AFAM STEPS 1 and 2: Management Tiers and Fisheries Management Controls

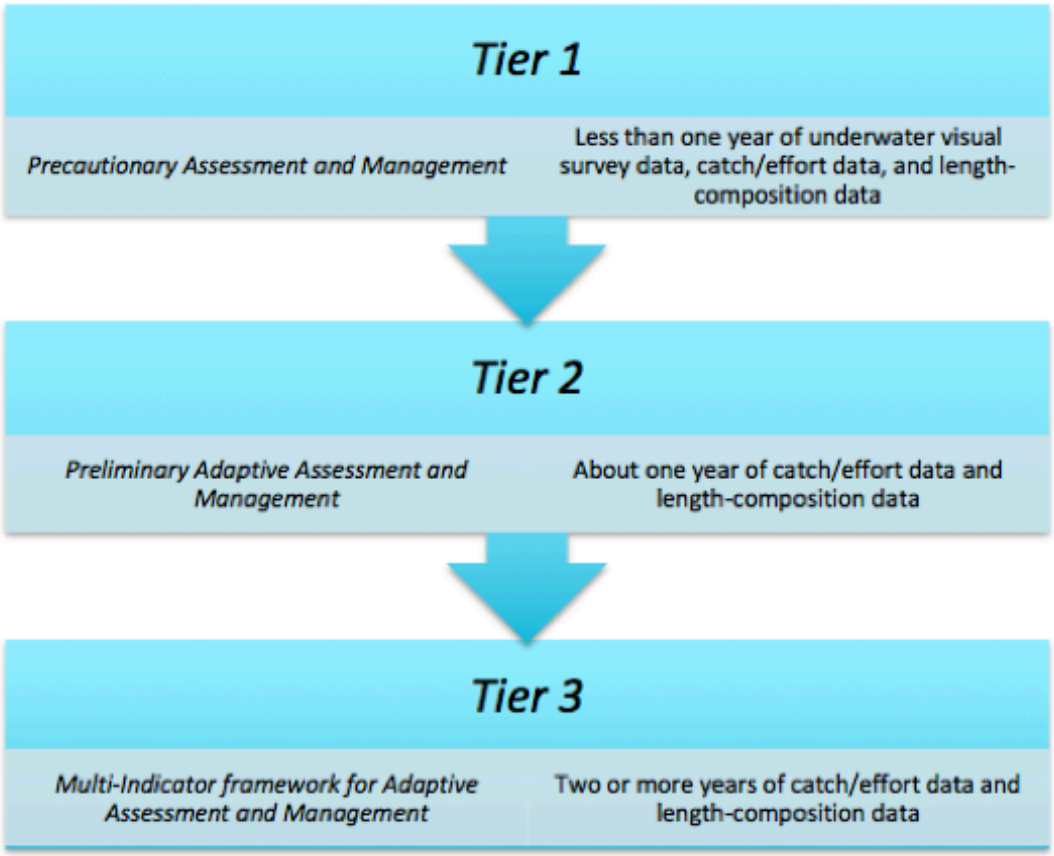
Roadmap

- What is a management tier?
- How do we choose appropriate fisheries management controls?

