

**BREN SCHOOL OF ENVIRONMENTAL SCIENCE & MANAGEMENT**  
**MESM GROUP PROJECT PROPOSAL 2024-2025**

*Conservation Gap Analysis and the Business Case for  
Protecting Surf Ecosystems*

**Client:**

Marissa Miller	Conservation International	Senior Coordinator	mrmiller@conservation.org
Scott Atkinson	Conservation International	Senior Director	satkinson@conservation.org

**Student Author:**

Lauren Londoño	UCSB Bren School	MESM 2025	llondono@bren.ucsb.edu
----------------	------------------	-----------	------------------------

**Objectives**

Global assessments conducted by Conservation International (CI) and collaborators underscore the critical intersection between surf breaks and biodiversity, revealing that 75% of surf breaks worldwide are located in areas of significant biodiversity<sup>1</sup>. Likewise, there are thousands of surf breaks globally where surrounding mangrove, forests and seagrasses contain high levels of carbon. Conservation International’s Surf Conservation Program is dedicated to conserving high priority waves and surrounding ecosystems (surf ecosystems) through the creation of a global Surf Protected Area Network (SPAN). This group project aims to identify the most critical surf ecosystems, identify the funding gap for implementing SPANs for these surf ecosystems, and develop a business case for advancing surf conservation efforts in Indonesia, with a possible focus on one or more regions of the country. Project Objectives are:

- Objective 1 – Identification of high priority surf ecosystems for conservation, based on biodiversity, important ecological processes, and high carbon ecosystems.
- Objective 2 – Understand the amount of funding needed, current funding levels and the funding gap to support the effective implementation of SPANs for these surf ecosystems.
- Objective 3 – Identification of the environmental, social, and economic benefits of protecting the surf ecosystems of the project focal region.
- Objective 4 – Complete a comprehensive business case report. Please note, this business case for the project focal region will contribute significantly to a Global Action Plan for Surf Conservation that CI is developing using a similar methodology.

**Implications**

The origins of the surf conservation approach trace back to the need to protect irreplaceable ecosystems while ensuring that surfing and surf tourism contribute positively rather than adversely. The urgency of the situation lies in the preservation of Indonesia’s extremely biodiverse and carbon-rich coastal ecosystems, home to some of the world's best surf breaks. This region also hosts a multi-million-dollar surf tourism industry, with several resorts expressing interest in implementing conservation fees to

support surf conservation initiatives. However, to elevate the progress, a comprehensive business case, understanding of return on investment, and knowledge on setting up effective conservation finance frameworks are imperative. The project will identify tangible ways for various stakeholders, particularly the surf tourism industry, to sustainably finance surf conservation. The anticipated outcomes include the development of key materials for effective communication with stakeholders and the establishment of sustainable finance mechanisms in collaboration with key partners. These mechanisms will ensure the successful implementation of surf conservation and secure the quantified benefits outlined in the project deliverables. Additionally, the project will create a scalable framework for sustainable financing surf conservation, extending its impact to other high-priority areas globally. The diverse target audience encompasses the surf tourism industry, local and international NGO partners, governments, local communities, institutional funders, private donors, and other key stakeholders who can contribute to unlocking financing for surf conservation.

## Equity

This group project focuses on the equity and environmental justice aspects of surf conservation in Indonesia, with an emphasis on sustainable community development. SPANs are centered around a participatory approach that includes community-based regulations and analyzes to ensure local benefits and mitigate negative outcomes. Among the documented benefits of SPANs are improved livelihoods, improved health, and well-being, and enhanced coastal resilience of the community. By supporting the continued and effective implementation of SPANs, this project will continue to protect the local environment and waves as well as create a foundation for local economic development. Due to the community-centric nature of SPA management plans, a key pillar of implementation includes hosting surf conservation camps with an emphasis on gender equity, as women and girls have historically been excluded from water-based sports and activities. In addition to providing them with basic ocean knowledge and surfing skills, our initiative contributes to their empowerment as the next generation of surf conservation leaders.

## Available Data

The project will leverage available databases and resources to provide students with a diverse range of data sets for developing the business case for Indonesian surf breaks. While some data collection, such as stakeholder interviews and surveys, may be involved, the majority will be derived from previous studies and public data sets on Surf Protected Area Networks. Interviews with regional experts facilitated by Conservation International will be crucial for obtaining cost-benefit evaluation information. No field data collection is anticipated, and if access is granted to databases like Stormrider or Surfline from Conservation International, a Non-Disclosure Agreement (NDA) will be implemented for surf spot data usage. The project will make use of publicly available data:

- Surf Conservation Index for Indonesia (projected completion by CI in May 2024)
- [Identification and Profiling of Sites for Inclusion in Surf Protected Area Networks](#)
- [Conservation International and Save the Waves Coalition Surf Conservation Index of Costa Rica](#)

CI will provide the group with additional internal and partner data:

- Telo Islands Sustainable Surf Management Plan
- Sustainable Surf Tourism materials (interviews with surf tourism industry actors and surf conservation practitioners and a paper on sustainable financing surf conservation)

## Possible Approach

- Objective 1 – *Identification of the Highest Priority Surf Ecosystem for Conservation*: The project will assess and map the highest priority surf ecosystems building on existing data on the overlap of surf breaks, high biodiversity, important ecological processes, and high carbon ecosystems.
- Objective 2 – *Financial Gap Analysis*: A financial analysis will be conducted to estimate the amount of funding needed to finance the effective protection of surf ecosystems in Indonesia, using the SPAN approach. Sustainable finance modeling and stakeholder analyses will then be used to identify the avenues or mechanisms through which that funding can be acquired within the unique context of the region.
- Objective 3 – *Benefits of Surf Ecosystem Conservation*: A multidimensional benefits analysis will be conducted to assess the environmental, social, and economic benefits of protecting surf ecosystems in Indonesia. This includes evaluating ecosystem services and other quantifiable environmental, economic, and business outcomes, and less quantifiable outcomes like community well-being, culture, and livelihood benefits. This benefits analysis will complement the financial analysis by outlining the “return on investment” for financing surf conservation.
- Objective 4 – *Business Case for Surf Ecosystem Management*: The project will synthesize the findings from the first three objectives to develop a comprehensive and compelling business case for surf ecosystem management. This will also support the Global Action Plan for Surf Conservation that CI is developing by providing a detailed assessment in the project focal region.

