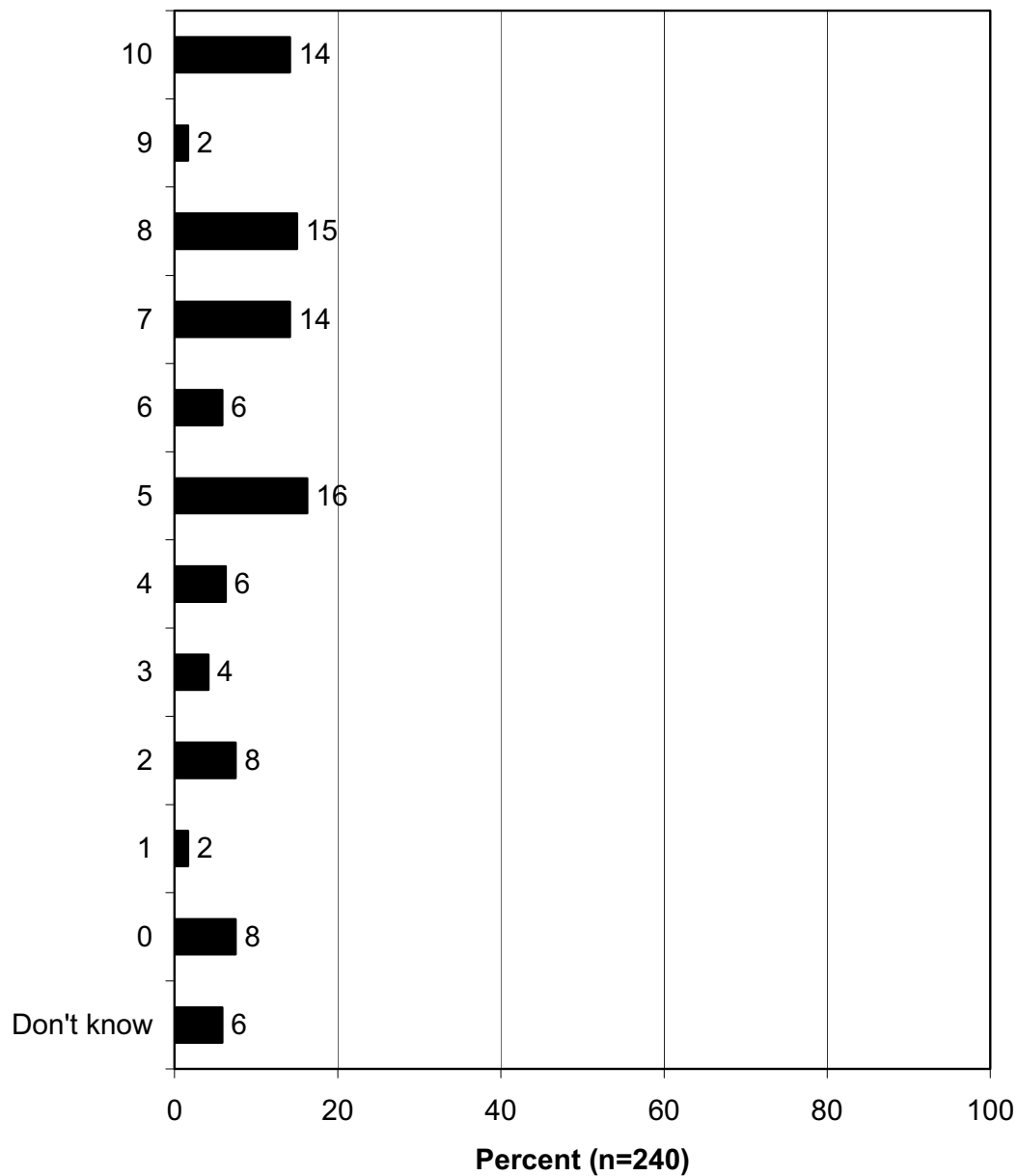
- Californians express much concern about the health of small family-run businesses: a quarter rate their concern about this at 10 (on a 0 to 10 scale), and the overwhelming majority (87%) rate their concern at the midpoint or higher. Compare this to their ratings of concern about large corporations in California: only 14% rate their concern about large corporations at 10, and 67% rate their concern at the midpoint or higher.
- Californians indicate a desire that family-run fishing boats can work and harvest fish sustainably in California. When asked how important it is to them that they know that family-run fishing boats can harvest fish sustainably in California, 80% to 84% give a rating at the midpoint or higher (note that one question asked part of the sample about family-run *commercial* fishing boats and the other asked a different part of the sample about family-run fishing boats without the term “commercial,” and there was no marked difference in the two results).
- Californians indicate that they care that family-run commercial fishing boats operate in California’s waters. Only 23% of seafood consumers (those who consume seafood at least once a month) agree that they would be willing to forgo buying California seafood knowing that doing so would drive family-run commercial fishing boats in California out of business; 63% disagree.
- More Californians oppose (38%) than support (27%) adding additional fishing restrictions to California coastal waters if it means that family-run commercial fishing boats may go out of business. As a demonstration of the difficulty in making this choice, nearly a third answered this question with “don’t know” (29%). (This graph is shown in the section of this report titled, “Opinions Regarding Utilization, Harvest, and Management of Fisheries.”)
- When asked directly whether family-run commercial fishing boats are harming the ocean’s fisheries, the majority of Californians (55%) disagree, while 29% agree.

- Finally, the survey asked Californians what exactly they think of when the term, “commercial fishing,” is applied to California, and family-run commercial fishing boats are not primarily on their mind, as 59% think primarily of large foreign factory ships or large U.S. corporations, and only 28% think primarily of small family-run fishing boats. (This graph is shown in the section of this report titled, “Concerns Regarding Commercial Fishing in California.”)

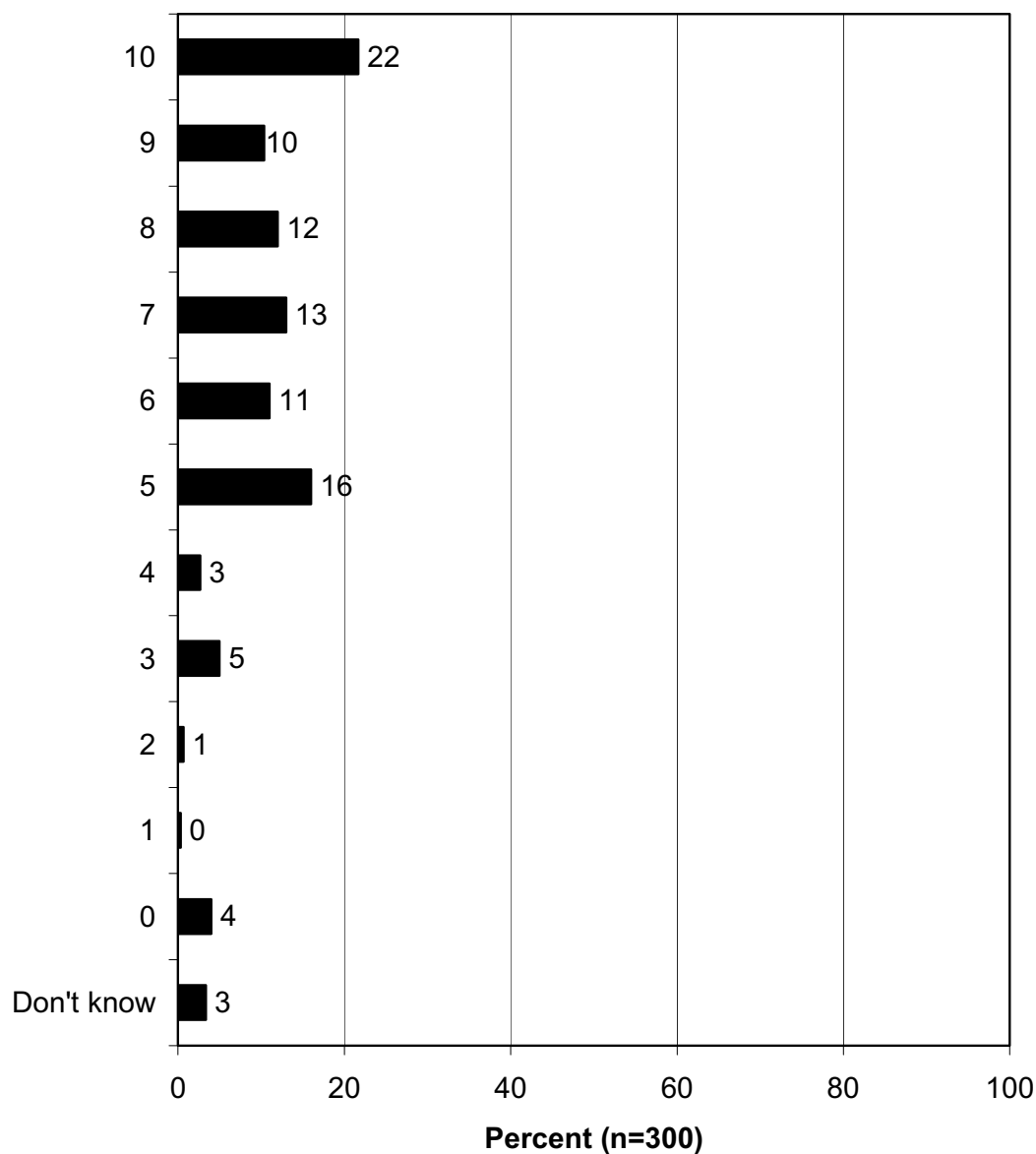
**Q11. What about the health of small family-run businesses? (How concerned are you about this on a scale of 0 to 10, where 0 is not at all important, and 10 is extremely important?)**



**Q15. What about the health of large corporations in California? (How concerned are you about this on a scale of 0 to 10, where 0 is not at all important, and 10 is extremely important?)**

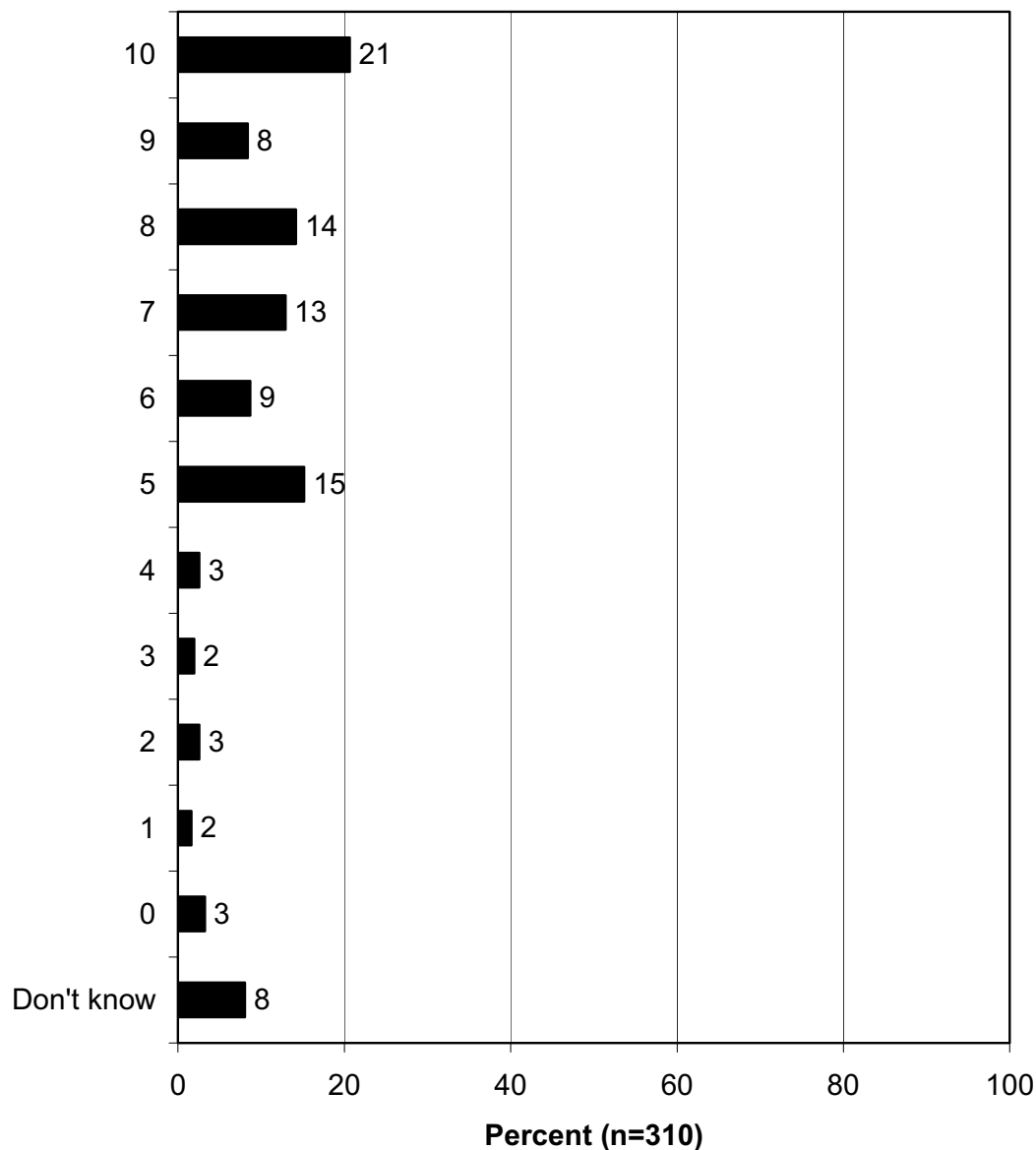


**Q54. What about knowing that family-run commercial fishing boats can harvest fish sustainably from coastal waters in California? (How important is it to you personally, on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**