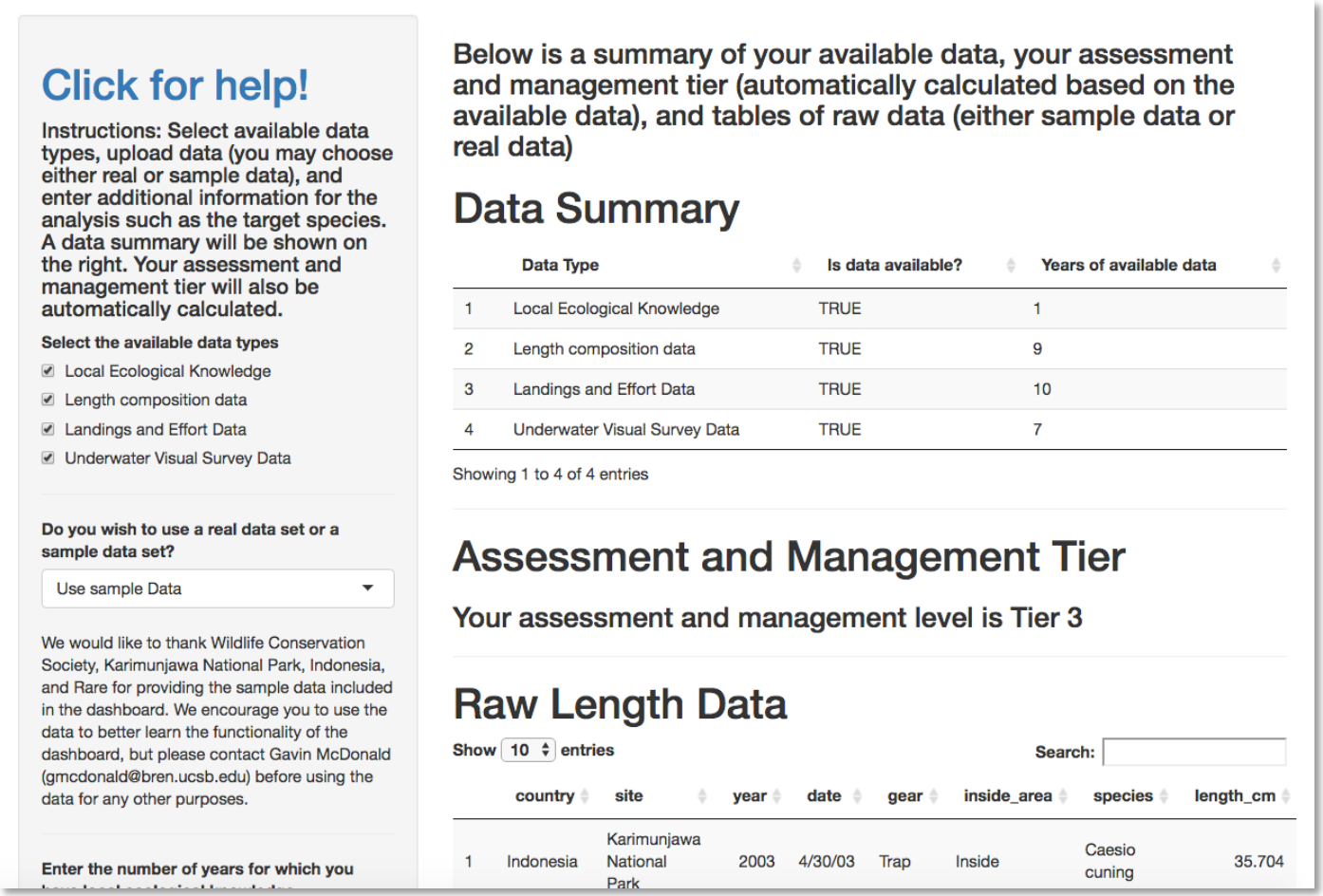
Step 1: Management Tiers

- Management depends on how much data is available
- Sufficient data to conduct several data limited assessments with independent representative data streams: science-based management
- Low data: precautionary management

Step 1: Management Tiers



Step 1: Management Tiers



Click for help!

Instructions: Select available data types, upload data (you may choose either real or sample data), and enter additional information for the analysis such as the target species. A data summary will be shown on the right. Your assessment and management tier will also be automatically calculated.

Select the available data types

- [x] Local Ecological Knowledge
- [x] Length composition data
- [x] Landings and Effort Data
- [x] Underwater Visual Survey Data

Do you wish to use a real data set or a sample data set?

Use sample Data

We would like to thank Wildlife Conservation Society, Karimunjawa National Park, Indonesia, and Rare for providing the sample data included in the dashboard. We encourage you to use the data to better learn the functionality of the dashboard, but please contact Gavin McDonald (gmcdonald@bren.ucsb.edu) before using the data for any other purposes.

