State of California – Natural Resources Agency   ***GAVIN NEWSOM, Governor***
DEPARTMENT OF FISH AND WILDLIFE   ***CHARLTON H. BONHAM, Director***
Director's Office
P.O. Box 944209
Sacramento, CA 94244-2090
www.wildlife.ca.gov

DATA SHARING AGREEMENT
BETWEEN THE
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW)
AND THE
REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF OF ITS
SANTA BARBARA CAMPUS (UCSB)
CONCERNING THE RELEASE AND USE OF CONFIDENTIAL FISHERIES INFORMATION

WHEREAS, Fish and Game Code Section 8022 (a) states that the receipts, reports, or other records filed with CDFW pursuant to California Fish and Game Code Section 7700 – Section 8070 are confidential.

WHEREAS, Fish and Game Code Section 8022 (b) states that CDFW may release these confidential data to any public or private postsecondary institution engaged in research.

WHEREAS, UCSB is a public postsecondary institution engaged in research.

WHEREAS, CDFW is willing to disclose the confidential information to UCSB, and UCSB is willing to receive the information on the terms and conditions described herein.

NOW, THEREFORE, CDFW and UCSB hereby agree that their interactions shall be guided by provisions of this Data Sharing Agreement (Agreement).

1.0   Purpose

This Agreement is entered into by and between CDFW and UCSB to establish the content, use, and protection of data needed by Dr. Christopher Free for the purpose reconstructing mortality of protected species in the California gillnet fishery and investigating the impact of historical and alternative management interventions in reducing mortality with least impact to fishing communities. Additional details regarding this work are provided in Attachment A.

2.0   Period of Agreement

The Agreement shall be in effect from the date of last signature and shall extend for a period of two years or until completion or termination of the project work identified in Attachment A, whichever is soonest. This Agreement

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may be extended by consent and signature of both parties and may be terminated in writing by either party.

3.0 Definitions

Parties means CDFW and UCSB.

CDFW includes its officers, employees, agents and any other representatives.

UCSB includes any individuals who are working on the research described in Attachment A, including individuals employed or contracted by, or studying at, UCSB. UCSB's authorized recipient for the Information is Christopher Free.

Information includes collectively any receipts, reports, or other records filed with CDFW pursuant to California Fish and Game Code §7700 - §8070, and the information contained in them, which is furnished by CDFW to UCSB pursuant to this Agreement.

4.0 Intended Use of Data

UCSB agrees to use the Information from CDFW's Marine Landings Data System (MLDS), Marine Logs System (MLS) and state onboard observer data for the strict purpose as described in section 1.0.

4.1 Description of Data:

CDFW shall provide California marine commercial fisheries landings receipt data, logbook data, state onboard observer data as described in Attachment B. CDFW reserves the right to edit, add, delete or change any data field contained in the Attachment B as CDFW considers necessary to the functions of CDFW or as applicable to comply with federal and state laws without notice to UCSB.

If the Information is used for any purpose other than authorized under this Agreement, UCSB's further access to any CDFW confidential data may be denied, and this Agreement may be terminated immediately.

5.0 Data Transfer

All data that are transferred through internal and external networks shall adhere to National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53 System and Communications Protection (SC) 8, *Transmission Confidentiality and Integrity*. All data that are transferred by means other than internal and external networks shall adhere to NIST SP 800-53, Media and Protections 5, *Media Transport*.

6.0   Constraints on Use of Data

CDFW is the exclusive owner of the landings, logbook and state onboard observer Information subject to this Agreement. UCSB will in all respects treat it as the proprietary information of CDFW in accordance with all procedures reasonably necessary to protect CDFW's proprietary rights therein, consistent with the legal authorities available to UCSB. UCSB will maintain the confidentiality of the information consistent with legal authorities available to UCSB, including but not limited to the applicable California state laws. In the event that UCSB receives a formal request for the Information pursuant to the California Public Records Act (PRA) (Government Code sections 7920-7931) or any other applicable law, UCSB will notify CDFW at least 10 days prior to responding to the request. Pursuant to Fish and Game Code Section 8022 and Government Code sections 7927.705, 7930.005, and 7930.125, this Information is not a public record under the PRA and is exempt from disclosure.