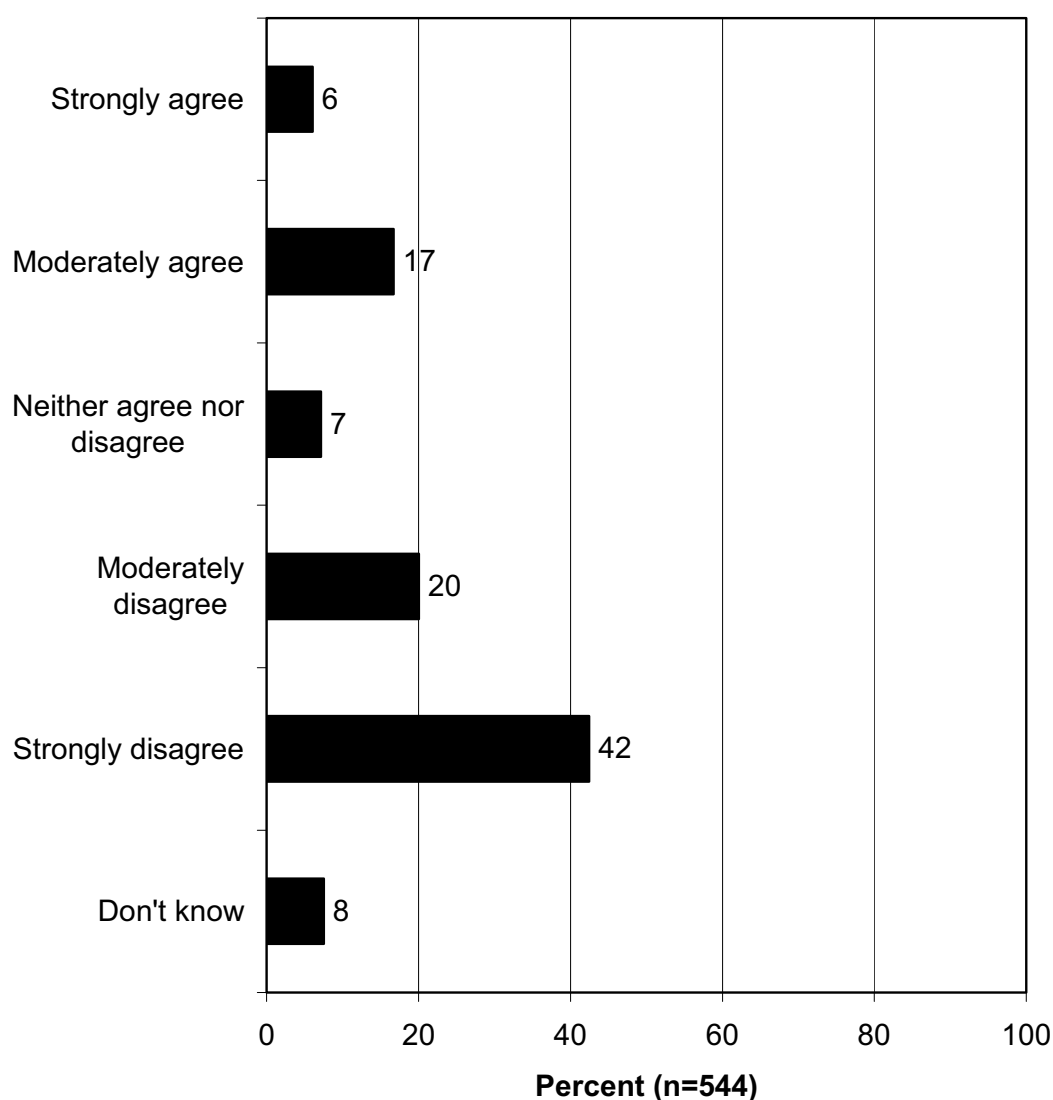




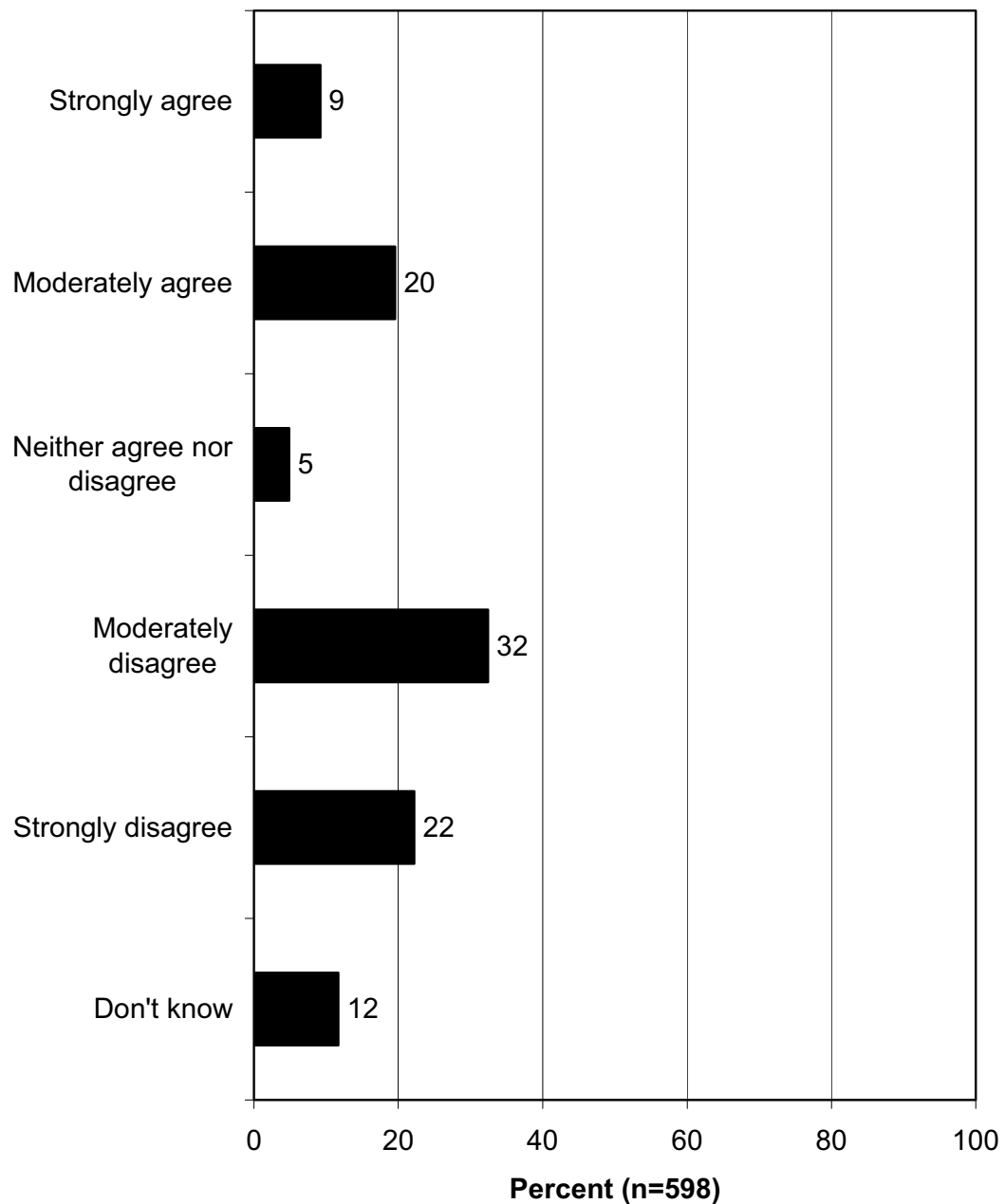
**Q55. What about knowing that family-run fishing boats can harvest fish sustainably from coastal waters in California? (How important is it to you personally, on a scale of 0 to 10, where 0 is not at all important and 10 is extremely important.)**



**Q80. I would be willing to buy seafood from a source other than California, knowing that many family-run commercial fishermen in California waters will no longer be able to make a living and will have to shut down their operations. (Do you agree or disagree with this statement?) (Asked of those who eat seafood at least once a month.)**



**Q70. Do you agree or disagree that family-run commercial fishing boats in California are harming the ocean's fisheries?**



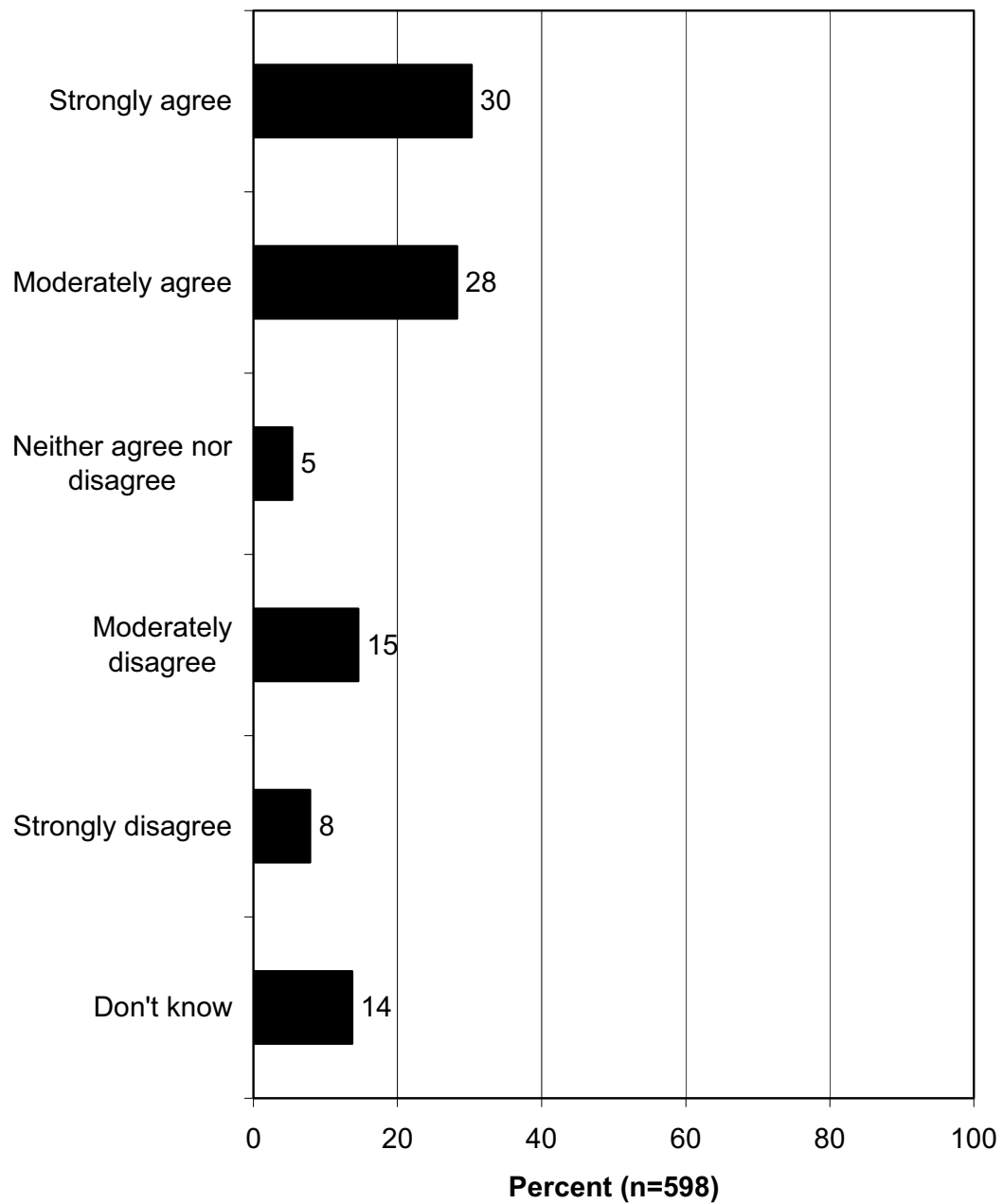
## OPINIONS ON FISH CONSUMPTION AND ITS EFFECTS ON CALIFORNIA'S COASTAL FISHERIES

- Californians show concern both for having their seafood harvested sustainably as well as for ensuring that California's seafood industry not be unduly harmed. The survey asked seafood consumers (those who typically eat seafood at least once a month) five questions about their opinions on harvesting of seafood. Overwhelming majorities agree that it matters to them that local seafood is harvested sustainably (86% agree) and that imported seafood is harvested sustainably (79% agree). They also overwhelmingly agree (82%) that they would buy California seafood over imported seafood when informed that California currently has more conservation safeguards in place than exist in most other countries. Seafood consumers show concern about California's fishing industry, with less than a majority agreeing that they would be willing to buy their seafood only from international markets to put the highest priority on protecting California's fisheries (37%), and even less than that saying that they would be willing to buy their seafood from non-California sources if they knew that doing so would likely force many family-run commercial fishermen out of business in California (23%). Regarding this last question, 63% disagree that they would be willing to buy their seafood from non-California sources if they knew that doing so would likely force many family-run commercial fishermen out of business in California. (These graphs are shown in the section of this report titled, "Opinions Regarding Utilization, Harvest, and Management of Fisheries.")
- Interestingly, while the majority of seafood consumers in California agree that large corporate commercial fishing companies in California are harming the ocean's fisheries (59%), less than half that amount agree that people who consume frozen, packaged seafood from large supermarket chains are harming the ocean's fisheries (27%).
- One question in the survey was asked simply to help determine seafood consumption patterns and for skip-outs in the survey (i.e., to ensure that vegans, who do not consume any animal products, including seafood, were not asked questions about seafood consumption behaviors and opinions on seafood consumption). The overwhelming majority of Californians (91%) are not vegetarian, while 5% are vegetarian but not vegan, and 3% are vegan. Those who are

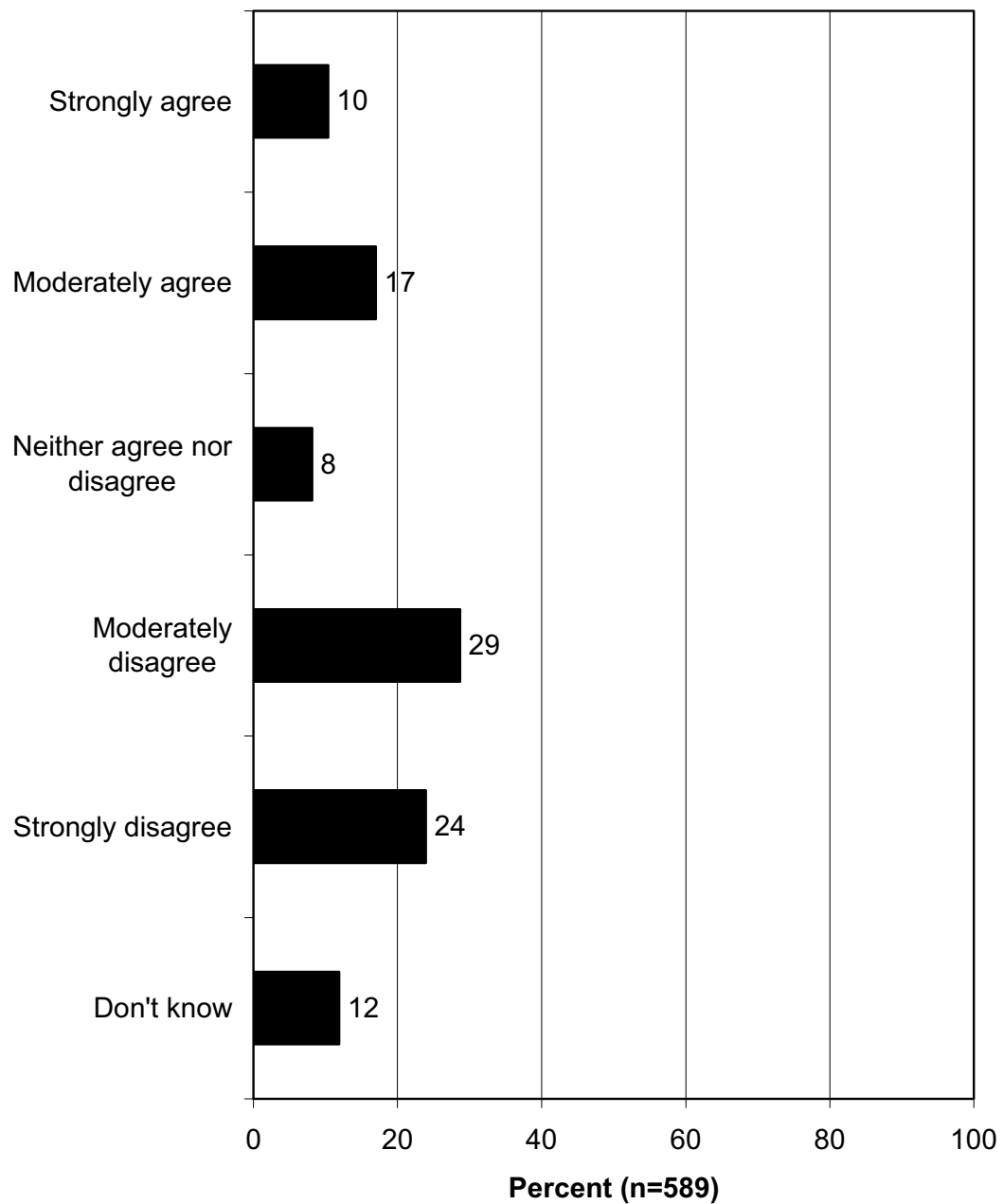
not vegan were asked how often they purchase seafood, with the large majority of them (57% of non-vegans) consuming seafood at least once a week. Interestingly, in a follow-up question, half of those who consume seafood do not know if any of the seafood they consume is harvested in California's waters; 38% indicated that some of the seafood is harvested in California's waters.

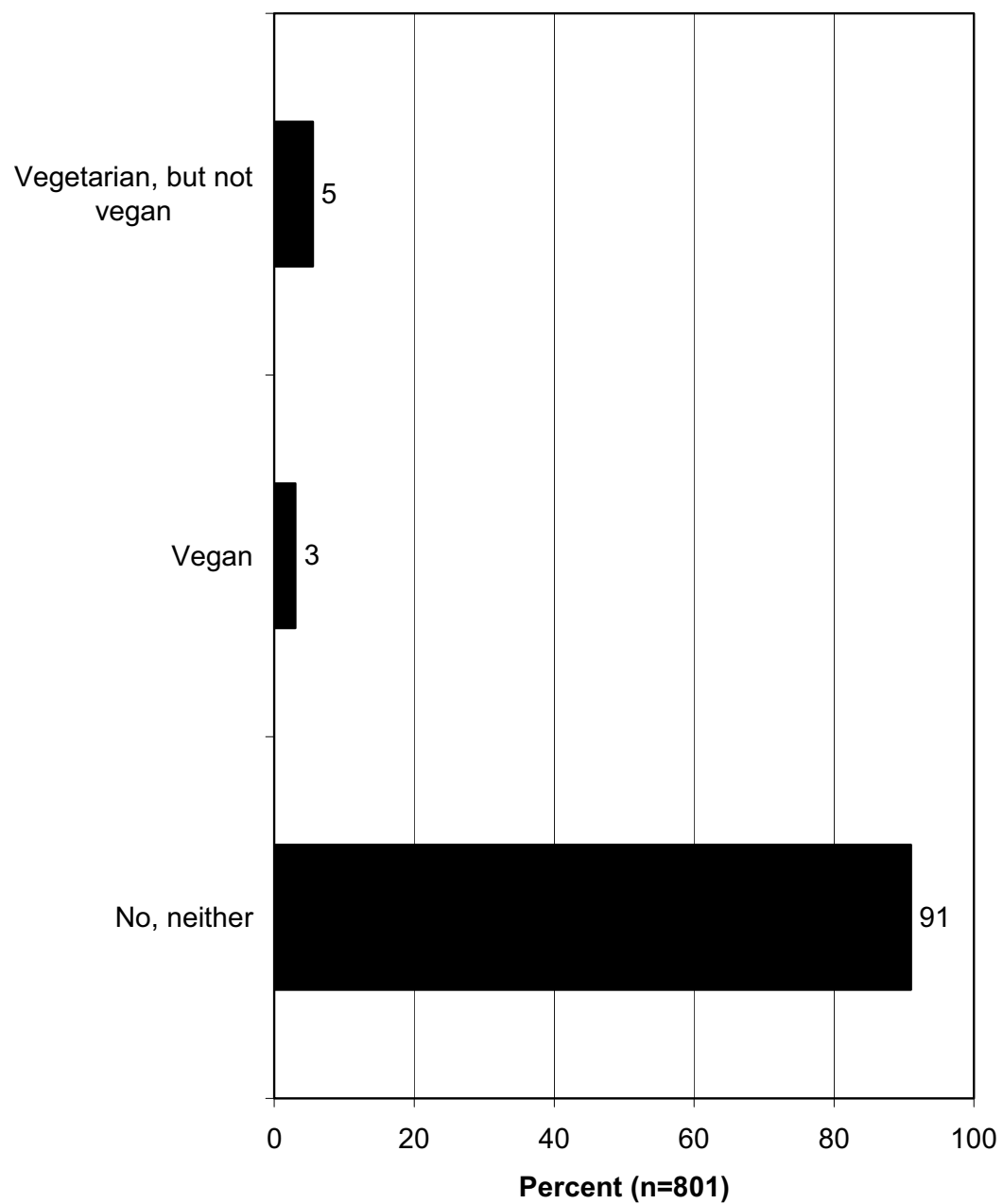
- When asked to name commercially fished species off the coast of California, respondents most commonly named salmon (34%), tuna (28%), halibut (16%), and bass (13%). Note that 40% could not name a species. In a follow-up question asking if any of the named species is in trouble, salmon, tuna, and abalone are most commonly named. (These graphs are shown in the section of this report titled, "Concerns Regarding Commercial Fishing in California.")

