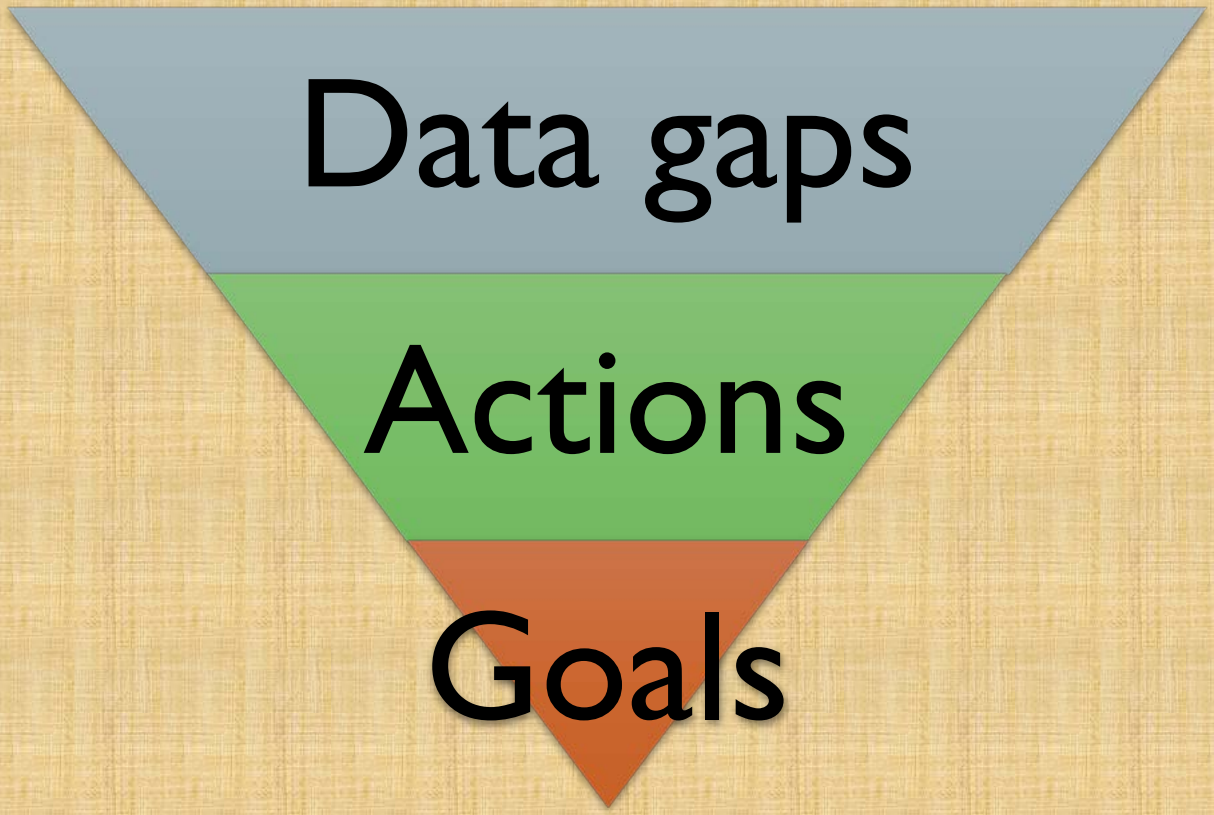

Data gaps
Actions
Goals

Goal 1: Describe current distribution of Puget Sound kelp and document historic changes