6.1   UCSB shall only use the Information for the purposes identified in section 1.0.

6.2   UCSB shall restrict disclosure of the Information solely to those individuals studying with or working for UCSB who have a need to know such information in order to accomplish the identified purposes.

6.3   UCSB shall advise such individuals, before they receive access to the Information, of UCSB's obligations under this Agreement. UCSB shall take steps to ensure that all such individuals shall comply with the provisions of this Agreement, including requiring: all agents (contractors) to sign a non-disclosure agreement consistent with the provisions of this Agreement; and all employees and other individuals working on the research to sign a statement affirming that they have read this Agreement and will maintain its obligations.

6.4   Any information published or otherwise shared, outside of those receiving the information pursuant to sections 3 or 6.3 above, will only be as summaries, so as not to disclose the individual record or business of any person, and before publishing, UCSB shall provide these summaries to CDFW for its review. CDFW will review summaries in consideration of the "Rule-of-Three" thresholds to ensure confidentiality is maintained consistent with Fish and Game Code Section 8022. All records summarized for public disclosure must be the aggregate of at least three data points in each given category that identifies an individual or business, for example three individual persons with commercial fishing licenses, three individual fishing vessels, or three individual fish businesses.

6.5   Publication of any results based upon this Information will include proper attribution to CDFW.

6.6   The following disclaimer will be included in the data attribution:

CDFW collects data from various sources for fisheries management purposes, and data may be modified at any time to improve accuracy and as new data are acquired. CDFW may provide data upon request under a formal agreement. Data are provided as-is and in good faith, but CDFW does not endorse any particular analytical methods, interpretations, or conclusions based upon the data it provides. Unless otherwise stated, use of CDFW's data does not constitute CDFW's professional advice or formal recommendation of any given analysis. CDFW recommends users consult with CDFW prior to data use regarding known limitations of certain data sets.

6.7 Data received under this Agreement, backups of these data, and all related materials that contain any portion of these confidential data will be removed from computer equipment after it has been used for its stated purposes.

7.0 Data Security

To protect CDFW data from unauthorized physical and electronic access and to ensure the confidentiality, availability and integrity of all data shared, UCSB shall meet or exceed industry best practices for physical security, data security, network security, and access controls, both technically and procedurally, including compliance with Federal Information Processing Standards (FIPS) Publication 200, *Minimum Security Requirements for Federal Information and Information Systems*, and National Institute of Standards and Technology (NIST) Special Publication 800-53, *Security and Privacy Controls for Federal Information Systems and Organizations*.

UCSB will apply security patches and upgrades, and keep antivirus software up-to-date on all systems on which data may be used.

In the event that CDFW data are improperly accessed or breached, UCSB shall take measures to prevent further access to CDFW data or further breach incidents. In addition, UCSB will notify CDFW within 24 hours of discovering any unauthorized access. CDFW shall have the right to participate in the investigation of a security incident involving its data or conduct its own independent investigation, and UCSB shall cooperate in such investigations. Despite any preventive measures taken by UCSB, CDFW retains the right to terminate this Agreement consistent with section 10.0 of this Agreement.

UCSB shall be responsible for all costs incurred by CDFW due to security incident resulting from UCSB's failure to perform or negligent acts of its personnel, and resulting in an unauthorized disclosure, release, access, review, or destruction; or loss, theft or misuse of data. If CDFW determines that notice to the individuals whose data has been lost or breached is appropriate, UCSB will bear any and all costs associated with the notice or any mitigation selected by CDFW. These costs include, but are not limited to,

staff time, material costs, postage, media announcements, and other identifiable costs associated with the breach or loss of data.

8.0   Compliance with Applicable Laws and Regulations

The validity, construction, and performance of this Agreement are governed by the laws of the State of California.