**Q68. Do you agree or disagree that large corporate commercial fishing companies in California are harming the ocean's fisheries?**



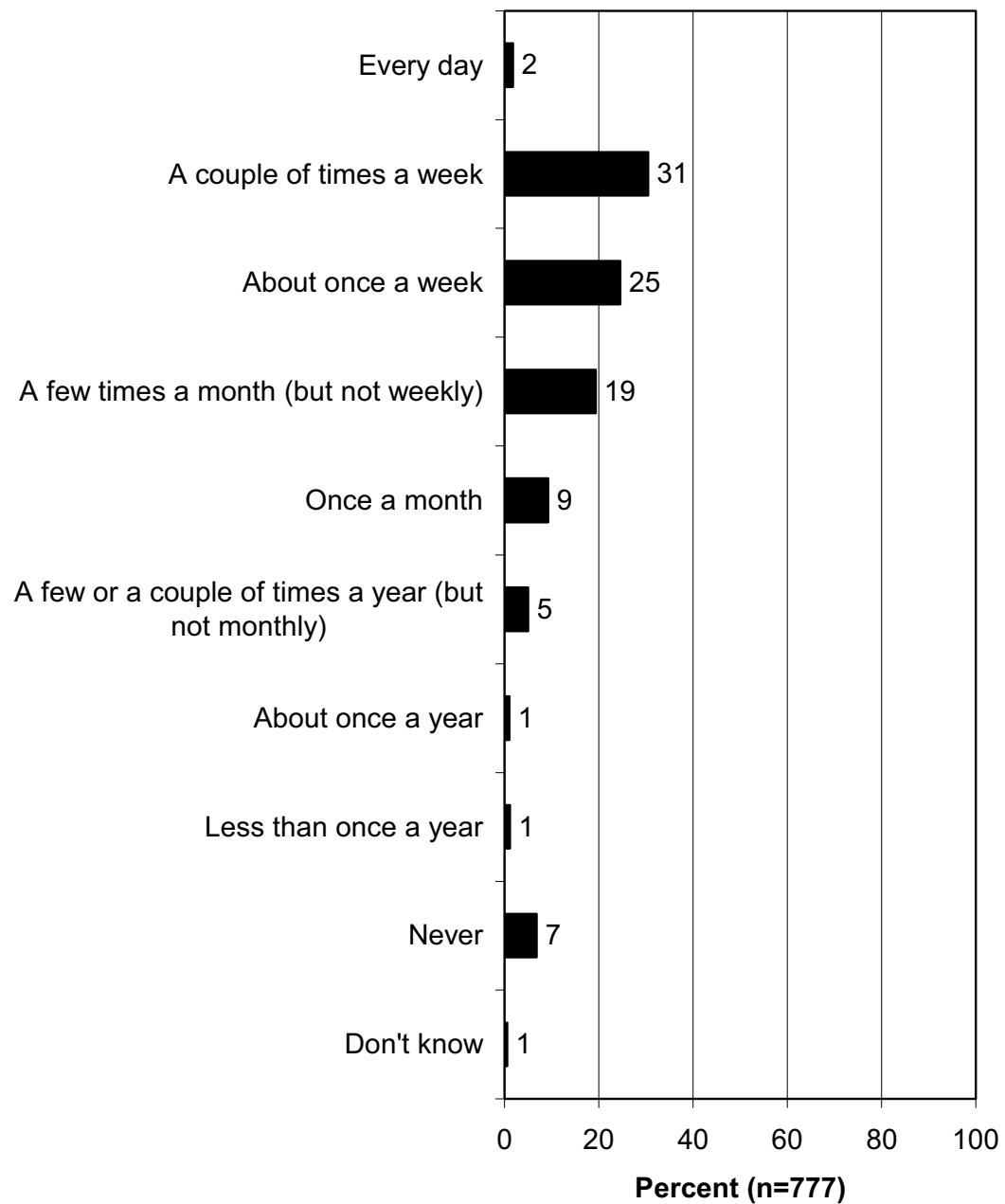
**Q71. Do you agree or disagree that people who consume frozen, packaged seafood from large supermarket chains are harming the ocean's fisheries?**



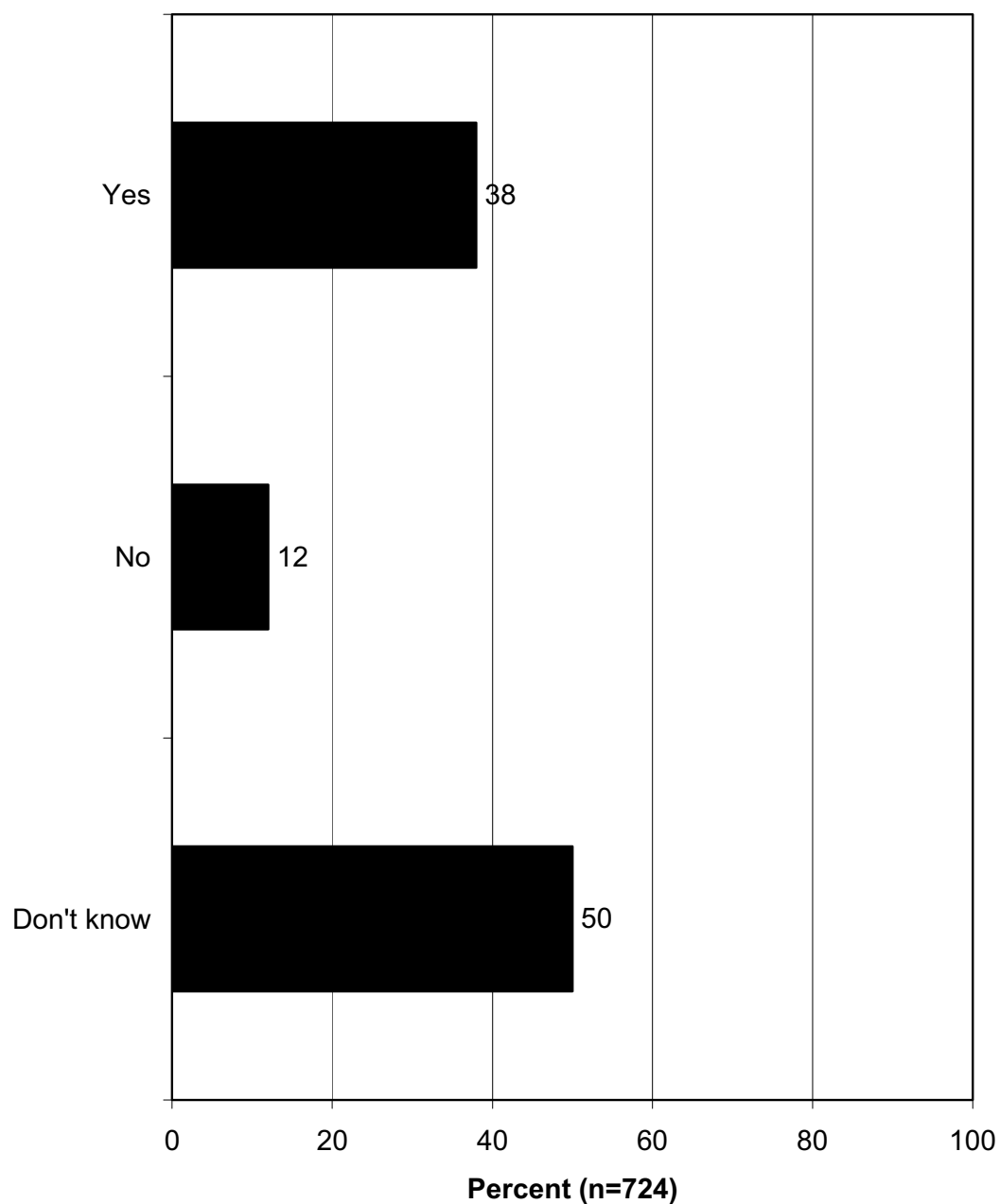
**Q72. Are you a vegetarian or vegan?**



**Q73. How often do you consume seafood? Would you say... (Asked of those who are not vegan.)**



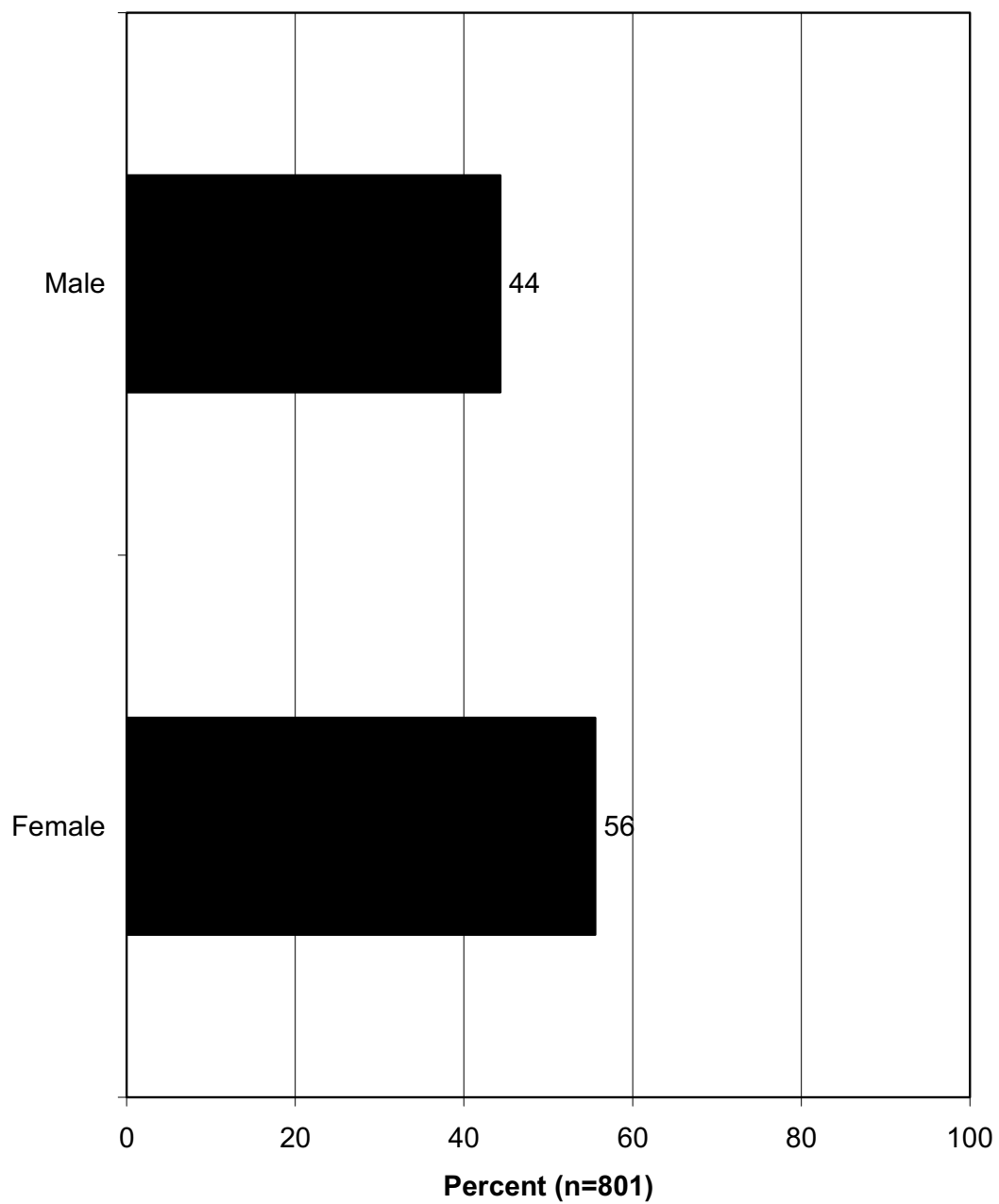
**Q74. Is any of the seafood you consume harvested in California? (or do you not know?) (Asked of those who are not vegan and who consume seafood.)**



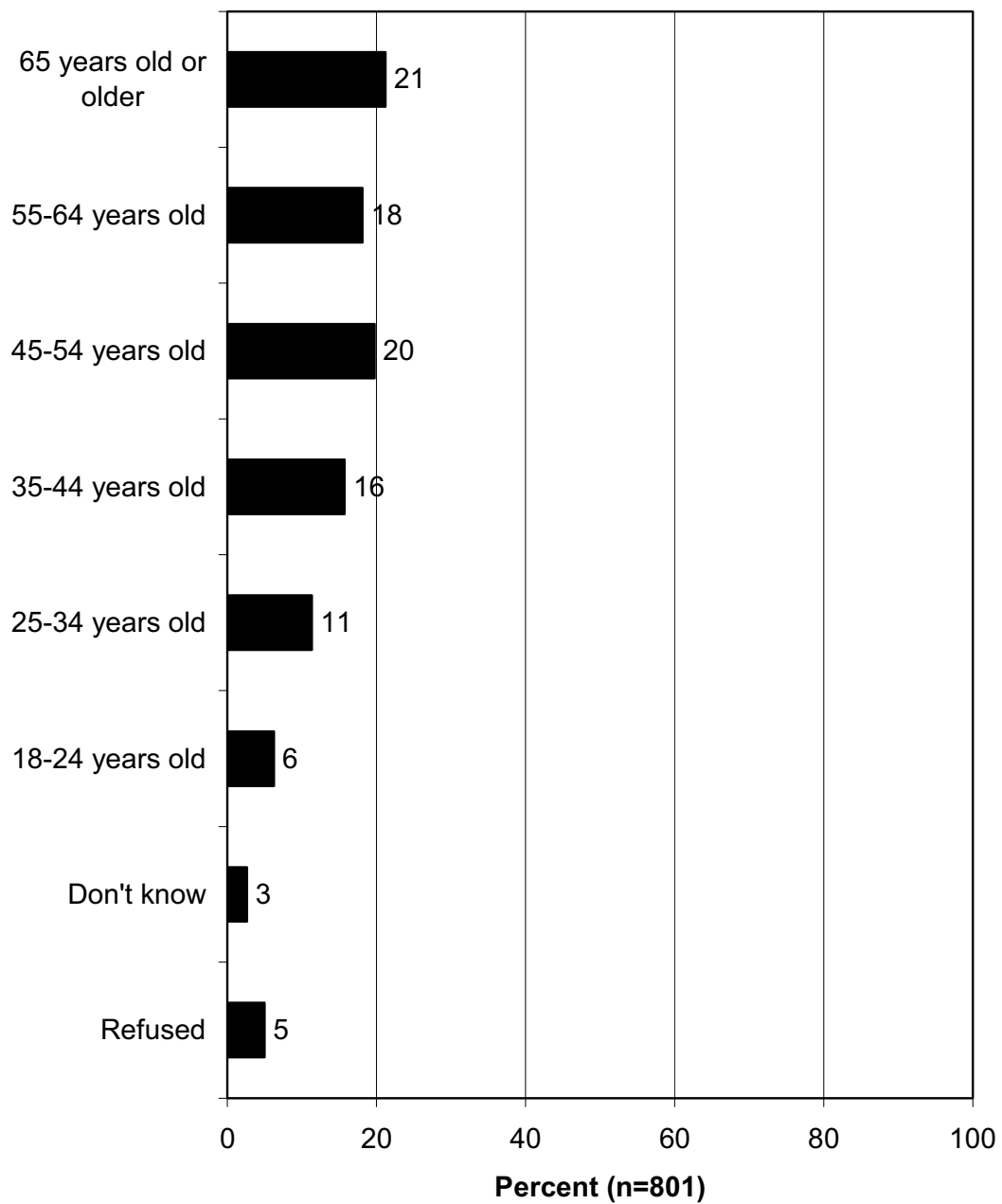
## **DEMOGRAPHIC DATA AND MEMBERSHIP IN SPORTSMEN, CONSERVATION, OF FISHERIES-RELATED ORGANIZATIONS**

- The sample was fairly well split between male and female.
- The ages of respondents are shown, fairly well distributed among the age categories.
- The years that Californians have lived in California is shown; the pattern follows a bell curve.
- While two-thirds (66%) of Californians do not have children living at home with them, 14% have one child at home, 11% have two children, and 5% have three or more children living at home.
- Ethnic backgrounds are shown.
- Counties of residence are shown; Los Angeles County has the most respondents, followed by San Diego and Orange Counties.
- Educational attainment of respondents is shown. The majority (72%) have taken some college or trade school courses, and 43% have a Bachelor's degree (with or without a higher degree).
- Occupations of respondents are shown.
- Household incomes of respondents are shown.
- While most Californians surveyed do not belong to any sportsmen's, conservation, environmental, or commercial fishing organizations, 5% do belong to one or more such organizations. The most common organizations are the Sierra Club and Ducks Unlimited.

