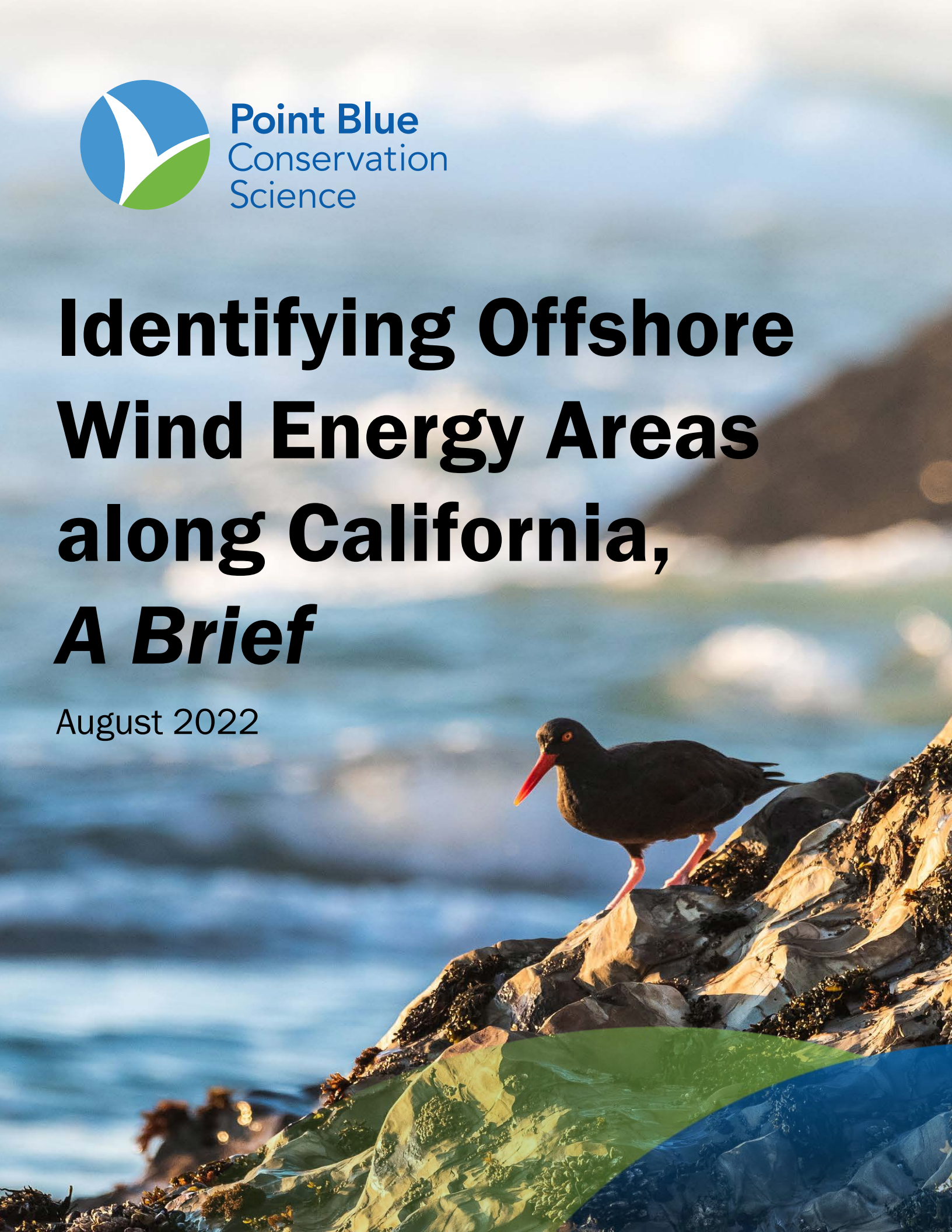
Point Blue Conservation Science

Identifying Offshore Wind Energy Areas along California, *A Brief*

August 2022



About this Brief

This brief summarizes the findings of a longer report, "**Using Available Data and Information to Identify Offshore Wind Energy Areas Off the California Coast**"

The report was completed in April 2022 by R. Cotton Rockwood, Leo Salas, Julie Howar, Nadav Nur, and Jaime Jahncke of Point Blue Conservation Science.

