Potential Marine Benthic Habitats, Offshore of Tomales Point Map Area, California

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DISCUSSION

The distribution, composition, and abundance of marine benthic habitats are key factors in determining the overall health of an ecosystem. Understanding these habitats is crucial for conservation, management, and sustainable development. The map provides a detailed representation of the diverse marine benthic habitats along the continental shelf of California, particularly highlighting the areas near Tomales Point. The habitat types are classified based on the spatial distribution of bottom sediments and bedrock outcrops, with a focus on areas covered by a thin veneer of sediment identified as mixed induration (containing both rock and sediment). These areas can support a variety of benthic species, depending on the specific characteristics of the substrate.

Ongoing research by Reid and others (2006) on the USSEABED bottom-sampling program contributes to a comprehensive understanding of the variability in marine habitats along the shelf. The map integrates information from this sampling program with satellite data, providing a more accurate representation of the seafloor geology and benthic habitats. The shelf is characterized by a combination of hard bedrock and soft sediment areas, which are crucial for the diversity of marine life. The mixed substrate areas, as shown in the map, are particularly important for understanding the distribution of sedimentary processes and the potential for colonization by specific benthic species.

REFERENCES


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Map is derived from several categories of the Benthic Marine Potential Habitat Classification Scheme (Greene and others, 1999, 2007), and it can be subdivided on the basis of the spatial scale of the data. The map also uses information from the USSEABED bottom-sampling compilation by Reid and others (2006). The map was created to not only easily distinguish marine benthic habitats but also to facilitate ease of use and queries on marine habitat associations.

The map highlights areas near shoreline not mapped owing to insufficient high-resolution seafloor mapping data; areas beyond 3-nautical-mile limit of California's State Waters limit from NOAA Office of Coast Survey at http://www.csc.noaa.gov/digitalcoast/data/.