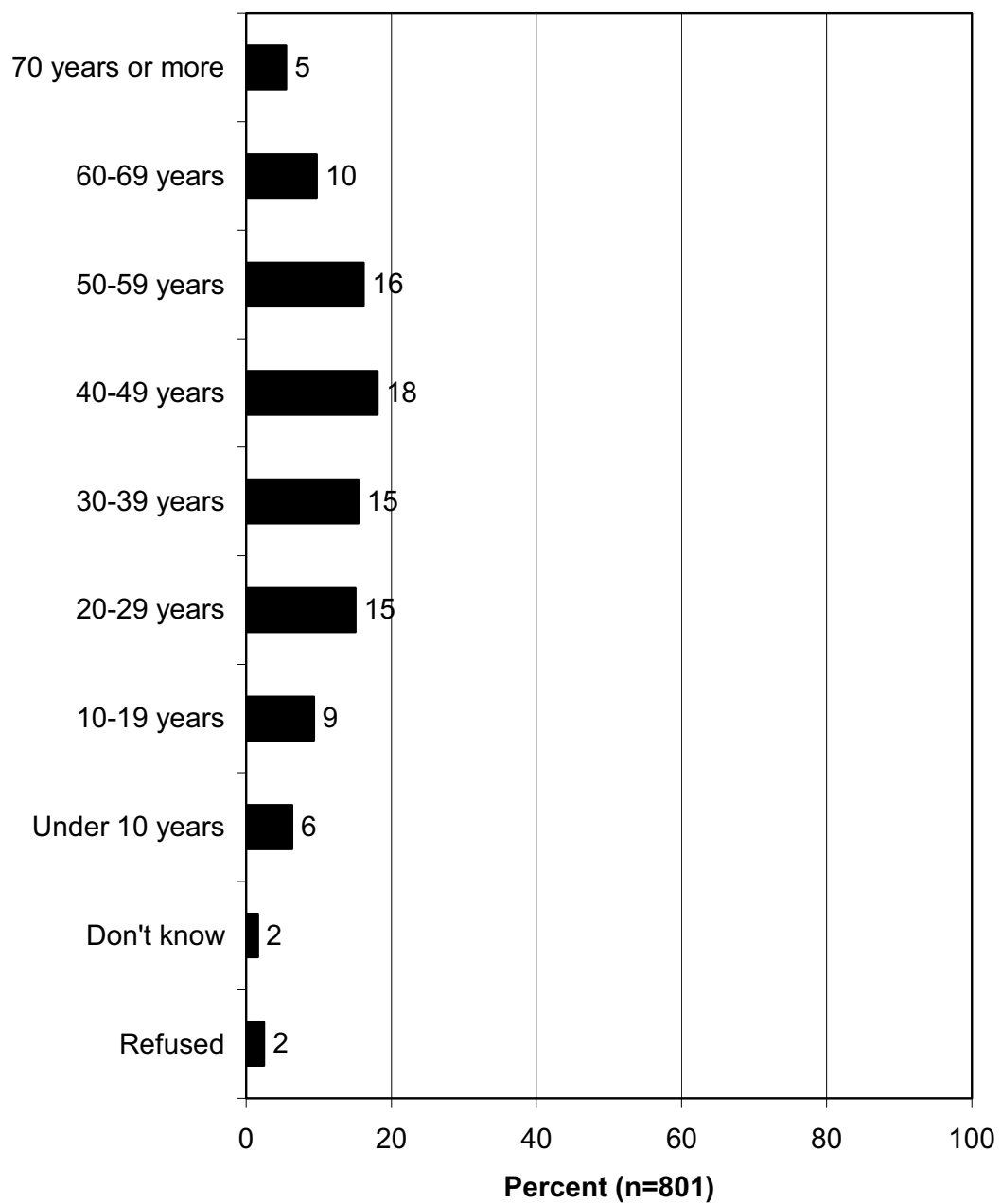
**Q132. Respondent's gender (not asked, but observed by interviewer).**



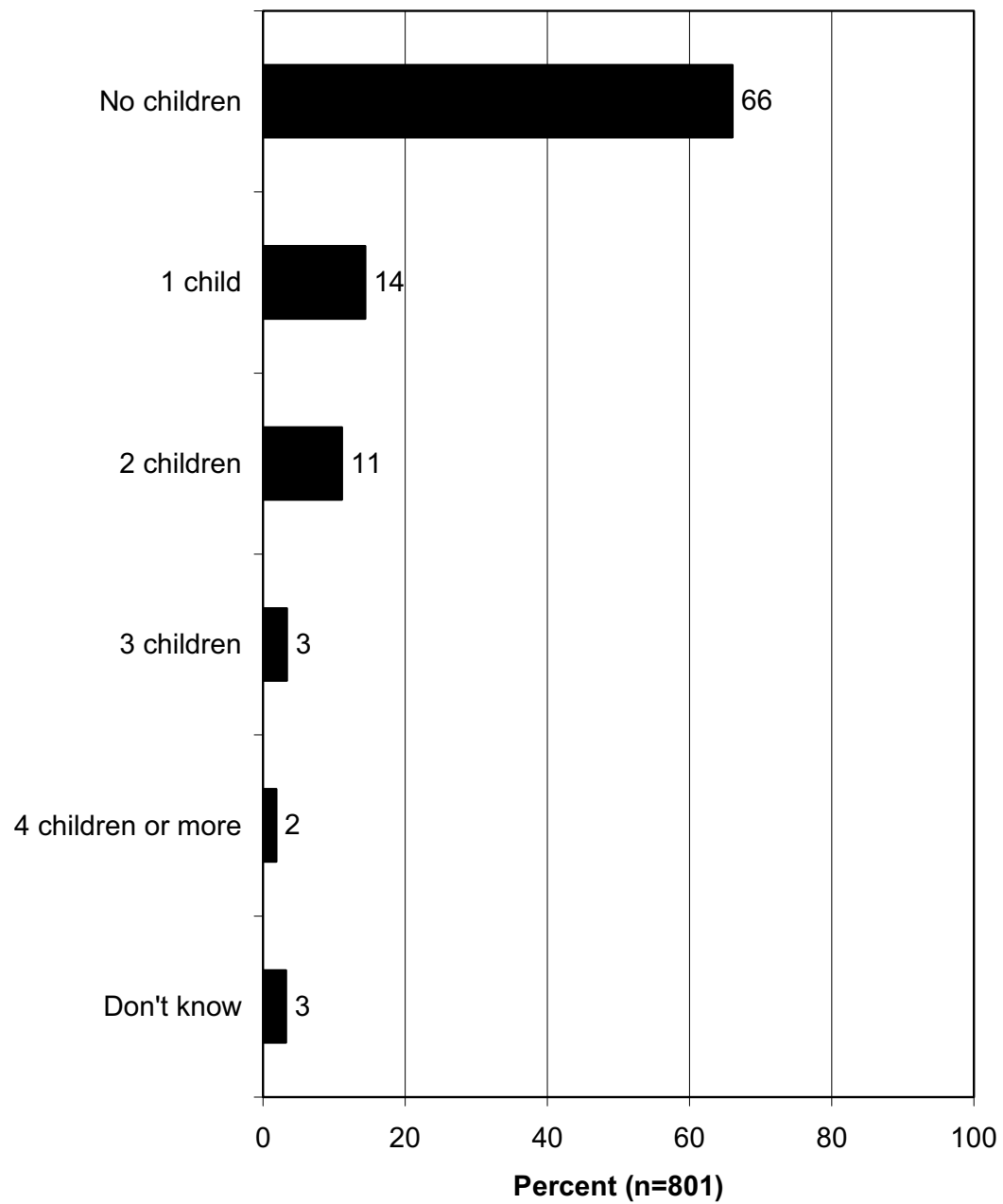
### Q126. May I ask your age?



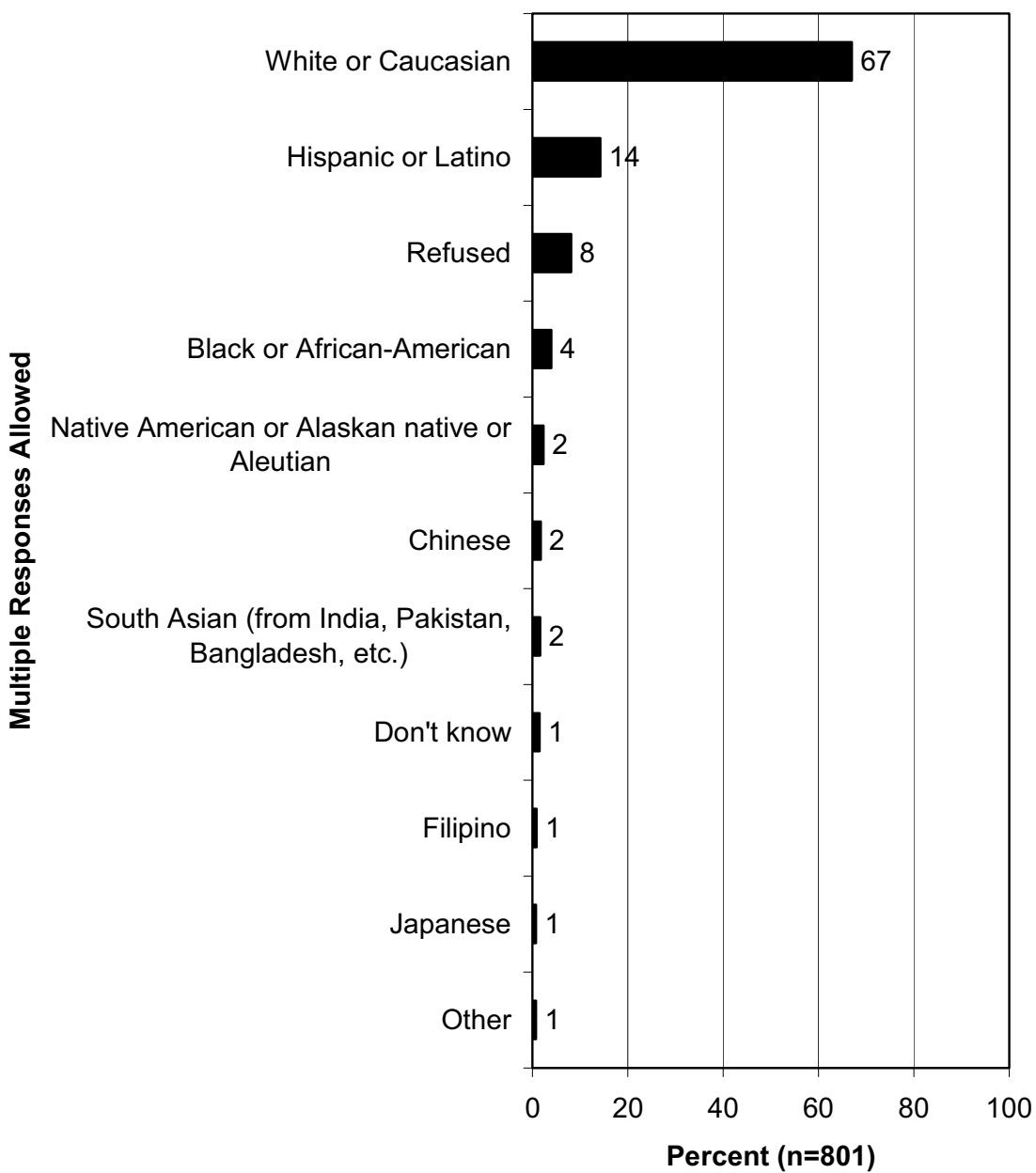
**Q112. How many years have you lived in California?**