Enter the number of years for which you

Below is a summary of your available data, your assessment and management tier (automatically calculated based on the available data), and tables of raw data (either sample data or real data)

Data Summary

	Data Type	Is data available?	Years of available data
1	Local Ecological Knowledge	TRUE	1
2	Length composition data	TRUE	9
3	Landings and Effort Data	TRUE	10
4	Underwater Visual Survey Data	TRUE	7

Showing 1 to 4 of 4 entries

Assessment and Management Tier

Your assessment and management level is Tier 3

Raw Length Data

Show 10 entries Search:

	country	site	year	date	gear	inside_area	species	length_cm
1	Indonesia	Karimunjawa National Park	2003	4/30/03	Trap	Inside	Caesio cuning	35.704

SUSTAINABLE FISHERIES GROUP
UC SANTA BARBARA

Step 2: Fishery Management Controls

- Many potential choices, with pros and cons
  - Input controls: size limits, gear restrictions, effort controls, seasonal restrictions
  - Output controls: catch limits
  - Spatial controls: closures, protection of spawning aggregations

Step 2: Fishery Management Controls

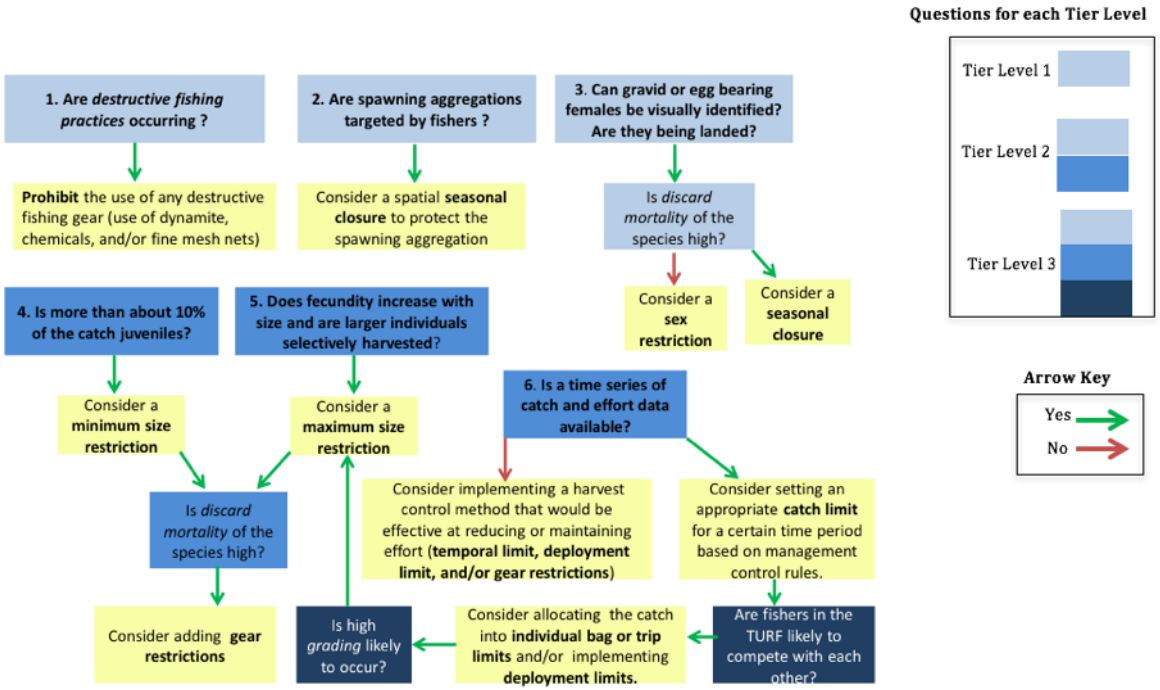
- Many factors influence choice
  - Biology of stocks
  - Fisherman understanding and buy-in
  - Data availability
  - Feasibility
- Each control has unique benefits and limitations
- Case studies

Step 2: Fishery management controls

- Step 2a: Summarize existing controls
  - Mandate
  - Cost
  - Compliance
  - Attitudes
  - Effectiveness
  - Other pros/cons
- Determination: keep or replace?

Step 2: Fishery management controls

- Step 2b: choose preliminary suite of fishery management controls



Step 2: Fishery Management Controls

- Step 2c: combining FMCs to achieve multiple goals
  - Need multiple FMCs for multiple goals
    - E.g.: catch limits maintain biomass but not length structure or habitat
  - List FMCs, existing and new. Evaluate using Tables
  - Align with goals
  - Assess potential effectiveness
  - If beneficial, combine multiple FMCs