UCSB shall comply with all applicable state and federal laws and regulations protecting the Information that is provided pursuant to this Agreement including the privacy of personal information. UCSB agrees to be bound by California law for any activities related to the scope of this agreement.

9.0   Amendments and Alterations to this Agreement

This Agreement constitutes the entire agreement between CDFW and UCSB for the purpose described in Attachment A, and no other statements or representations, written or oral, shall be deemed to exist or to bind the parties for the stated purpose. CDFW and UCSB may amend this Agreement at any time, provided that the amendment is with the consent of both parties, in writing, and signed by authorized persons.

10.0   Termination of the Agreement

This Agreement may be terminated at any time, for cause, by CDFW; may be terminated for any reason by either party with a 30-day written notice; and in any case terminates as described in section 2.0, unless extended pursuant to section 2.0 or section 9.0.

In the event this Agreement is terminated, UCSB shall return to CDFW all the Information covered by this Agreement as well as any backups and all related materials that contain any portion of the Information. Once the Information and related materials are transferred to CDFW, UCSB shall sanitize the data in accordance with NIST SP 800-53 MP-6, *Media Sanitation*. CDFW may request independent confirmation of data sanitation.

UCSB's obligations of confidentiality and restrictions on use of the Information pursuant to this Agreement shall continue in full force and effect, and shall survive termination of this Agreement.

11.0   Dispute Resolution

Except as otherwise provided in this Agreement, should a bona fide dispute arise between CDFW and UCSB regarding subjects of this Agreement, it is the expectation of both UCSB and CDFW that the parties shall meet and resolve the issue through discussion and negotiation. If the Parties are unable to resolve the dispute through good faith discussions, the Parties reserve the right to seek legal remedies as appropriate.

12.0   Miscellaneous Provisions

12.1   It is expressly understood that the confidentiality of the Information is statutory in nature and cannot be waived by any act or omission of CDFW.

12.2   This Agreement constitutes the entire understanding between CDFW and UCSB with respect to the subject and purpose described in section 1.0 and supersedes any prior or contemporaneous understandings or agreements, whether oral or written.

13.0   Notices

Any notices made in connection with this Agreement shall be in writing and sent certified mail or by recognized overnight courier to the following individuals and addresses:

For CDFW:

Dr. Craig Shuman, Regional Manager
California Department of Fish and Wildlife
Marine Region
1933 Cliff Drive, Suite 9
Santa Barbara, CA 93109
Telephone: (916) 445-6459
E-mail: Craig.Shuman@wildlife.ca.gov

For UCSB:

Jenna Nakano, MTA/NDA Officer
UCSB Office of Technology & Industry Alliances
342 Lagoon Road
Santa Barbara, CA 93106-2055
Telephone: (805) 893-2367
E-mail: nakano@tia.ucsb.edu

14.0   Independent Capacity

The employees or agents of each party who are engaged in the performance of this Agreement shall continue to be employees or agents of that party and shall not be considered for any purpose to be employees or agents of the other party.

SIGNATURE PAGE

This Agreement may be executed through original signature or digital signature. Execution in original signature may be provided in counterparts, with each Party signing a copy of this Signature Page, each of which is an original and all of which taken together form one completely executed document. Original signature that are transmitted via facsimile or email (e.g. PDF or similar file types) are valid. Digital signature is the preferred signature format. Any digital signature will be completed through a CDFW-initiated DocuSign process, with all signatures completed within a single envelope. In signing, the signatories attest they are each duly authorized to execute this agreement.