To view on the web, please visit:
www.pointblue.org/california-wind

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Back cover: White-sided dolphin, credit: Ben Saenz.

Point Blue Conservation Science – Point Blue's 160 scientists work to reduce the impacts of climate change, habitat loss, and other environmental threats while developing nature-based solutions to benefit both wildlife and people.
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Introduction

Clean energy that works with nature, such as wind and solar, is key to creating a healthy future and reducing atmospheric carbon levels before major tipping points occur. But there must be thoughtful, science-driven planning in order to implement this approach to energy production.

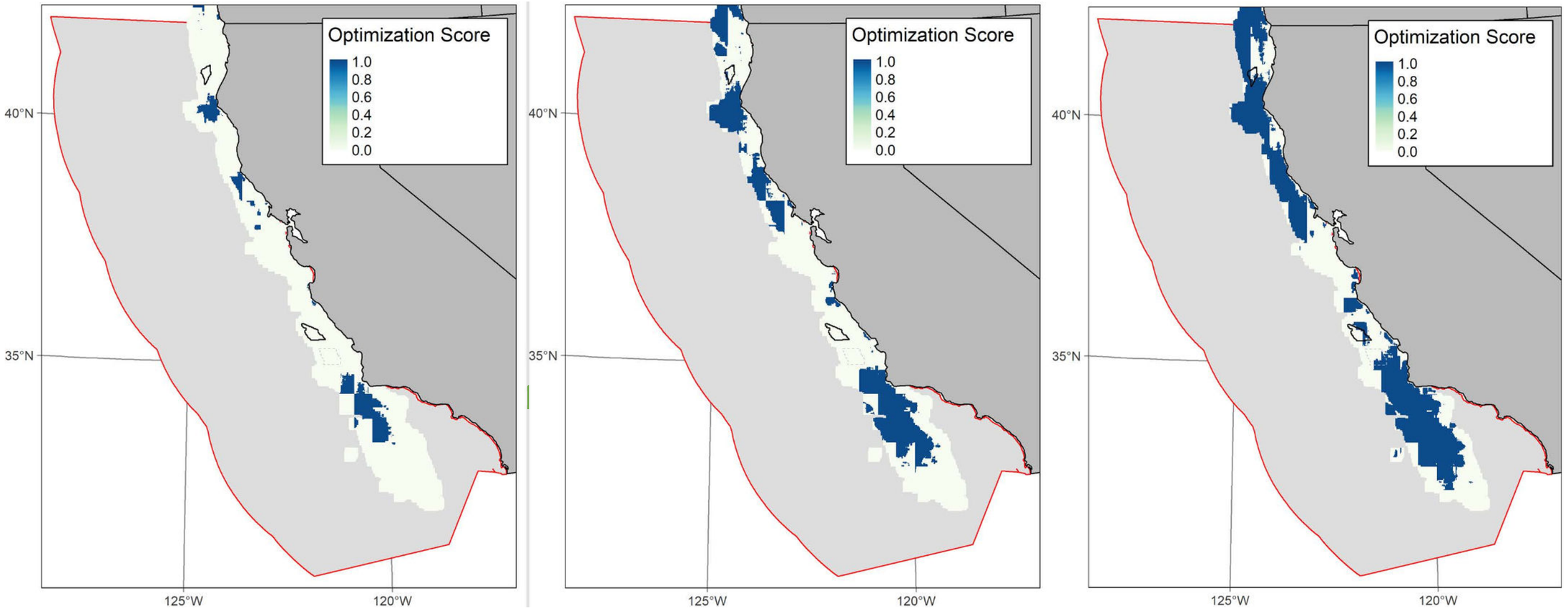
The goal of the report we summarize in this brief was to first analyze the existing spatial data on marine species, the marine environment, and human uses of the ocean. Then we used key data sets to identify areas for potential offshore wind energy development that maximize energy output and minimize impact to wildlife and human activities like fishing.

