

Vital Signs and Vibrant Lives: Ecosystem Restoration and Human Wellbeing in Puget Sound



Nathalie Hamel
Kyle Clifton
Krista Harrington
Rebecca Hollender
Corinne Noufi
Mary Ramirez
Andres Sheikh
Trimbach, David
NCER, April 2024



PUGET SOUND ECOSYSTEM
MONITORING PROGRAM

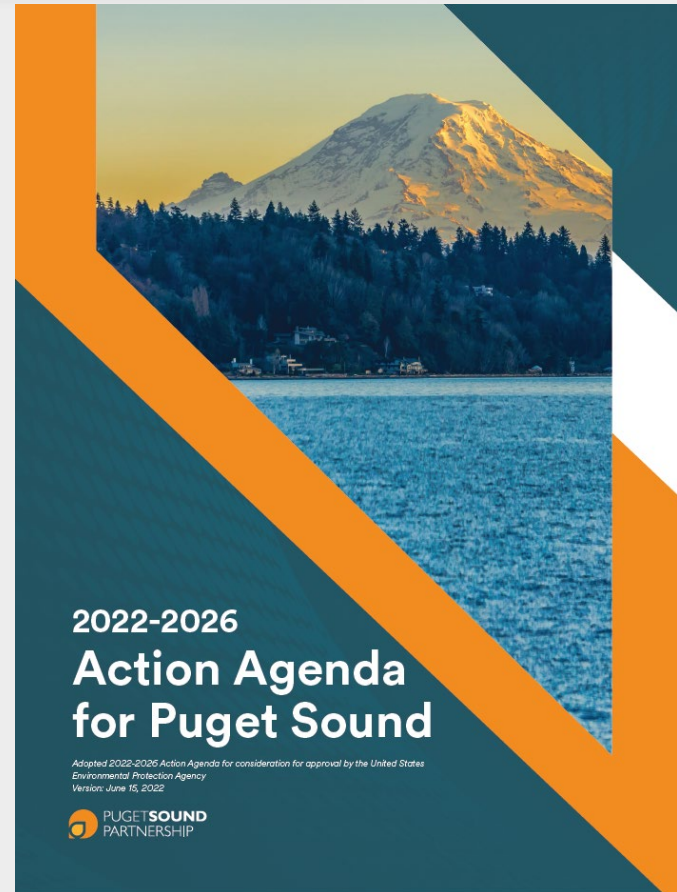


Puget Sound



Puget Sound Partnership

- State agency to “accelerate recovery”
- Lead agency for EPA’s National Estuary Program
- No regulatory authority
- Not the “doers”
- Convene partners, coordinate, communicate, plan, invest, and provide accountability
- 31 regional-scale strategies
- Healthy Environments for All (HEAL) Act