Develop & implement expanded monitoring of bull kelp forests

Identify and monitor distribution and trends of understory species

Synthesize available data sources

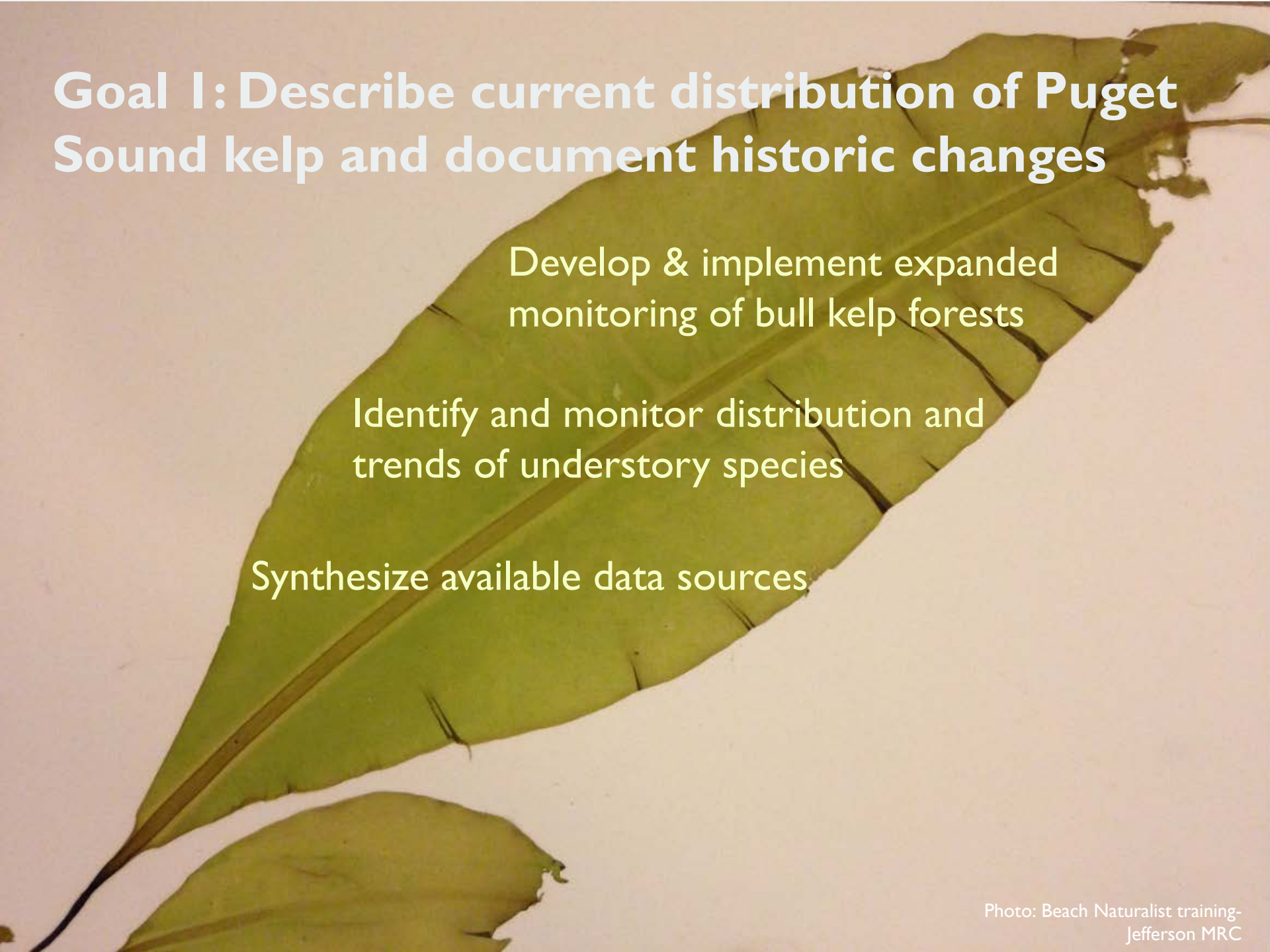


Photo: Beach Naturalist training- Jefferson MRC

Goal 2: Prioritize actions to reduce stressors

Human impacts

Water quality

Biological stressors

↑ Ocean temperature

Photo Courtesy: WA-DNR

Goal 3: Identify priority conservation areas and develop conservation strategies

Possible examples: fish use, forest persistence and size, local stressors, genetic connectivity

Photo: Linda Rhodes

Goal 4: Identify management and policy opportunities

Photo: NOAA Hollings Internship Program 2014

Goal 5: Restore persistent bull kelp forests

Develop methods and best management practices

Restoration site criteria

Population genetics

Photo: Puget Sound Restoration Fund

Kelp needs your input!