**Q121. Do you have any children under 18 living at home?**

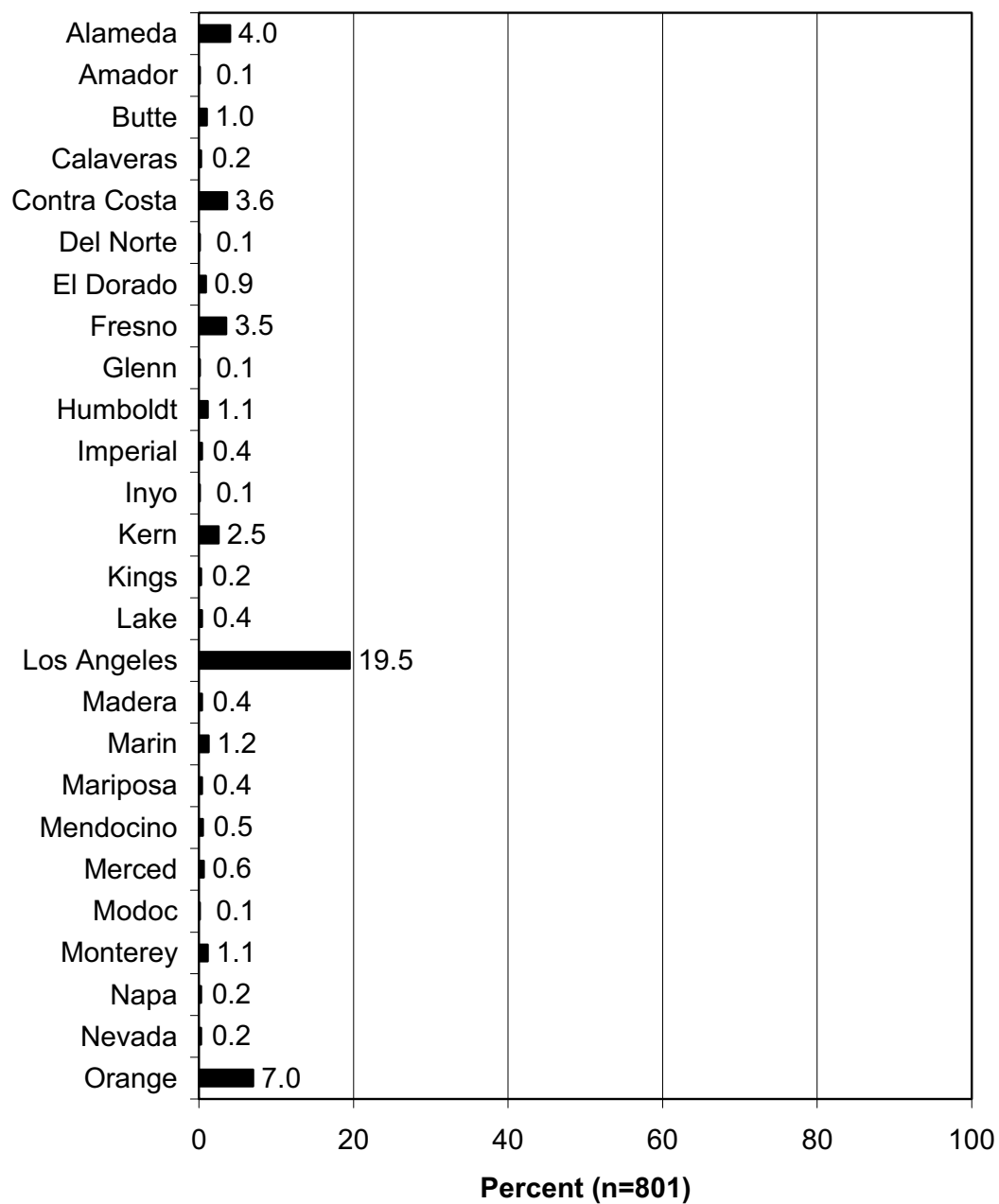


**Q124. What races or ethnic background do you consider yourself?**

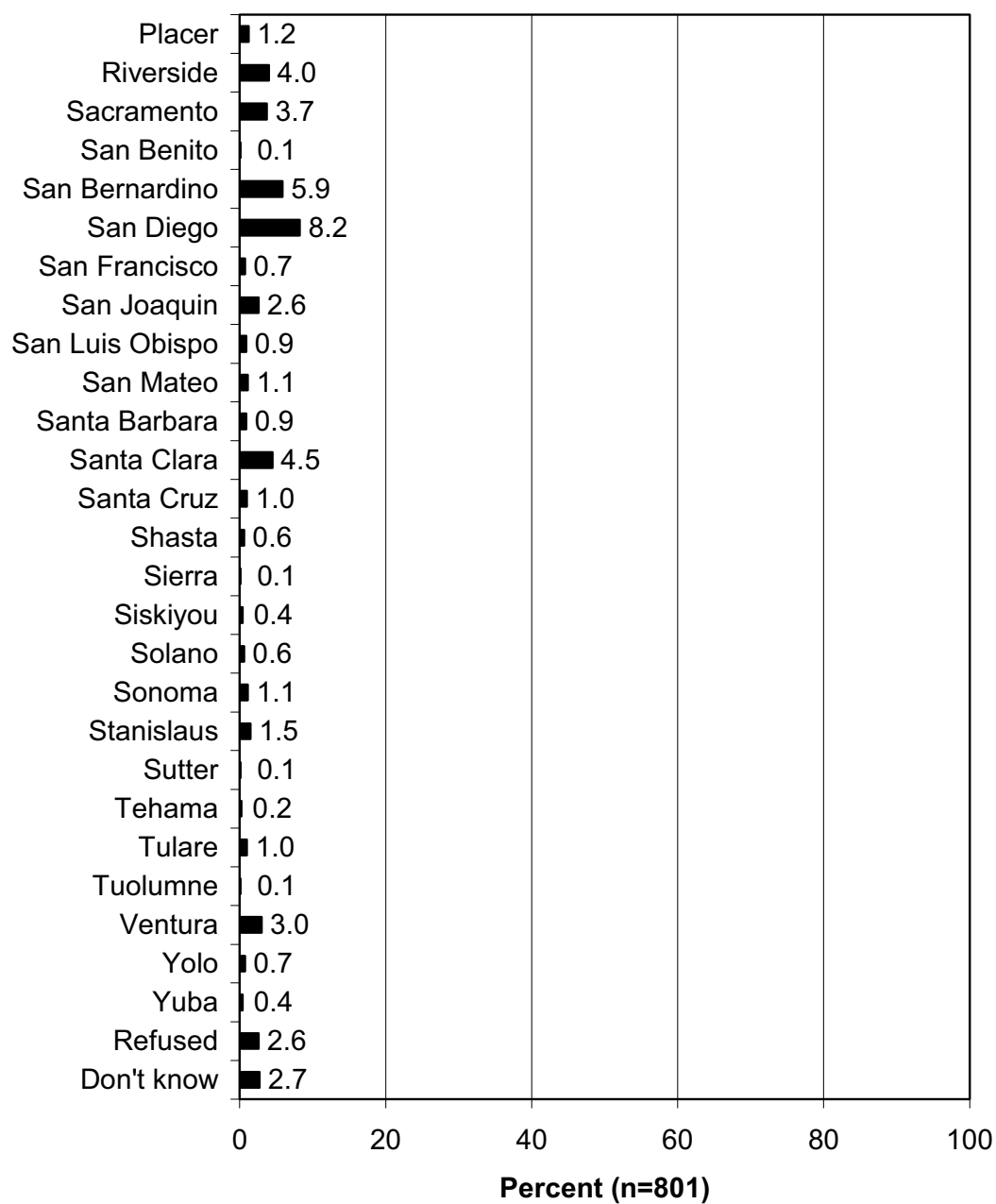




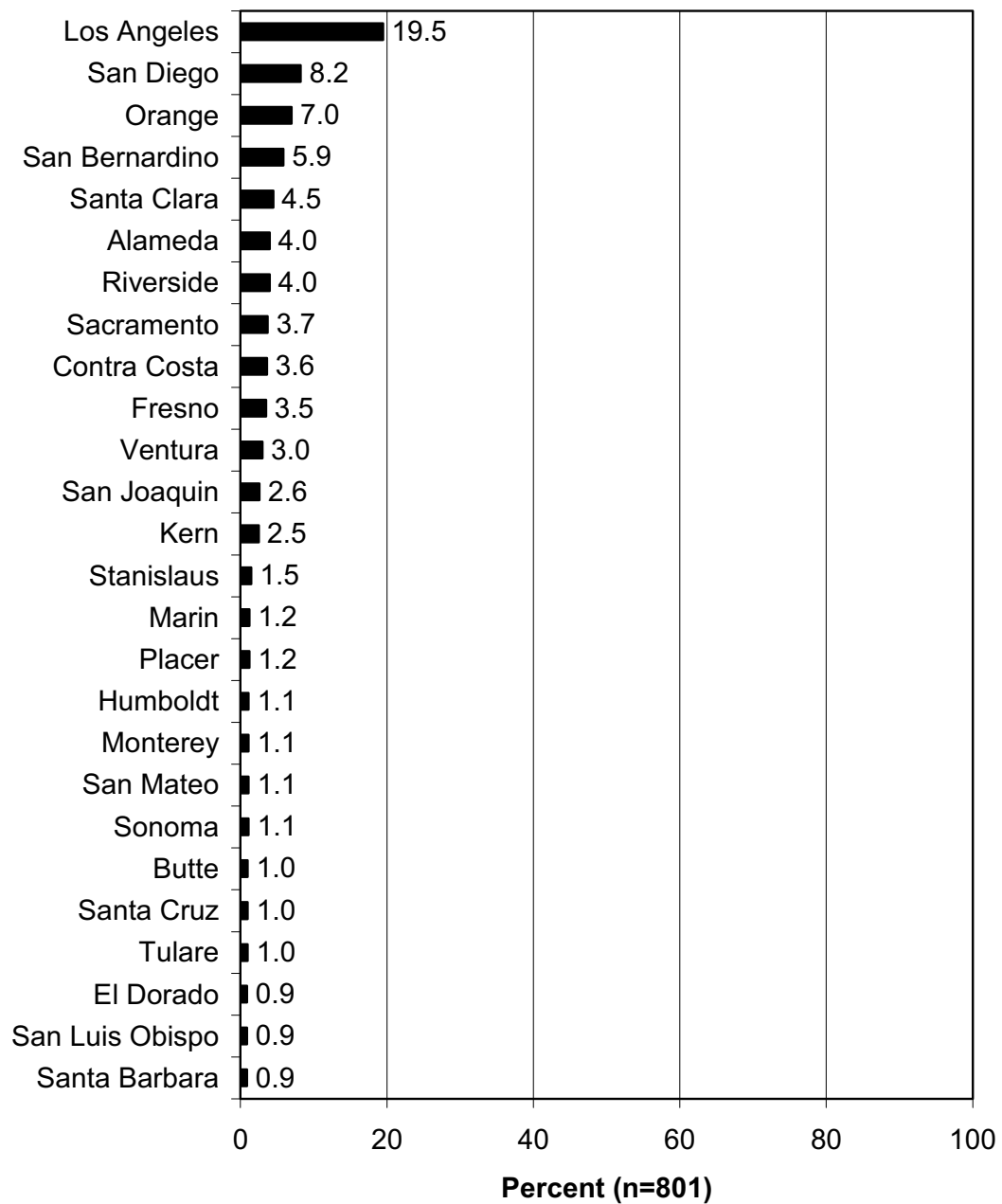
**Q115. What is your county of residence? (Part 1, sorted alphabetically.)**



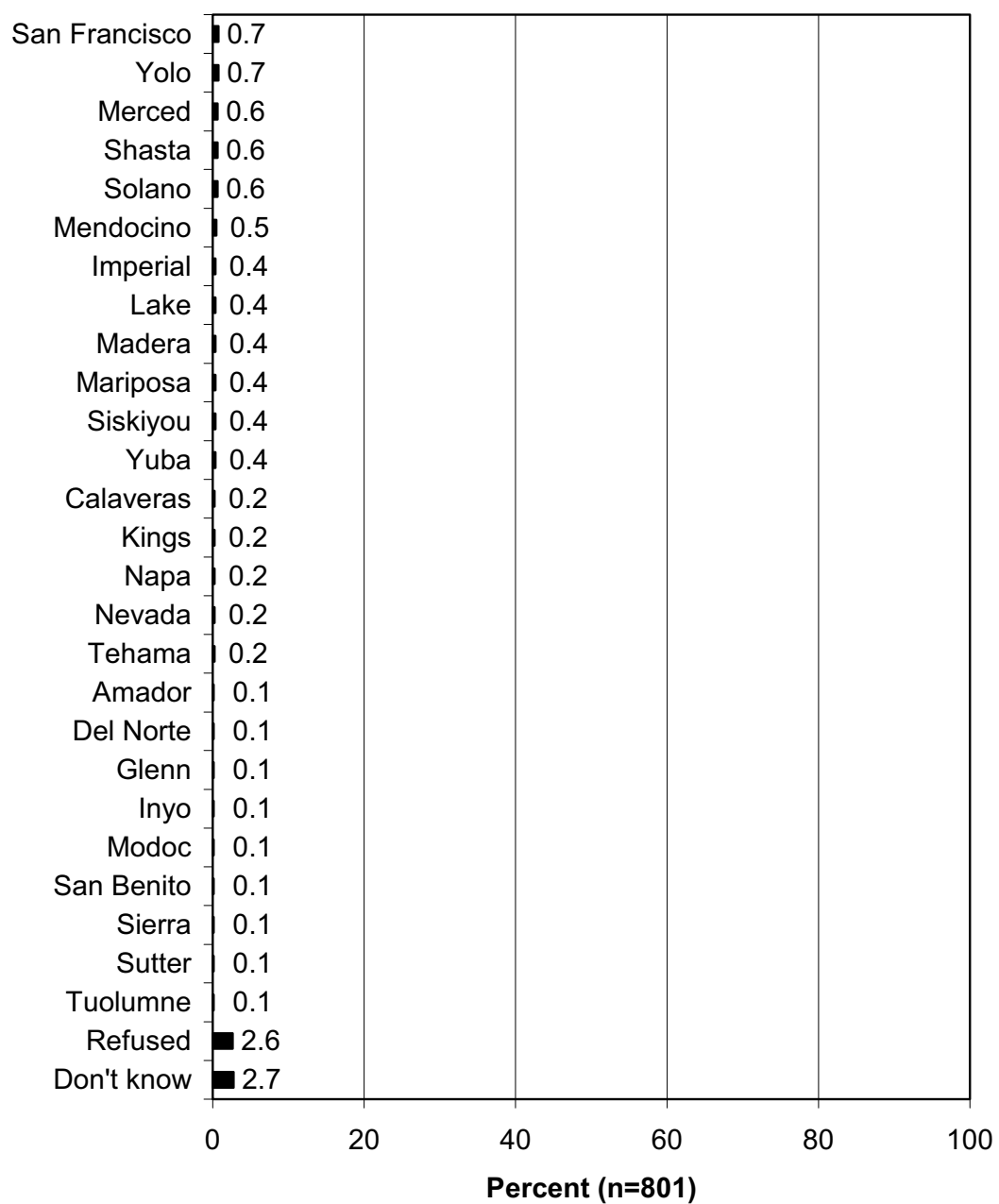
**Q115. What is your county of residence? (Part 2,  
sorted alphabetically.)**



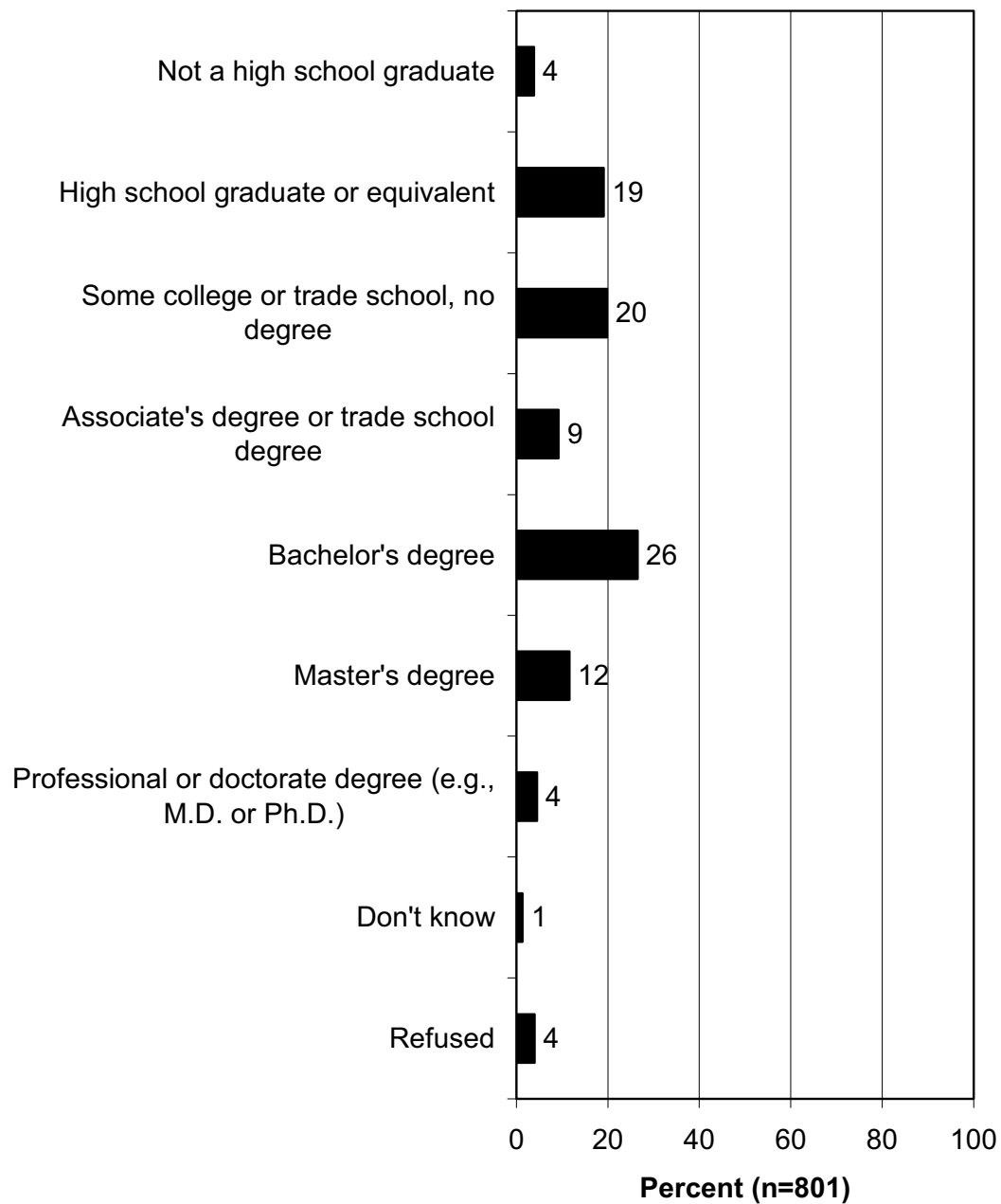
**Q115. What is your county of residence? (Part 1, sorted by percentage.)**



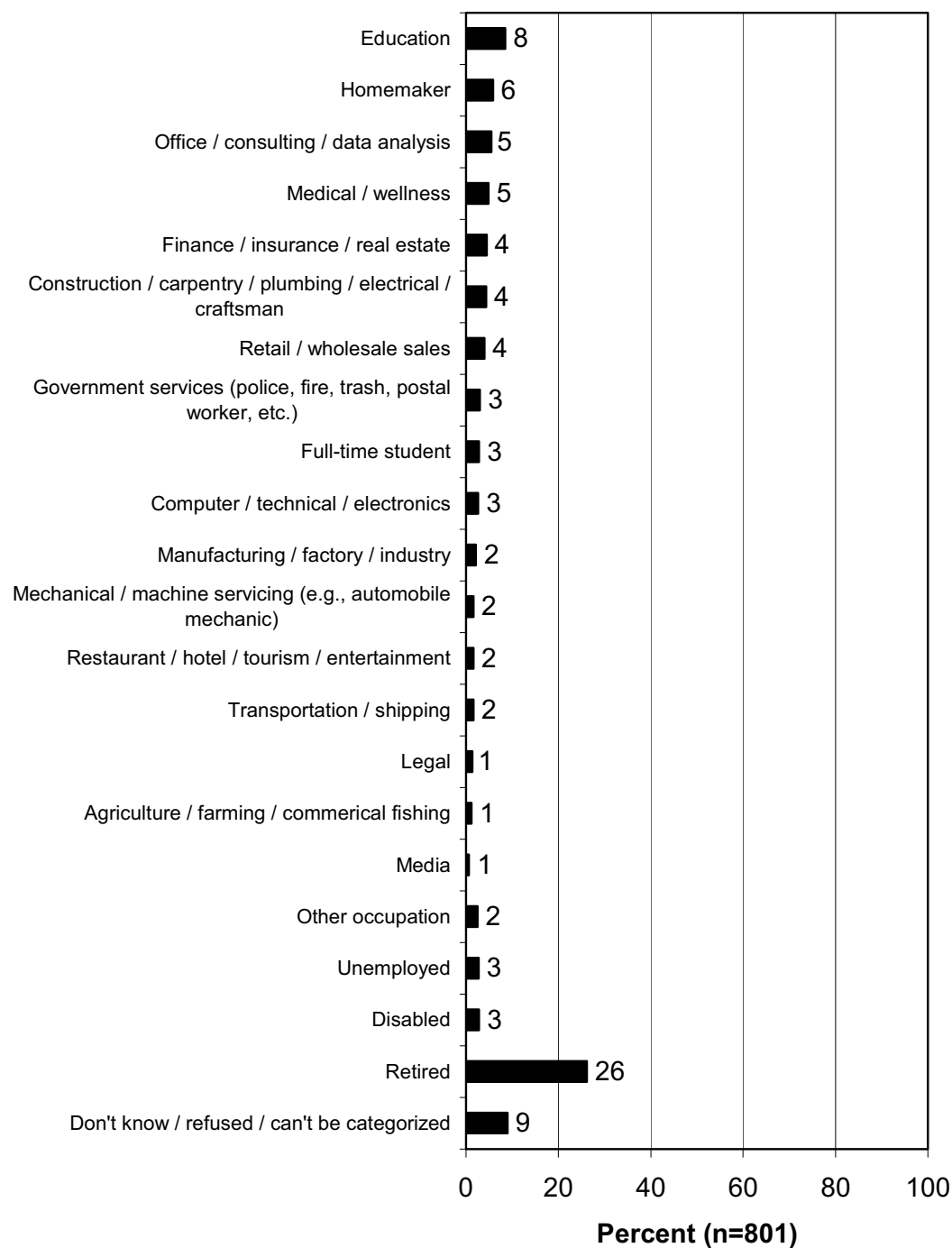
**Q115. What is your county of residence? (Part 2,  
sorted by percentage.)**