We developed a spatial model that showed offshore areas around Punta Gorda in Humboldt County, Point Arena in Mendocino County, and Point Conception in Santa Barbara County as priority wind energy installation locations that have the lowest wildlife impact value while still having a significant wind energy output. We show other scenarios that accept higher impact values as well.

Our contribution is part of a thorough, multi-step process to support the California Energy Commission (CEC) and the Bureau of Ocean and Energy Management (BOEM) with offshore wind planning decisions. If leases are awarded, then the purchasing company must write Site Assessment and Construction and Operation Plans, which are reviewed and evaluated by BOEM. All of these steps and associated decisions can benefit from the results of our models.

Areas Identified that Optimize Energy Output and Minimize Wildlife and Human Use Impact

These three scenarios lie along a spectrum that moves from weighting protection of wildlife and current human uses to emphasizing the benefits of wind energy production more heavily. They provide information that could help guide the staged process of offshore wind development as California seeks to meet renewable energy targets while protecting wildlife and important human uses of the ocean. These findings both highlight the importance of holistic and science-driven evaluations of siting priorities early in the process as well as the significance of using and continuing to develop the highest quality input data for such models. In addition, since certain components necessitate value-driven decisions and weighting, our tool is most useful as a dynamic, easily updated and modified means to inform decision making.



10% maximum impact

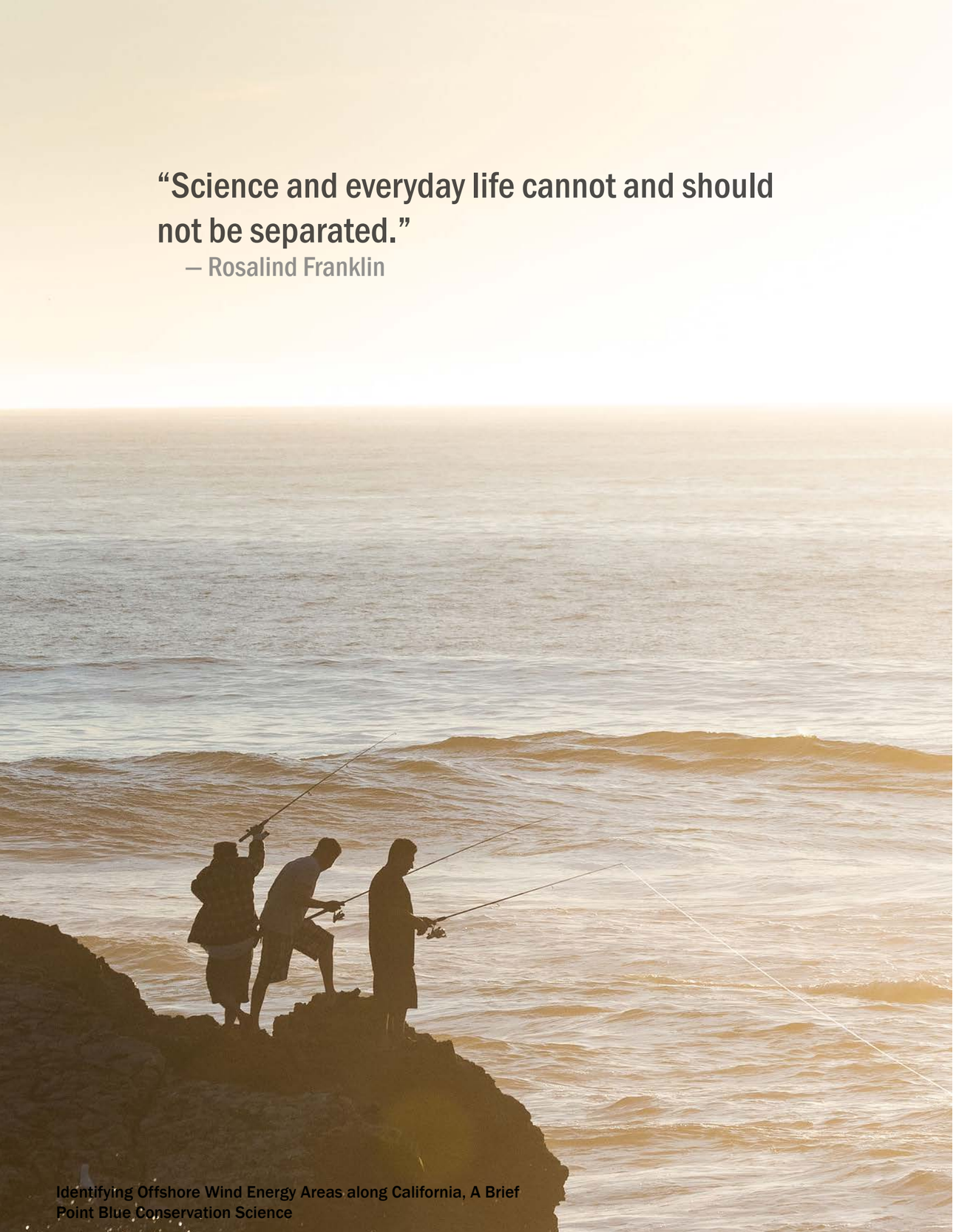
Placing wind energy infrastructure in the blue shaded areas would produce a 10% maximum impact on wildlife and human uses. This is the lowest impact scenario. The areas include southwest from Punta Gorda/Cape Mendocino, and offshore from Point Arena.