Step 2: Fishery Management Controls

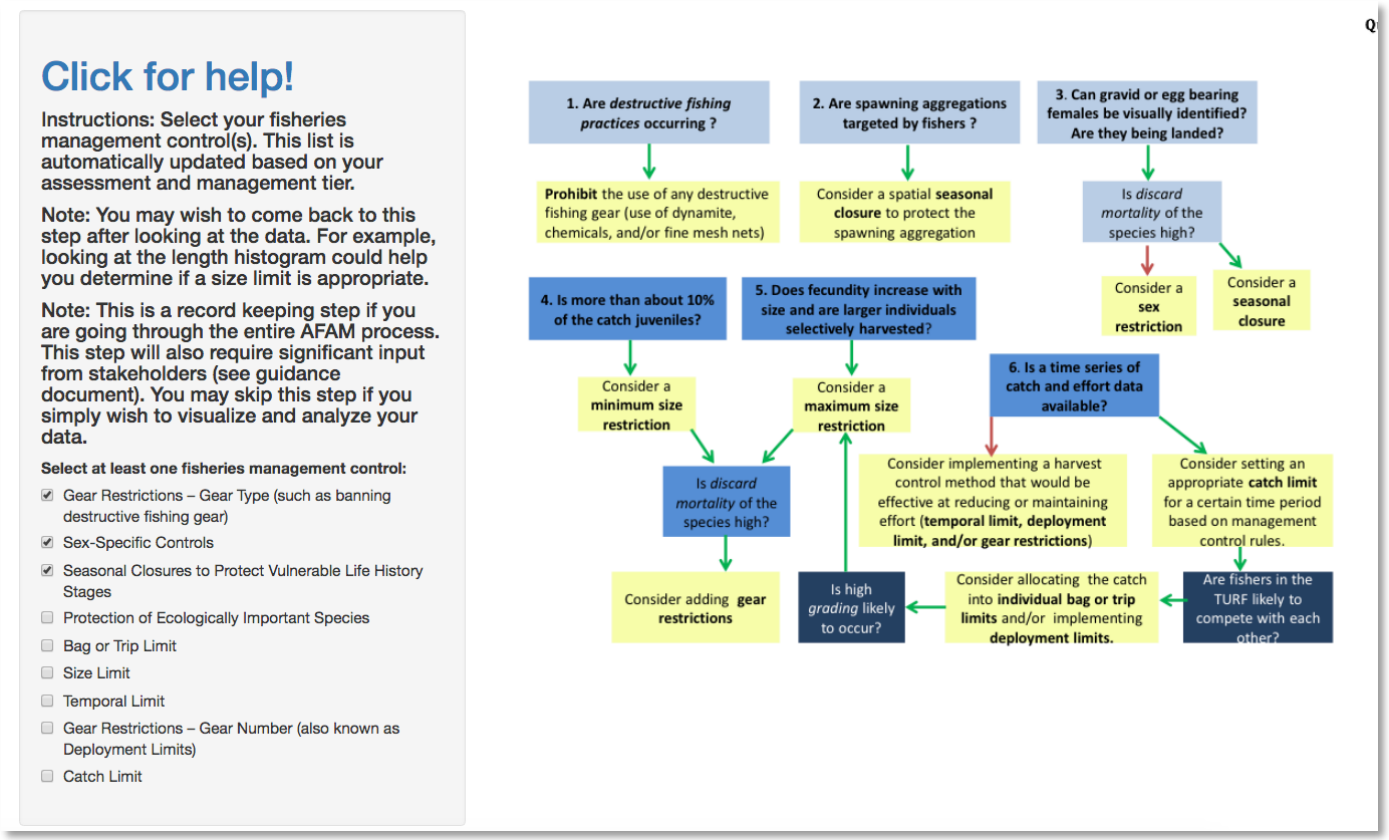
- Step 2d: feasibility
  - What has succeeded before?
  - Can it be implemented and enforced?
  - Socially and politically feasible?
  - Potential compliance?

Step 2: Fishery Management Controls

- Step 2e: choosing specifics of FMCs for the first time
  - May need to choose specifics – how big to make size limit, how much to reduce effort, etc.
  - Once established, AFAM can adaptively adjust previous controls over time

Step 2: Fishery Management Controls

Dashboard has system for recording selected FMCs



SUSTAINABLE FISHERIES GROUP
UC SANTA BARBARA

Activity

- Using AFAM Guidance Document, look through instructions and references for Steps 1 and 2

- Record choices and notes in Your AFAM Toolkit Worksheet

- Record choices in AFAM Toolkit Online Dashboard

Thank you!