Peer review and public comment summer 2019

Learn more about our project:

http://nwstraits.org/our-work/kelp/

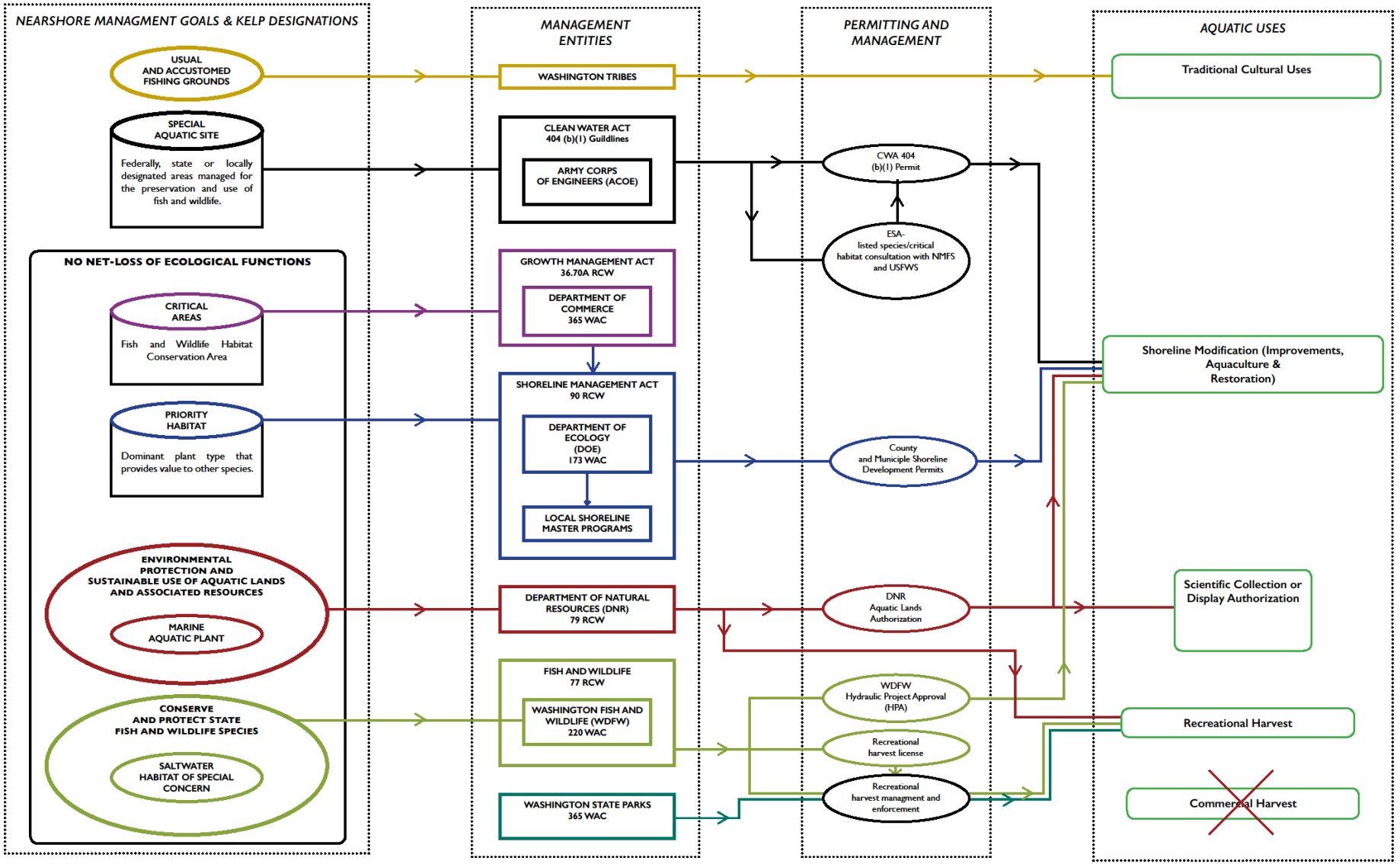
https://www.westcoast.fisheries.noaa.gov/protected_species/rockfish/kelp_conservation.html

Photo: Florian Graner

Objective # 1:

Identify priority research and monitoring actions to inform management/regulatory changes to better protect kelp.