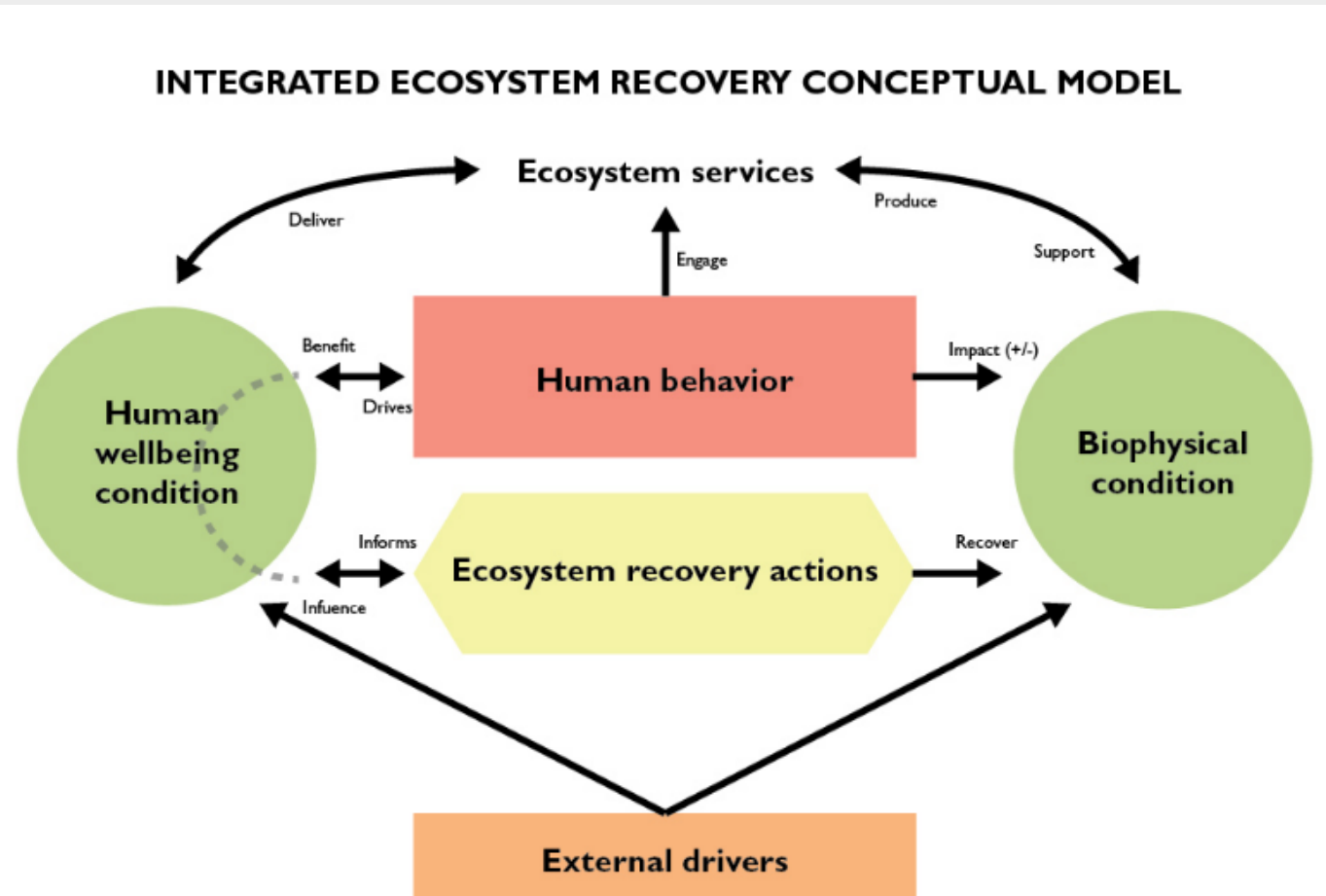
Strategy 1 – Smart Growth
Strategy 2 – Working Lands
Strategy 3 – Shorelines

...

Strategy 21 – Place Attachment
Strategy 22 – Outdoor Recreation and Stewardship
Strategy 23 – Good Governance
Strategy 24 – Cultural Practices and Local Foods
Strategy 25 – Economic Benefits
Strategy 26 – Human Health

Human wellbeing defined

- People are part of nature. The wellbeing of one depends on the wellbeing of the other.



Trimbach et al. 2020 Protocol for the integration of human dimensions

Harguth et al., 2014.