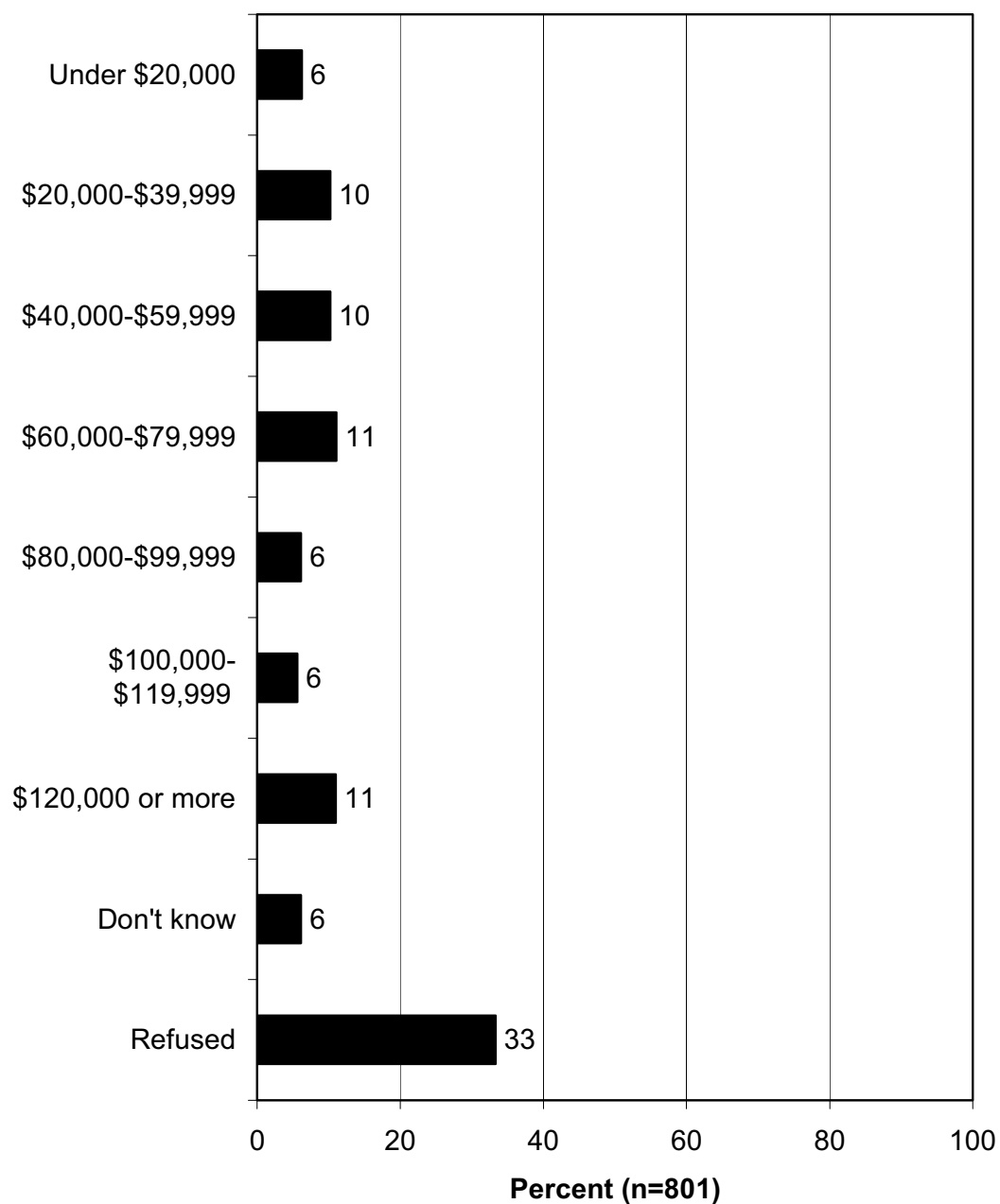
**Q116. What is the highest level of education you have completed?**



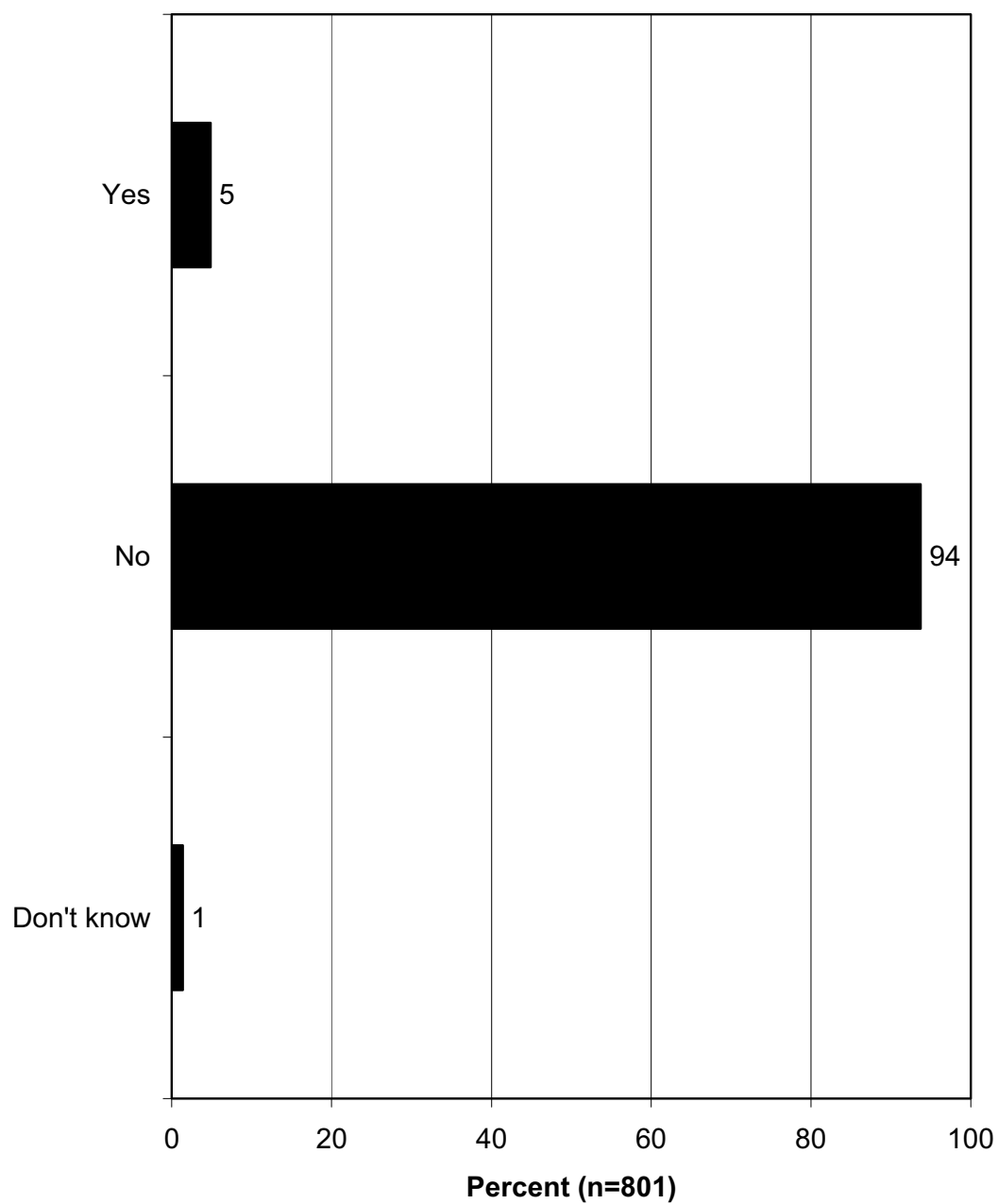
### Q117/118. Respondent's occupation.



**Q120. Which of these categories best describes your total household income before taxes last year?**

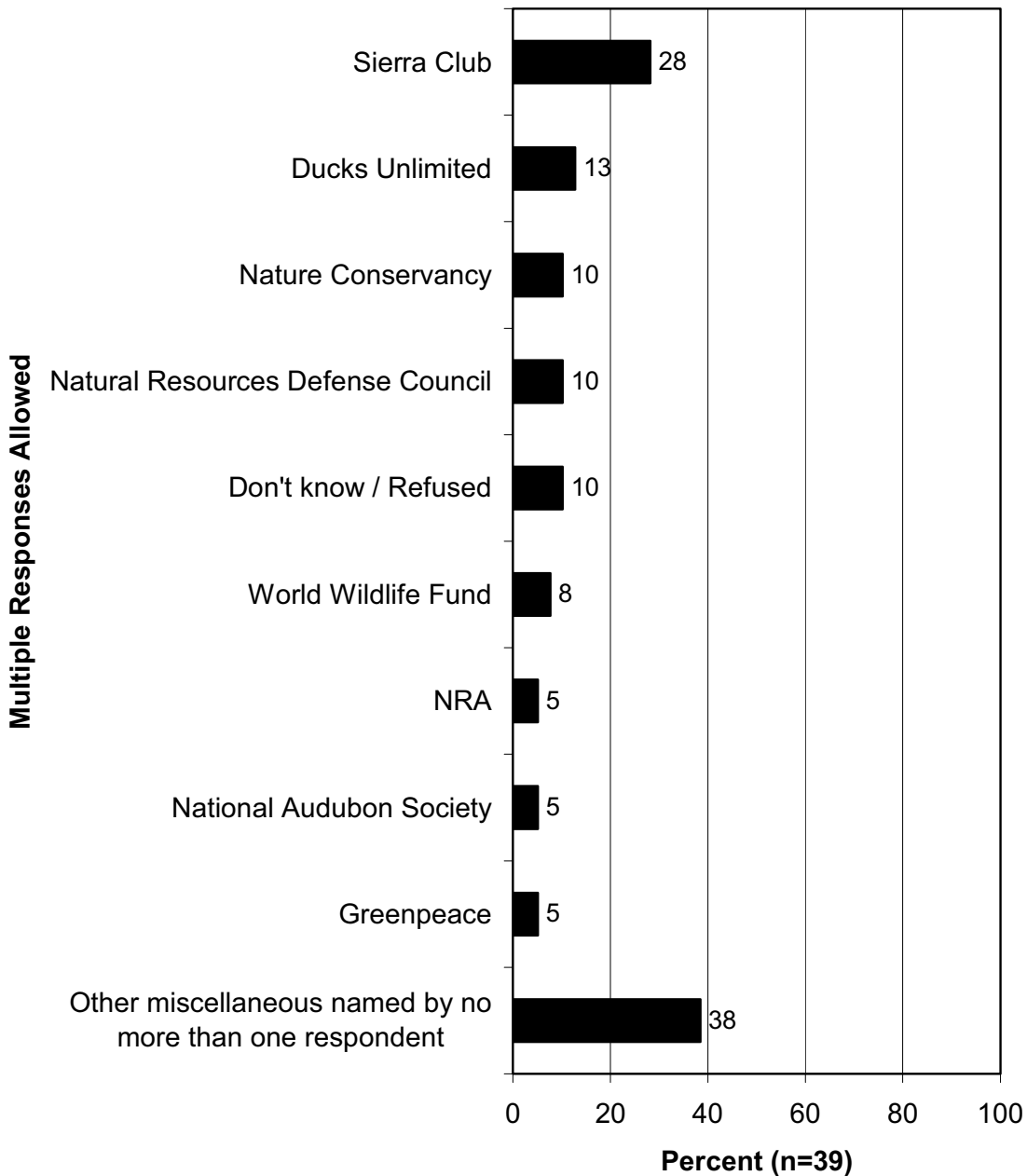


**Q109. Do you belong to any sportsmen's, conservation, environmental, or commercial fishing organizations?**





**Q110. Which sportsmen's, conservation, environmental, or commercial fishing organizations do you belong to? (Asked of those who belong to an organization.)**



## ADDITIONAL COMMENTS

**Q130. That's the end of the survey. Thanks for your time and cooperation. If you have any additional comments, I can record them here.**

The oceans are real fragile and part of the ecosystem of the planet. If you see an area where fishing is depleting the species, then there is a problem. Everyone should take their lumps like the construction industry.
I am opposed to having genetically altered fish mixing with natural, organic fish.
The survey should say if you are against commercial fishing, if we can deduct their fishing by a certain percent. We shouldn't take it out completely.
More protection for the entire world; we have to conserve.
I do not approve of fish farming in the commercial industry.
Fishing licenses cost too much.
They teach bad social issues in school. Environmental charges make for more taxes but don't help the environment. This just increases the taxes. Large corporations need to clean up the messes.
I think the best thing the state could do for charter boat businesses and small family-run boats is to not force them out of business with all kinds of red tape and requirements.
There should be restrictions on recreational fishing, but fishing for food is okay.
Fisheries must be preserved long-term. Hopefully restrictions could be temporary and retraining would be offered to displaced commercial fishermen. Stop pollution and save fishing.
The idea that the government is going to restrict something is preposterous. These restrictions are stupid. We need to stop foreign ships.
Take care of the fish.
The cost of recreational fishing is too much.
Endangered fish should be in TV ads, and why they are endangered.
I care about the environment, and I think if it is harming the environment we need to start to protect it; I have a daughter and would like for her to see what we have.
Where is the nuclear waste dumped?
My husband and son both do catch-and-release, enjoy fishing.
Put restrictions on sewer, water, and power plants that pollute the ocean.
Due to legislation, creating a tax for corporate fishing, they will be restocking the waters. I think that they need to restock the waters and restock them properly including food sources and habitat, not throwing them in haphazardly.
Questions regarding foreign and frozen seafood: my answer depends on whether the fisheries involved are sustainable. Also, my answer is that fishing should be banned only if the ban will help fisheries recover. Cure the cause.
Government should subsidize commercial fishermen when fisheries decline.
I want to protect the oceans. A little fishing is okay; limit, but don't ban.
We should also reduce the human population; sustainable population.
Instead of focusing on the fish populations, we should also assess the health of the fish in general.
If necessary to health of species, I support restrictions on fishing, but I hate to think of small, family-run commercial boats being put out of business if that can be avoided.

Dams being built on rivers where salmon are trying to reproduce needs to stop.
Fish farms are what are endangering the fish population of the whole world.
I feel for small independent men trying to make a living, and I think they should be able to. Commercial fishing boats push them out of business.
Foreign fishing is harmful to the coastal ocean and to proper fish management.
Balance with care to the restrictions on the fisheries. I do not want the government having total control.
Protect the otters; better irrigation patterns should be in place to prevent polluted runoff from getting to the ocean.
Drag fishing is extremely destructive; I want only hook fishing. True family-run operations are important to keep.
I am concerned about sharks and dolphins being caught in nets and mutilated from that.
I feel that oil dumping harms fisheries. Small fisheries need to survive.
I support small fishermen in California to the degree that the populations of fish will support them.
I favor protecting commercial fishing if the fishing is sustainable.
I think people should be allowed to fish; however, the fish should come first.
This should be determined by scientists, not politicians. I'd rather see restrictions (like catch limits) rather than a total ban on fishing unless absolutely necessary.
There is too much foreign fishing allowed. Can't control migration, so they can just be fished in other states. Control pollution, restore balance.
I get most of the fish I eat from friends out of Alaska or Mexico.
I'd really need more information to answer policy questions, but generally I oppose absolute bans on fishing unless they're absolutely, scientifically necessary.
Pollution is the worst hazard out of all the hazards because it affects people as well. Overfishing is bad too.
I don't check the packages of the seafood I buy.
I'm going to go look up more about California fisheries.
I think anything for the environment is good.
Pollution includes mercury which can kill you. Family-owned commercial fishing (family industries) are important to California.
Hard to protect family-owned businesses and the environment. I would stop eating seafood if it cannot be harvested sustainably.
The ocean is not being supervised and needs more protection. Stronger supervision on family-run boats. I buy Alaska salmon.
I think the state is getting too tight with the restrictions. We should be more concerned about the pollution. They need better sewers and less pollution.
We can't fish any more than 140 feet deep. The bigger fish are in the deep sea, and we are not allowed to do that anymore.
I live in San Pedro. Pitiful what is being done to the small fisherman in this area due to over regulation. I am not in the business, have just seen it. It is not right what is happening to people.
Individual family-owned commercial boats are not a problem; large fleets are a problem.
I really don't know anything about commercial fishing or any of these things. I think qualified scientists should decide about bans and limits, not me.