We need to know (scientific information)
so that we can do (management/policy tool)
to better protect kelp.


NEARSHORE MANAGMENT GOALS & KELP DESIGNATIONS
USUAL AND ACCUSTOMED FISHING GROUNDS
SPECIAL AQUATIC SITE
Federally, state or locally designated areas managed for the preservation and use of fish and wildlife.
NO NET-LOSS OF ECOLOGICAL FUNCTIONS
CRITICAL AREAS
Fish and Wildlife Habitat Conservation Area
PRIORITY HABITAT
Dominant plant type that provides value to other species.
ENVIRONMENTAL PROTECTION AND SUSTAINABLE USE OF AQUATIC LANDS AND ASSOCIATED RESOURCES
MARINE AQUATIC PLANT
CONSERVE AND PROTECT STATE FISH AND WILDLIFE SPECIES
SALTWATER HABITAT OF SPECIAL CONCERN
MANAGEMENT ENTITIES
WASHINGTON TRIBES
CLEAN WATER ACT 404 (b)(1) Guildlines
ARMY CORPS OF ENGINEERS (ACOE)
GROWTH MANAGEMENT ACT 36.70A RCW
DEPARTMENT OF COMMERCE 365 WAC
SHORELINE MANAGEMENT ACT 90 RCW
DEPARTMENT OF ECOLOGY (DOE) 173 WAC
LOCAL SHORELINE MASTER PROGRAMS
DEPARTMENT OF NATURAL RESOURCES (DNR) 79 RCW
FISH AND WILDLIFE 77 RCW
WASHINGTON FISH AND WILDLIFE (WDFW) 220 WAC
WASHINGTON STATE PARKS 365 WAC
PERMITTING AND MANAGEMENT
CWA 404 (b)(1) Permit
ESA-listed species/critical habitat consultation with NMFS and USFWS
County and Municiple Shoreline Development Permits
DNR Aquatic Lands Authorization
WDFW Hydraulic Project Approval (HPA)
Recreational harvest license
Recreational harvest managment and enforcement
AQUATIC USES
Traditional Cultural Uses
Shoreline Modification (Improvements, Aquaculture & Restoration)
Scientific Collection or Display Authorization
Recreational Harvest
Commercial Harvest

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Human Activities that might impact kelp:

- Improvements (such as overwater structures, outfalls, shoreline armoring, etc.)
- Compensatory mitigation (actions to compensate for impacts)
- Point-source and non-point source water quality impacts
- Recreational harvest
- Kelp aquaculture (farming)
- Scientific and display collection/use
- _____ (fill in the blank)

Other dimensions of kelp management:

- Protected or priority areas
- Climate change response/adaptation
- Kelp restoration or kelp outplanting for habitat enhancement
- _____ (fill in the blank)

Breakout group discussion

1
- What existing tools are there to minimize (avoid, conserve) impacts to kelp?
- Are these tools being used effectively?
- Please differentiate between gaps in regulations, implementation, enforcement or other components of the larger management framework.

2
- Where are gaps or opportunities within regulations to improve protection of kelp?
- What scientific information is needed to support the proposed management tool?

Objective # 2:

Identify currently available management tools that can further help conservation and restoration of kelp.

We have _____ (management/policy tool) _____ currently in place to minimize impacts to kelp.

Objective # 3:

Assess opportunities for additional tools that can further kelp conservation and restoration.

We need (management/policy tool) to improve protection of kelp.

short-term action

long-term action