DATE: 6/20/2023

Chad Dibble, Deputy Director
Wildlife and Fisheries Division
California Department of Fish and Wildlife
P O Box 944209
Sacramento, CA 94244-2090

DATE: 6/20/2023

Stephen Adams, Chief Information Officer
Data and Technology Division
California Department of Fish and Wildlife
P.O. Box 944209
Sacramento, California 94244-2090

DATE: 6/19/2023

Jenna Nakano, MTA/NDA Officer
UCSB Office of Technology & Industry Alliances
342 Lagoon Road
Santa Barbara, CA 93106-2055

Read and Acknowledged:

DocuSigned by:

Christopher Free

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DATE: 6/19/2023

Authorized Data Recipient
Christopher Free
2400 Bren Hall
Bren School, UC Santa Barbara
Santa Barbara, CA 93106-5131

DocuSigned by:

Yutian Fang

37503773FD004D5...
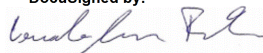
DATE: 6/19/2023

Authorized Data Recipient
Yutian Fang
2400 Bren Hall
Bren School, UC Santa Barbara
Santa Barbara, CA 93106-5131

DocuSigned by:

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DATE: 6/19/2023

Authorized Data Recipient
Leonardo Feitosa
2400 Bren Hall
Bren School, UC Santa Barbara
Santa Barbara, CA 93106-5131

Appendix A

Project Description

We will develop models to reconstruct mortality of protected species (marine mammals, seabirds, turtles) in the California gillnet fishery from 1980-2022 and to investigate the impact of historical and alternative management interventions in reducing mortality with least impact to fishing communities. First, we will use observer data to develop statistical models that predict bycatch occurrence as a function of variables such as distance from shore, depth, latitude, soak time, mesh size, and julian day. These models will both reveal the opportunity for potential management interventions to lower bycatch while also providing a model for predicting bycatch for gillnet sets documented in logbooks. We will fit and compare machine learning models such as random forests and boosted regression trees as well as classical ratio estimators (the method previously used by CDFW). We will then test, through retrospective analysis, how different management measures (e.g., depth, season, space, mesh size, or soak time restrictions, etc.) would have impacted bycatch rates and fisheries revenues. Through this analysis, we will attempt to identify rules that could be used to reduce mortality with minimal impact on fishers.

Appendix B

COMMERCIAL FISHING DATA
FILE LAYOUT
CDFW & UCSB

General Description	Commercial landings and revenues data, logbook data, and state gillnet vessel onboard observer data (1980-2022)
1. Observation Requested	i. Marine Landings Data System (MLDS) landings records 1980 – 2022 ii. Marine Logs System (MLS) logbook records 1980 – 2022 iii. State gillnet onboard observation data 1980 - 2022
2. Delivery Timeline Request	As soon as possible
Process:	Various
File Name:	To be determined
Format:	To be determined
Data Field Provided	i. Marine Landings Data System (MLDS) data **Landing Receipt Data Extract:** Landing Date Serial Number Fish License Number (CFL) Vessel ID State Permit ID Groundfish Permit ID Port ID Port Name Block ID Fish Business ID Species ID Species Name Pounds Unit Price Total Value Primary Gear ID Primary Gear Name Gear ID Gear Name Condition ID Condition Name Use ID Use Name ii. Marine Logs System (MLS) data **Gillnet Log:** Current_Name BoatNo Vessel_Num Permit Fishing_Date

Tarspc
Drift_Set
FG_Blocks
Depths
Net_Length
Mesh_Size
Bouy_Line_Depth
Hours_Net_Soaked
Common_Name
Status
NoCatch
Weights
Predator

iii. State gillnet observer data

GNS8389 Table:
Date
FGNo
SetNo
Complete
OType
DPort
LPort
TSpec
Lat
Long
DFS
Area
NOrient
Environ
BDepth
PTime
SetDur
NType
NMat
NLen
NDepth
MSize1
MSize2
HLength
HRatio
SLength
ELength
Sampler
C Link
M Link

GNM8389 Table:
Date
FGNo
SetNo
Species
Length
AltLen

Sex
Mat
Disp
C Link
S Link

GNC8389 Table:
Date
FGNo
SetNo
Species
TCat
DDead
DLive
NoDam
NoKept
NoKepSL
NoSold
M file link
S file link

Species Codes 2009 Table:
EXSP
Common Name
Scientific Name
EXSP text
PACFIN code

Per Federal Information Processing Standards Publication 199, these data have the FIPS Classification = {(confidentiality, moderate), (integrity, moderate), (availability, low)}.