"Ban" is such a harsh word; limiting would be more appropriate.
We should strive for sustainable fisheries; any restraint should be applied equally to commercial and family businesses. There should be a limit to amount of fish taken. I am beginning to be quite concerned about this issue.
Overall, I don't have a problem with fishing, as long as it is done in a sustainable manner.
I favor legislation to keep businesses going, both commercial and family-run.
There needs to be international conservation standards from Japan and Russia, who overfish California waters.
Require replenishing and non-polluting methods.
I am active with Surfriders and am concerned with the pollution of the ocean. It is okay for the chartered boats to go fishing for the public.
We need to take desperate measures to control commercial fishing and save the ocean and the fish until they recover.
I think they need more regulations and more enforcement of those regulations.
I think these are important questions.
Some answers depend on who decides if the fisheries are in danger and if they really are in danger. Bans on fishing should be equal for all.
It's important that people abide by fishing rules; people should practice conservation.
I'm a great believer in moderation, so unless banning fishing altogether is necessary to save species, I prefer scientific regulation and limits.
There need to be more restrictions on wildlife, habitat, fish, and the environment.
Find another way to bring oil to land; find a way to produce oil on land. I worry about the dirtiness of water and the oil spills that are causing pollution.
I don't like sport fishing or killing anything.
ATVs and snowmobiles are threatening wildlife and habitat; there needs to be restrictions on foreign (Japanese) companies that overfish California species.
If fish are declining, scientists should find out why and correct it, but fishing shouldn't be totally banned unless it's the reason for the decline.
I believe there needs to be moderate considerations to areas that are overfished, but not enough to run businesses underground.
Restrictions should have a scientific basis and should be regularly reviewed given the cyclical nature of many fisheries.
Money rules; corporations will do what they want to.
Commercial fishermen respect waters; commercial fishermen can regulate themselves.
Americans need omega 3 fish oil; we need to consume more fish. We shouldn't put our own fisheries out of business. We should be patriotic and buy from California. The human body is part of the environment.
The health of family-run fishing boats should be put before corporate ones.
I would not like to see family commercial fisherman put out of business. Large commercial fishermen should be reduced to their lowest levels first. Banning fishing would depend on how long the ban lasts.
I think the commercial fishing industry cares less whether the waters are depleted because they can go fish other places. I also think that family-run operations are more careful because their livelihood depends on it.

I think limiting is fine, but don't think it should be too limited because of ruining livelihoods; should have some limits for environmental protection.
The problem of overfishing is due partly to overpopulation of California.
I think it is important to take care of our environment in a sustainable way.
I grew up in Maine and know about trouble small fisherman have staying in business; pollution and water (industry) are the problems, not the commercial fishermen. Watch coastal waters for foreign encroachment, watch environmental pollution (industry related).
Banning fishing depends on how long; I wouldn't want to put anyone out of work.
A lot of good laws started off okay but went too far; most are too extreme.
Commercial fishing should be looked at individually as to how much damage they do.
If I knew that California fish contained no mercury (or less than other sources), I'd look for locally caught fish.
I've never been so ill-prepared for a survey, and there should be some literature distributed about this, but you have to worry about bias. I don't want anyone to go out of business, but I'm worried about ecology too.
Some bays are cleaner than others.
A 3-4 year moratorium to help fisheries recover makes sense, but I'd hate to see the family boats put out of generational traditions. Restriction vs. bans? Stop poachers.
I love fish. I think pollution is a bigger threat than small-scale fishing.
Global warming needs government attention.
Stop the big, foreign commercial boats.
They need to give the fish time to replenish themselves. You can't take and take and take unrestricted.
Recreational fishing is okay, but I don't do it.
Fishing is part of my cultural and religious tradition, and I'd hate to see it banned, but I think the overall health of the ocean and fisheries is more important than commerce or sport or even wonderful family heritage.
I am against recreational/sport hunting and fishing—it kills and uses tools to make the animals defenseless. It is more important to look out for small businesses rather than corporate industries that have taken over; they take away from American jobs.

## **ABOUT RESPONSIVE MANAGEMENT**

Responsive Management is a nationally recognized public opinion and attitude survey research firm specializing in natural resource and outdoor recreation issues. Its mission is to help natural resource and outdoor recreation agencies and organizations better understand and work with their constituents, customers, and the public.

Utilizing its in-house, full-service, computer-assisted telephone and mail survey center with 45 professional interviewers, Responsive Management has conducted more than 1,000 telephone surveys, mail surveys, personal interviews, and focus groups, as well as numerous marketing and communications plans, need assessments, and program evaluations on natural resource and outdoor recreation issues.

Clients include most of the federal and state natural resource, outdoor recreation, and environmental agencies, and most of the top conservation organizations. Responsive Management also collects attitude and opinion data for many of the nation's top universities, including the University of Southern California, Virginia Tech, Colorado State University, Auburn, Texas Tech, the University of California—Davis, Michigan State University, the University of Florida, North Carolina State University, Penn State, West Virginia University, and others.

Among the wide range of work Responsive Management has completed during the past 20 years are studies on how the general population values natural resources and outdoor recreation, and their opinions on and attitudes toward an array of natural resource-related issues. Responsive Management has conducted dozens of studies of selected groups of outdoor recreationists, including anglers, boaters, hunters, wildlife watchers, birdwatchers, park visitors, historic site visitors, hikers, and campers, as well as selected groups within the general population, such as landowners, farmers, urban and rural residents, women, senior citizens, children, Hispanics, Asians, and African-Americans. Responsive Management has conducted studies on environmental education, endangered species, waterfowl, wetlands, water quality, and the reintroduction of numerous species such as wolves, grizzly bears, the California condor, and the Florida panther.

Responsive Management has conducted research on numerous natural resource ballot initiatives and referenda and helped agencies and organizations find alternative funding and increase their memberships and donations. Responsive Management has conducted major agency and organizational program needs assessments and helped develop more effective programs based upon a solid foundation of fact. Responsive Management has developed Web sites for natural resource organizations, conducted training workshops on the human dimensions of natural resources, and presented numerous studies each year in presentations and as keynote speakers at major natural resource, outdoor recreation, conservation, and environmental conferences and meetings.

Responsive Management has conducted research on public attitudes toward natural resources and outdoor recreation in almost every state in the United States, as well as in Canada, Australia, the United Kingdom, France, Germany, and Japan. Responsive Management routinely conducts surveys in Spanish and has also conducted surveys and focus groups in Chinese, Korean, Japanese, and Vietnamese.

Responsive Management's research has been featured in most of the nation's major media, including CNN's *Crossfire*, ESPN, *The Washington Post*, *The Washington Times*, *The New York Times*, *Newsweek*, *The Wall Street Journal*, and on the front page of *USA Today*.

Visit the Responsive Management Website at:

**[www.responsivemanagement.com](http://www.responsivemanagement.com)**

ACSF Comments About the MBNMS Use of Data to Claim Public Opinion  
Supports More MPAs, and Other Socio-economic Considerations  
May 2008

The data which the Sanctuary uses or has chosen not to use, seems to the Alliance of Communities for Sustainable Fisheries (ACSF) to be very much open to scientific scrutiny, particularly by the Social Science disciplines of the SSC. The ACSF is asking for a determination to be made as to the adequacy of the Sanctuary's claim that public opinion supports more MPAs be established in the federal waters of the National Marine Sanctuary, based in part on the public's desire to create wilderness-type areas. Pertinent questions include: What is the quality of the data? Has data been manipulated or selectively used? Is there data that has not been included in the MBNMS's decision letters (2/15/08 and 4/15/08)? In asserting a "values" point of view, does the MBNMS also analyze other "values," and provide any relative weight to these?

In both the February 15<sup>th</sup> and April 15<sup>th</sup> 2008 Sanctuary MPA decision documents, the MBNMS has asserted that an interpretation of the National Marine Sanctuary Act says they must set aside "Wilderness Areas" for their intrinsic value for future generations, and that there is a body of public opinion behind this need.

The ACSF does not dispute that this is a legitimate human value and that some people hold this value, even in its most extreme form, that all of the ocean should be set aside from human use. We also believe that the legal interpretation of the National Marine Sanctuary Act which the Sanctuary is asserting is not likely to survive a judicial review. This interpretation is exactly contrary to the original MBNMS designation document and EIS which did not assert this opinion. We submit that this interpretation comes directly from culture in the National Marine Sanctuary Program that appears to want to expand the powers of the Act and the Program at every opportunity. A 2004 report in the Environmental Law Review ("The History and Evolution of the National Marine Sanctuaries Act," by Chandler and Gillelan) clearly shows that it was not the intention of Congress that the NMSA be a "wilderness" law, and that multiple use opportunities have always been an important goal of the Act. Even though a copy of this report was provided to the MBNMS in advance of its February 15, 2008 decision letter, this report is not referenced and the MBNMS decision stands in contrast to its findings.

The 2/15 and 4/15 MBNMS documents are also silent about the very broad public support for two statements of concern, and recommendations, made by public agencies (elected officials) and organizations, in the region. These statements are:

1. The MBNMS should not seek to change its Designation Document to override the State F&G Commission or PFMC to create MBNMS fishing regulations or zones which affect fishing.
2. The MBNMS must gain the support of the fishing community for any regulations or zones which affect fishing that the MBNMS takes to the



State or PFMC.

These statements are supported by Congressman Sam Farr, the Association of Monterey Bay Area Governments, the Monterey Peninsula Chamber of Commerce, and numerous other public agencies. While these recommendations do not directly address a public opinion of support, or lack of, for “intrinsic value” MPAs, they do indicate the public’s value of the PFMC process, and of the value of needing fishermen’s support for “wilderness” type areas. These values are not addressed at all in the MBNMS 2/15 and 4/15 documents.

The large bulk of public comments “for MPAs” was received in 2001 as part of the Sanctuary’s scoping process for its pending Management Plan Review. At this time, there were hardly any MPAs, and generally less protection in place within the Sanctuary Region. Now, extensive fishery management is in place, along with other precautionary management measures, including numerous MPAs. Therefore, for the Sanctuary to be claiming now that thousands of people want MPAs in the Sanctuary, and that’s why they need to propose more, simply is not a credible statement. At minimum, it must be recognized that the public who made that statement in 2001 is not a currently informed public. Secondly, we point out that, by the MBNMS’s own statements, the public comment received was largely generated electronically from the list-servers of several large environmental organizations that are not necessarily representative of the general public. The MBNMS has done nothing to examine the quality of this data.

The Council and SSC should be aware that a recent (April 2007) public opinion poll conducted by Responsive Management Inc. of Virginia asked Californians in every county, in a statistically valid study, a set of questions about how the public views protection and ocean management. One key question asked: “When you hear the word “protect,” as in “We should protect the ocean,” do you think it means that ocean resources should be used in a sustainable way, or do you think it means that ocean resources should not be used at all?” Eighty-seven percent of the public responded that what they mean by protection is “manage for sustainable use.” Only eight percent stated that ocean resources should not be used at all. The public was also asked which they thought was the better management option for California’s coastal fisheries. One choice was to fully protect some areas from fishing, even if it means the fishermen would then concentrate their fishing in the remaining open areas. Only 24% of the public favored this option. However, 68% of the public favored the option that said “through the use of science-based limits on the amount of fish that can be taken, allow fishing in all areas.” An additional 8% did not choose an answer. These factors tell us that the Sanctuary is either misinterpreting or misusing data to support a position that the Sanctuary Program itself favors, as opposed to looking at this question objectively as to the opinions of all Californians. We do recognize, incidentally, that the Sanctuary Program represents all of the nation, not just California, but we believe that the poll results would not be substantially different in any other parts of the country.

A second survey was completed in January 2008. Also conducted by Responsive Management Inc., this report is titled "California Tourism and Fishing Heritage Assessment." It documents the economic importance of fishing heritage in three coastal communities (Morro Bay, Monterey, and Crescent City, CA) to the tourism economies of these communities, as expressed by local civic and business leaders. It shows a very high appreciation by those civic and business leaders for the fact that people come to visit these communities to eat fresh fish and experience this heritage, and that the spending this creates is a cornerstone of their tourism economies. The MBNMS received a copy of this report, but its findings, and the human values which it expresses, are not addressed by the MBNMS at all.

These polls can be found on the ACSF website, [www.alliancefisheries.com](http://www.alliancefisheries.com), under "reports."

Has the Sanctuary used selective and questionable data to try to justify the need to create intrinsic value or ocean wilderness areas? How much of the public actually supports wilderness areas if they become aware of the levels of protection that already exist? Further, the Sanctuary does not address the significant areas of state waters and the Davidson Seamount that were put aside essentially as either research or intrinsic value areas by the State or by this Council. How will the MBNMS weigh "public opinion" vs. a need for further protection based on scientific analysis? How does the MBNMS view the expression of Congress in the recent reauthorization of the Magnuson-Stevens Act, wherein Congress told the regional councils to base their decisions on good science? The question posed earlier of how much protection or research or intrinsic value is enough is still the guiding question for this discussion. The ACSF wonders if any amount is ever enough for the MBNMS.

We point out that whereas the 2/15 MBNMS document has a brief passage about developing socio-economic information, the 4/15 document is silent on socio-economic considerations. We are also aware that during the State MLPA process, the MBNMS commissioned Ecotrust to develop some spatial use information for the federal waters, along with state waters. A peer review of Ecotrust's methodology in the State process was prepared, coordinated by Dr. Barbara Walker of UCSB. It can also be found on the ACSF website, under "reports." This peer review expresses concerns and a number of suggestions about the Ecotrust methodology. It appears that the MBNMS is continuing to use Ecotrust to develop socio-economic information, yet we have not heard that the methodology concerns were ever addressed.

Moreover, the ACSF must make the point that socio-economic information critical to the MBNMS's "need" decision was either not developed or ignored. Particularly relevant is the landing information found in Dr. Parrish's report. For the MBNMS to have made a decision that it "needs" additional MPAs, despite the fact that it has accurate information that certain regional fisheries are very close to economic collapse, therefore also affecting their communities, seems to the ACSF to reveal a lack of concern by the MBNMS as to the consequences of its

actions.

ACSF Comments on MBNMS Research "Needs"  
May 2008

The Sanctuary asserts a research need. While we agree that research is one of the most legitimate purposes of MPAs, we find the Sanctuary's rationale for additional MPAs for this purpose to be unconvincing. In fact, we point out that the Sanctuary, in creating their need statement, never even consulted with their own Research Advisory Panel, a group of approximately 20 respected scientists from all of the Monterey Bay Region's research institutes, that meets on a regular basis. They were never asked for their opinions about research needs in the Sanctuary. Perhaps MBNMS officials should be asked why.

Further, we point out that the Sanctuary did virtually nothing to do any of its own monitoring or research on the two State Marine Reserves in the Sanctuary Region during its first 14 years of existence.

Finally, we point out that regarding the list of research questions listed in the April 15<sup>th</sup> letter, the letter does not address specifically how these questions can be answered by existing MPA opportunities. There are now 29 State MPAs within the region. The new State MPAs in our region include some very deep water in and along the edges of Monterey Bay Canyon. Additionally, research could be conducted on the Essential Fish Habitat Area to document the effects of bottom trawling on similar habitats. The RCA also provides research opportunities. And, of course, we should not forget that the National Marine Sanctuary came to the Council with a request that the very large Davidson Seamount Area be made essentially a benthic reserve, with no bottom extraction at all within 1000 feet of the top of the Seamount. This covers a 775 square-mile area. The Sanctuary gave both research and intrinsic value arguments for asking the Council for this protection. Finally, the new federal waters Channel Islands National Marine Sanctuary MPA was also created to provide research opportunities to the Sanctuary Program

In short, there is little evidence provided in the April 15<sup>th</sup> MBNMS rationale statement about why additional MPAs are needed for research. There is also no discussion about the MBNMS's research capabilities. Not only has the MBNMS not answered the question: "How much protection is enough?" - they have also not answered the question: "How many research opportunities are enough, especially if they come at a cost of removing fishing opportunities from struggling local fisheries?"