## Deliverables

In addition to the required Bren School deliverables, this project will produce one or more of the following:

- *Surf Ecosystem Priority Maps*: Maps of high conservation priority surf ecosystems.
- *Financial analysis*: Full written report, folder of all data used, and 1-pager summary.
- *Benefits analysis*: Full written report, folder of all data used, and 1-pager summary.
- *Business case*: Full written report, 1-pager summary, and presentation catered to various stakeholder audiences.
- *Participation on global working group*: Summary presentation of all deliverables above (can be same as final presentation to Bren).

## Internship

Conservation International will be able to provide unpaid internships for 1-2 Bren student(s) in the Group Project during Summer 2024. Most of the internship(s) scope of work can be completed remotely, but there may be a possibility to travel to Indonesia if interest and funding are available.

## **SUPPORTING MATERIALS**

### **Citations**

1. 2022 impact report - save the waves. (n.d.). [https://www.savethewaves.org/wp-content/uploads/2023/05/2022\\_ImpactReport\\_SaveTheWaves\\_WebShare.pdf](https://www.savethewaves.org/wp-content/uploads/2023/05/2022_ImpactReport_SaveTheWaves_WebShare.pdf)
2. Buckley, R.C., Cooper, MA. Mental health contribution to economic value of surfing ecosystem services. *npj Ocean Sustain* 2, 20 (2023). <https://doi.org/10.1038/s44183-023-00027-5>
3. Smith, R. J., Bennun, L., Brooks, T. M., Butchart, S. H. M., Cuttelod, A., Di Marco, M., Ferrier, S., Fishpool, L. D. C., Joppa, L., Juffe-Bignoli, D., Knight, A. T., Lamoreux, J. F., Langhammer, P., Possingham, H. P., Rondinini, C., Visconti, P., Watson, J. E. M., Woodley, S., Boitani, L., ... Scaramuzza, C. A. (2018). Synergies between the Key Biodiversity Area and systematic conservation planning approaches. *Conservation Letters*, 12(1). <https://doi.org/10.1111/conl.12625>

### **Budget and Justification**

It is not anticipated that the proposed project will require additional funding beyond the \$1,000 contributed by the Bren School.

### **Client Letter of Support**

**Group Project Committee  
Bren School of Environmental Science & Management  
2400 Bren Hall UC Santa Barbara, CA 93106-5131**

January 12, 2024

Dear Group Project Committee:

I am writing to offer my support for the group project proposal “*Conservation Gap Analysis and the Business Case for Protecting Surf Ecosystems.*” The proposal was written in partnership with the Surf Conservation Program (SCP) at Conservation International, which is greatly expanding marine conservation through the power of surfing. The SCP has developed the Surf Protected Area Network approach to advance the role of surfing in marine and coastal conservation. Similar to how SCUBA diving has been applied as a focal point for marine conservation, surfing is proving to be an incredible rallying point for advancing marine conservation. In Surf Protected Area Networks, surfing waves serve an anchor and motivator for the conservation of much larger surrounding ecosystems (surf ecosystems), including reefs, seagrass and mangroves, beaches, and coastal forests.

The SCP has worked with local communities in Indonesia to successfully establish 23 Surf Protected Areas and 15 more are under development. We have also expanded to Costa Rica, Peru and Brazil.

To scale up the impact of the Surf Protected Area Network approach, we are launching a process to develop a Global Action Plan for Surf Conservation. In this process, we will identify the highest priority surf ecosystems for conservation, identify the funding levels needed to bring these surf ecosystems into sustainable conservation, identify the economic, social and ecological benefits of this conservation and develop the business case and roadmap to achieve this conservation.

This Bren School project will focus on one of our primary partner countries, Indonesia, or Costa Rica to undertake a deep dive using a similar methodology. During the project, the student group will map the priority surf ecosystems for the focal country (building on existing research), identify the needed funding levels to manage these areas, the current funding and the gap, identify pathways to secure the needed funding, identify the economic, social and ecological benefits of this surf conservation, and develop this all into a business case for the protection of these high priority surf ecosystems. This will be an invaluable contribution both to advancing surf ecosystem conservation in the focal country and to supporting the Global Action Plan process to make a major contribution to surf ecosystem conservation at scale.

As the client for this project, we enthusiastically commit to provide access to relevant data, as well as necessary consultation and supervision throughout the project in recognition of the mutual academic objectives of the student team. Furthermore, Conservation International commits to hosting one or more interns to advance the project. This internship will be un-paid, although funding for the position is being requested to provide a stipend that covers travel and living expenses. Regarding all other expenses related to the project, we expect that it will not require more funding than the budget provided to group project by the Bren School. We understand however, that should special opportunities to advance the impact of the project arise, the CI Surf Conservation Program will seek and provide support as needed. Please don't hesitate to contact me should you need more information.

Sincerely,



Scott Atkinson  
Senior Director, Surf Conservation Cell:  
+1 808-224-2679  
[satkinson@conservation.org](mailto:satkinson@conservation.org)