30% maximum impact

Offshore wind energy placement in this scenario includes those areas in the 10% scenario and an offshore region near the Oregon border. Small areas of the Humboldt Wind Energy Area area also included. This gives more options for placement of wind energy infrasctructure, but at a higher cost to wildlife and human use

50% maximum impact

Best areas for offshore wind energy placement in this scenario cover much of the north coast offshore area, including a larger portion of the Humboldt Wind Energy Area. With this scenario, part of the Morro Bay Wind Energy Area is also selected along with an adjacent area to the northeast.



“Science and everyday life cannot and should not be separated.”

— Rosalind Franklin

Data is Guiding the Way

To responsibly develop offshore wind, we need flexible, transparent, science-driven tools to help managers and decision makers strike the right balance of producing energy while imparting minimal impact to species, habitats, and human uses. Point Blue has developed such a tool in the model we describe in this brief and our full report.

Point Blue’s role in wind energy development is to provide the science that enables sound, informed planning that ultimately helps ocean ecosystem health in the long run. This is for the benefit of wildlife and people.

As we continue to develop this modeling system, we will refine the visualizations and types of outputs to better meet the needs of stakeholders and managers. In addition, there is great potential for the optimization component of this model to be modified so that it can identify siting solutions that meet specific total energy production targets, such as those that will be developed as part of AB 525, the California legislation guiding offshore wind targets and planning.

At this stage of our work, there is an exciting opportunity to build on our existing efforts and improve our ability to guide science-based siting of offshore wind installations. We can leverage this opportunity by incorporating additional datasets, expanding the sensitivity assessments, getting feedback on the models, and publishing our work in a peer reviewed journal. The purpose of the models continues to be to identify areas that maximize energy generation potential while preserving existing ocean uses and protecting the marine and coastal environments.

View and share this brief via the Point Blue website at **www.pointblue.org/california-wind**.

Find our previous offshore wind energy reports and briefs at www.pointblue.org/humboldt-wind and www.pointblue.org/morro-bay-wind.



This project was made possible by funding from the California Ocean Protection Council.

OCEAN PROTECTION COUNCIL

The OPC is committed to basing its decisions and actions on the best available science, and to promoting the use of science among all entities involved in the management of ocean resources.



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