MONTEREY BAY  
AQUARIUM

May 21, 2008

Mr. Donald K. Hansen  
Chair, Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 101  
Portland, OR 97220-1384

**Re: Support for the Process to Implement Marine Protected Areas in the Federal Waters of the Monterey Bay National Marine Sanctuary**

Dear Chair Hansen and Members of the Pacific Fishery Management Council:

Thank you for the opportunity to comment on the use of marine protected areas (MPAs) as ecosystem protection tools in the Monterey Bay National Marine Sanctuary. The Monterey Bay Aquarium strongly supports moving forward with a process to develop and implement MPAs in the Federal waters of the Sanctuary.

Since opening in 1984, the Monterey Bay Aquarium has introduced more than 40 million people to the marine wildlife and natural communities of California's central coast, which is one of the world's most remarkable marine ecosystems. In 1992, Congress recognized this spectacular assemblage of marine life as a national treasure and established the Monterey Bay National Marine Sanctuary to protect and conserve it. All National Marine Sanctuaries serve a unique role in providing comprehensive conservation and management of special areas of the marine environment. This role is especially critical today as ocean ecosystems everywhere, including those along California's coast, are increasingly threatened by a wide range of impacts, including climate change.

When properly designed and implemented, MPAs are effective tools for restoring the health and enhancing the resiliency of ocean ecosystems. In 2007, the Monterey Bay Sanctuary embarked on a thoughtful and rigorous effort to determine the need for MPAs in the offshore waters of the central coast. This effort included consideration of current stakeholder and scientific input, in addition to substantial data and information amassed over the previous five years by members of the Sanctuary's MPA working group. The need for MPAs was affirmed by Superintendent Paul Michel in a February 15, 2008 letter to the Sanctuary Advisory Council; Michel and his staff expounded on the rationale for this decision in a follow up letter to the Council dated April 15, 2008, which includes the following objectives for the use of MPAs:

1. Preservation of unique and rare areas in their natural state for the benefit of future generations;
2. Preservation of areas where natural ecosystem components are maintained and/or restored;
3. Designation of research areas to differentiate between natural variation versus human impact to ecological processes and components.

We support these objectives as they are closely aligned with the statutory goals of the National Marine Sanctuary Act and are critical to the successful, long-term protection of ecosystems in the Monterey Bay Sanctuary. The effort to create MPAs in the Federal waters of the Sanctuary will also complement and potentially amplify the benefits of the existing MPA network in state waters developed as part of California's Marine Life Protection Act Initiative.

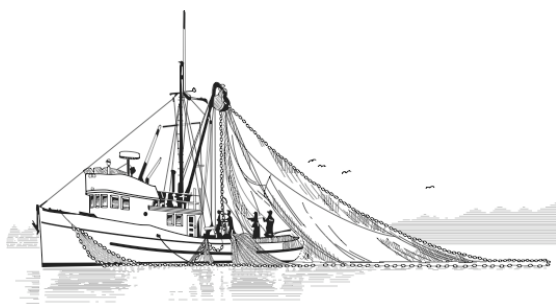
We appreciate the steps the Sanctuary is taking in this process to consult with the Pacific Fishery Management Council, NOAA Fisheries, and other regulatory and resource management agencies. Fisheries based closures are currently used in Sanctuary waters to help achieve fisheries management objectives, which include rebuilding overfished populations and protecting essential fish habitat. As stated in the April 15 rationale document, there is a clear distinction between the use of these closures to achieve sustainable production versus the use of MPAs to meet ecosystem conservation objectives. We support the Sanctuary's intent to work with the Council to leverage existing fisheries management measures that may partially contribute to the Sanctuary's goal of ecosystem protection.

We look forward to working with the Monterey Bay Sanctuary, the Pacific Fishery Management Council, and our fellow community members in this important process, which we believe will help us achieve healthy and productive ocean ecosystems for the benefit of entire central coast region.

Sincerely;

A handwritten signature in black ink, reading "Edward R. Cassano". The signature is fluid and cursive, with a large, stylized "E" and "C".

Ed Cassano  
Deputy Director, Center for the Future of the Oceans  
Monterey Bay Aquarium



## CALIFORNIA WETFISH PRODUCERS ASSOCIATION

Representing California's Historic Fishery

VISIT [WWW.CALIFORNIAWETFISH.ORG](http://WWW.CALIFORNIAWETFISH.ORG) FOR INFORMATION

May 21, 2008

Mr. Don Hansen, Chair &  
Dr. Don McIsaac, Executive Director  
Pacific Fishery Management Council  
7700 NE Ambassador Place #200  
Portland OR 97220-1384

RE: Agenda Item I.1.c : Review of Rationale for MPAs in Monterey Bay National Marine Sanctuary

Dear Chairman Hansen, Dr. McIsaac and Council members,

The California Wetfish Producers Association (CWPA) represents the majority of wetfish processors and active wetfish fishermen from both Monterey and southern California. We have followed with interest, in fact grave concern, the redoubled efforts of the National Marine Sanctuary Program, with particular reference to the Monterey Bay National Marine Sanctuary (MBNMS), to rationalize the 'need' to establish more MPAs in federal waters of the MBNMS.

We strongly concur with and support the testimony and extensive documentation provided by the Alliance of Communities for Sustainable Fisheries (ACSF) and their expert witnesses, all questioning:

- the scientific justification and rationale for the 'need' for more MPAs;
- the accuracy of alleged public support for additional MPAs beyond the 29 recently established by the State in the MBNMS; as well as
- the legal authority to implement any regulatory action resulting in restrictions on fishing, without full compliance with the recently amended Magnuson-Stevens Act, which expanded the PFMC's authority to designate such zones. [16 U.S.C. &1853(b)(2)(A)].

According to a legal review provided to both NOAA and the PFMC by James P. Walsh Esq., Davis Wright Tremaine LLP dated May 8, 2008, "This recent specific Congressional authorization [see ref. above] trumps the more general authority provided under the National Marine Sanctuaries Act (NMSA).

Moreover, the MBNMS Designation Document prohibits regulating fishing activities, under a promise made when the Sanctuary was created to gain support from the fishing community. Regional governmental officials in the Monterey Bay Area (AMBAG), as well as regional Congressman Sam Farr, broadly support the fishing community, its economic and tourism value in this region. Both the Monterey City Council and AMBAG have resolved that the Sanctuary should uphold the 'fishermen's promise'. By unilaterally moving to designate MPAs without the support of

the fishing community and local government, however, the Sanctuary expressly contradicts this promise.

We call attention to the detailed scientific review of the 'need' question by internationally honored scientists Ray Hilborn and Carl Walters, and including analysis by respected scientists Drs. Richard Parrish, Doyle Hanan and Barbara Walker. This review was commissioned by ACSF and provided earlier to the Sanctuary and recently to the Council. Please also consider the further May 2008 comments submitted by Dr. Ray Hilborn, which state:

"...[the MBNMS objective] statement provides no basis for determining how much protection is appropriate. Implicit throughout the report is the assertion that the current levels of protection are not sufficient, but there is no basis for making any decisions on how much is enough."

Wetfish, i.e. sardines, anchovy and market squid, comprise the lion's share of landings in this region, representing as much as 96 percent of total volume of commercial fishery landings in the greater Monterey Bay area (2006) and 65 percent of ex-vessel value (2003). The historic wetfish industry has been the backbone of the fishing community in the Monterey Bay region, both economically and culturally, for more than a century. It is vitally important to maintain the economic base as well as the fishing culture of this community.

As ACSF testimony and support documents point out, the Monterey Sanctuary has not yet addressed fishing community concerns, nor apparently considered scientific expertise that contradicts its mission as stated in recent 'needs' rationales. We support the requests made by the Alliance to the Council, and urge the Council to consider and act on ACSF's recommendations, [in part] including a request that the MBNMS:

- withdraw its February 15 and April 15, 2008 'decision' letters and restructure the task of an MPA work group to evaluate the utility and socio-economic consequences of additional MPAs versus other protection measures
- include State waters [and the 29 recently implemented MPAs] in its review of protection...,
- acknowledge the socio-economic crisis now unfolding in fisheries and fishing communities on the central coast, and set as a goal of the MPA process that there be no further loss of economic opportunity

We further concur with the ACSF recommendation that this Sanctuary MPA process should occur as part of the PFMC process to develop and implement the California Current System Ecosystem Management Plan, perhaps funded in part by the MBNMS. Conducting an evaluation of the need for and siting of additional MPAs in the MBNMS region in the context of the PFMC process would be consistent with the legal opinion provided by Mr. James Walsh, who also notes the Sanctuary lacks specific authority in the National Marine Sanctuaries Act, absent significant change to the current MBNMS designation document, to create zones that regulate/restrict fishing.

Thank you very much for your consideration of our concerns.

Sincerely,



Diane Pleschner-Steele  
Executive Director





American Cetacean Society  
Monterey Bay Chapter

Delivered via electronic mail to: [pfmc.comments@noaa.gov](mailto:pfmc.comments@noaa.gov)

May 15, 2008

Chair Hansen and  
Members of the Pacific Fishery Management Council  
7700 NE Ambassador Place, Suite 101  
Portland, OR 97220-1384

RE: Support for Use of Marine Protected Areas as an  
Ecosystem Management Tool in the Federal Waters of the  
Monterey Bay National Marine Sanctuary

Dear Chair Hansen and Members of the Pacific Fishery Management Council:

Please accept the following comments in support of marine protected areas (MPAs) in the federal waters of the Monterey Bay National Marine Sanctuary (MBNMS) on behalf of Ocean Conservancy, World Wildlife Fund, Save Our Shores, Monterey Coastkeeper, The Otter Project and American Cetacean Society's Monterey Bay Chapter.

Our organizations have been strong supporters of the National Marine Sanctuary Program for many years and we have been deeply involved with the program at both the national and individual sanctuary level. Some of our organizations have been integrally involved in the successful MPA efforts in both the Florida Keys and the Channel Islands sanctuaries as well as California's efforts under the Marine Life Protection Act (MLPA). Based on our experience with MPAs and with the National Marine Sanctuary Program and our involvement in MBNMS management, we believe that the MBNMS would benefit from adoption of federal water MPAs that build upon and leverage the recent accomplishments of the State of California under the MLPA.

Adoption of MPAs was the top priority identified by the public during the scoping period of the Sanctuary Program's Joint Management Plan Review (JMPR) process. In response to this strong public support and to a growing scientific and policy literature outlining the value of marine protected areas as an important ecosystem management tool, in 2001, the MBNMS convened an MPA working group that included several fishermen and harbor masters as well as representatives from scientific institutions and conservation organizations. Several of our organizations participated in this working group.

The Sanctuary's MPA working group developed an Action Plan that was unanimously adopted by the Sanctuary Advisory Council in 2003 at a public hearing in Santa Cruz where more than 200 members of the public testified – the vast majority in favor of stronger Sanctuary protections. Considerable progress has already been made under the MPA plan which is expected to continue to serve as the basis for the Sanctuary's MPA planning process in the future.

Public support for federal water MPAs within the MBNMS was reaffirmed at the December 2007 Sanctuary Advisory Council meeting in Monterey where more than two dozen local residents spoke in favor of such protection. The Sanctuary also received several thousand written comments urging adoption of federal water MPAs during a comment period earlier this year.

Our organizations support the ecosystem management objectives for MPAs in federal waters of the MBNMS outlined in the Sanctuary's April 15, 2008 Rationale Document provided to its Advisory Council:

- Preservation of unique and rare areas in their natural state for the benefit of future generations;
- Preservation of areas where species and habitats are maintained and/or restored for the purpose of ecosystem protection;
- Designation of research areas to differentiate between natural variation versus human impacts to ecological processes that will contribute to better management decisions.

These ecosystem management objectives are closely aligned with the statutory goals of the National Marine Sanctuaries Act and are critical to the successful long-term management and protection of MBNMS resources and qualities.

It is our understanding that the MBNMS' MPA process will include a review of how fisheries based closures like the Rockfish Conservation Areas and Essential Fish Habitat can contribute to partial accomplishment of the MBNMS' management objectives for federal water MPAs. We believe that it may be appropriate in some cases to leverage existing fisheries management measures to help contribute to meeting sanctuary ecosystem protection objectives and we anticipate exploring this issue further as the process unfolds.

We look forward to working with the Office of National Marine Sanctuaries, the Pacific Fisheries Management Council and NOAA Fisheries as well as members of the fishing community, scientists, other conservation interests and the public to advance this important issue.

Thank you for your consideration of these comments.

Sincerely,

Kaitilin Gaffney  
Ocean Conservancy

Steve Shimek  
The Otter Project & Monterey Coastkeeper

Laura Kasa  
Save Our Shores

Mike Osmond  
World Wildlife Fund

Carol Maehr  
Monterey Bay Chapter,  
American Cetacean Society

cc: Dan Basta, Office of National Marine Sanctuaries  
Paul Michel, Superintendent of the MBNMS  
Congressman Sam Farr



April 21, 2008

Pacific Fishery Management Council  
7700 NE Ambassador Place, Ste. 101  
Portland, OR 97220

Dear Members of the Council,

In addition to the letter of comment dated April 7, 2008, I would like to submit the following:

1. "Davidson Seamount" Action Plan: AMBAG supports the inclusion of the Davidson Seamount within the Boundaries of the Monterey Bay National Marine Sanctuary with fishing restrictions as adopted by the PPMC.
2. Bottom Trawling Effects on Benthic Habitats Action Plan: AMBAG recommends that any data that the Sanctuary develops be presented to the appropriate fishery management agencies for their consideration and action. AMBAG would not support the Sanctuary changing its Designation Document to regulate this fishery even in the event that the appropriate fishery management agencies decline to act on the Sanctuary's behalf.
3. Marine Protected Areas Action Plan: AMBAG recommends for Sanctuary actions which affect fishing include the statement: "any zones or regulations proposed by the Sanctuary which affect fishing would occur only if they are the result of a cooperative effort with the fishing and/or aquaculture communities and they have the support of those communities."

Thank you for your consideration.

Sincerely,

Anthony Botelho  
AMBAG President

cc: AMBAG Board of Directors  
Paul Michel, MBNMS Superintendent

JUN-08-08 SUN 10:12 PM PHILIPPO  
BARBARA BOXER  
CALIFORNIA

## United States Senate

HART SENATE OFFICE BUILDING  
SUITE 112

WASHINGTON, DC 20510-0505

(202) 224-3553

<http://boxer.senate.gov/contact>

May 29, 2008

Jim Martin, West Coast Regional Director  
Recreational Fishing Alliance  
P.O. Box 2420  
Fort Bragg, CA 95437

Dear Mr. Martin:

Thank you for writing to me regarding H.R. 1187, the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries-Boundary Modification and Protection Act, which passed the House in March. I appreciate having this opportunity to respond to your concerns.

I am proud to have introduced S.2635, the Senate version of this bill, which was approved by the Senate Commerce Committee earlier this month. Like H.R. 1187, S.2635 would permanently protect the coastal waters and estuaries of Sonoma County and portions of Mendocino County by extending the boundaries of the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries.

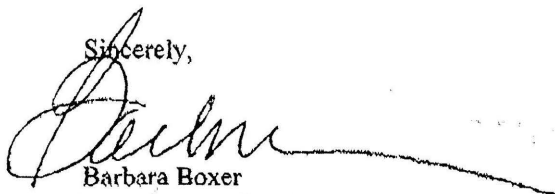
I understand that you have concerns that H.R. 1187/S.2635 could result in more fishing regulations within the Farallones and Cordell Bank sanctuaries. Let me assure you that recreational fishing is extremely important to California and to me. In fact, one of the objectives of this bill is to protect the water quality and habitat essential for good fishing.

The Gulf of the Farallones and Cordell Bank Sanctuaries do not restrict fishing - in fact, their designation documents do not allow them to impose fishing regulations - and this bill would not change that. The Sanctuary Advisory Councils, which draft sanctuary regulations, include representatives from the commercial and recreational fishing industries (the Vice-Chair of the Farallones Council is a fisherwoman), and any proposal to change the designation documents would require both the support of these fishermen and a lengthy public review process.

I appreciate your perspectives on improvements needed in the National Marine Sanctuaries Program and will take your suggestions into consideration during reauthorization of the National Marine Sanctuaries Act. However, because of imminent threats to California's marine environment (including oil spills, sewage pollution, and water removals), I believe that Congress must act swiftly to enact H.R. 1187/S.2635. Be assured that the aim of this bill is not to impose further fishing restrictions but to protect an ecologically and economically important area from pollution and habitat degradation.

Again, thank you for writing to me. Please feel free to contact me again about this or other issues of concern to you and the Recreational Fishing Alliance.

Sincerely,



Barbara Boxer  
United States Senator

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SAN FRANCISCO, CA 94111  
(415) 403-0100

312 NORTH SPRING STREET  
SUITE 1748  
LOS ANGELES, CA 90012  
(213) 894-5000

501 'I' STREET  
SUITE 7-600  
SACRAMENTO, CA 95814  
(916) 448-2787

2500 TULARE STREET  
SUITE 5290  
FRESNO, CA 93721  
(559) 497-5109

600 'K' STREET  
SUITE 2240  
SAN DIEGO, CA 92101  
(619) 239-3884

201 NORTH 'E' STREET  
SUITE 210  
SAN BERNARDINO, CA 92401  
(909) 335-8525