EXAMPLE OF VITAL SIGNS STRUCTURE



Types of indicators to measure human wellbeing Vital Signs

- Objective indicators

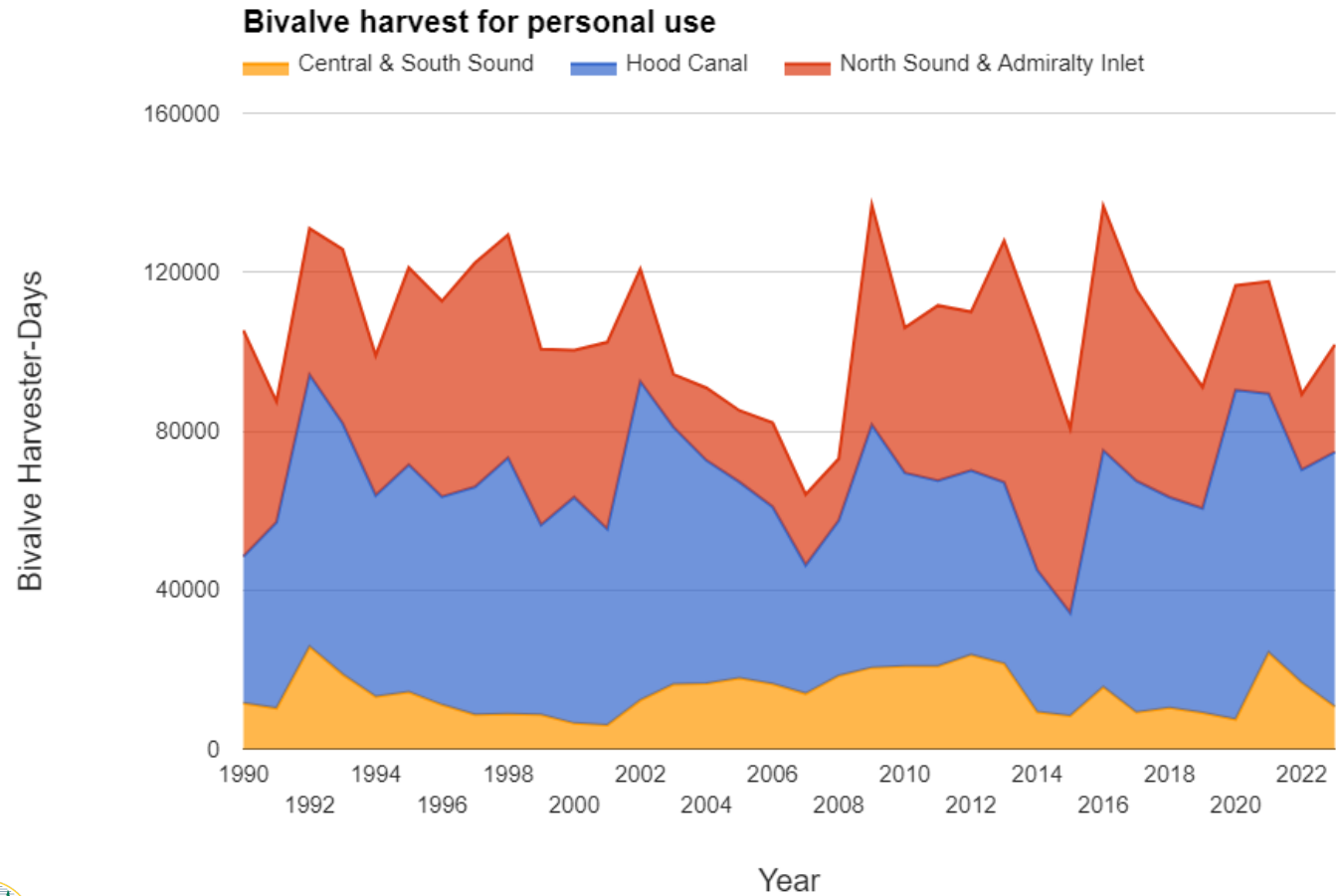


- Subjective indicators



Objective indicator

Local
Foods



NO
TREND

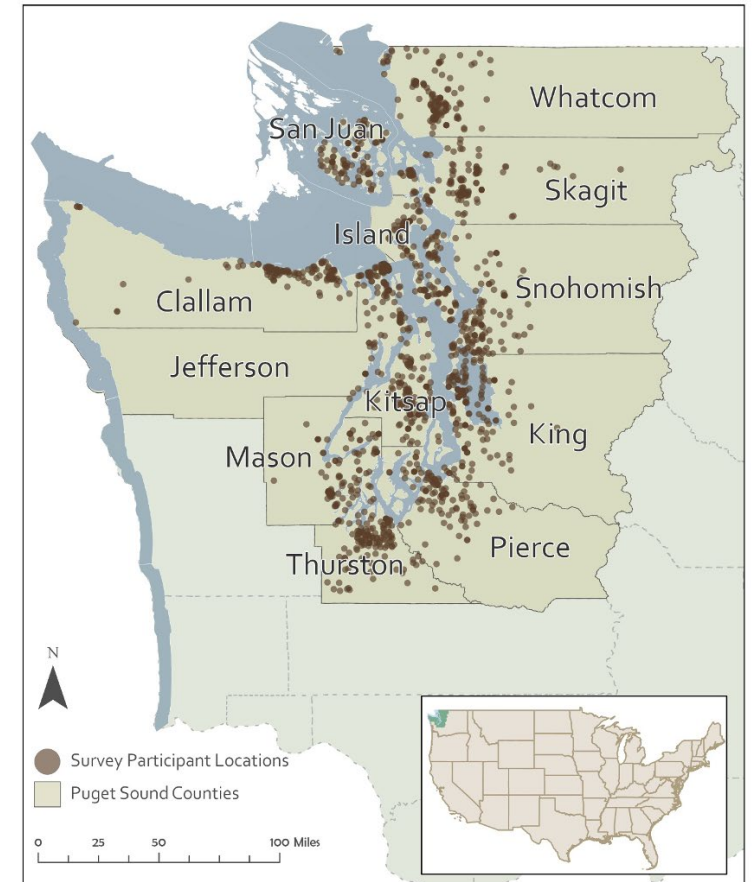
How we measure subjective indicators

Human Wellbeing Survey



- In 2022, sample of 8,144
- 20.8% response rate or total usable sample of 1,701 responses

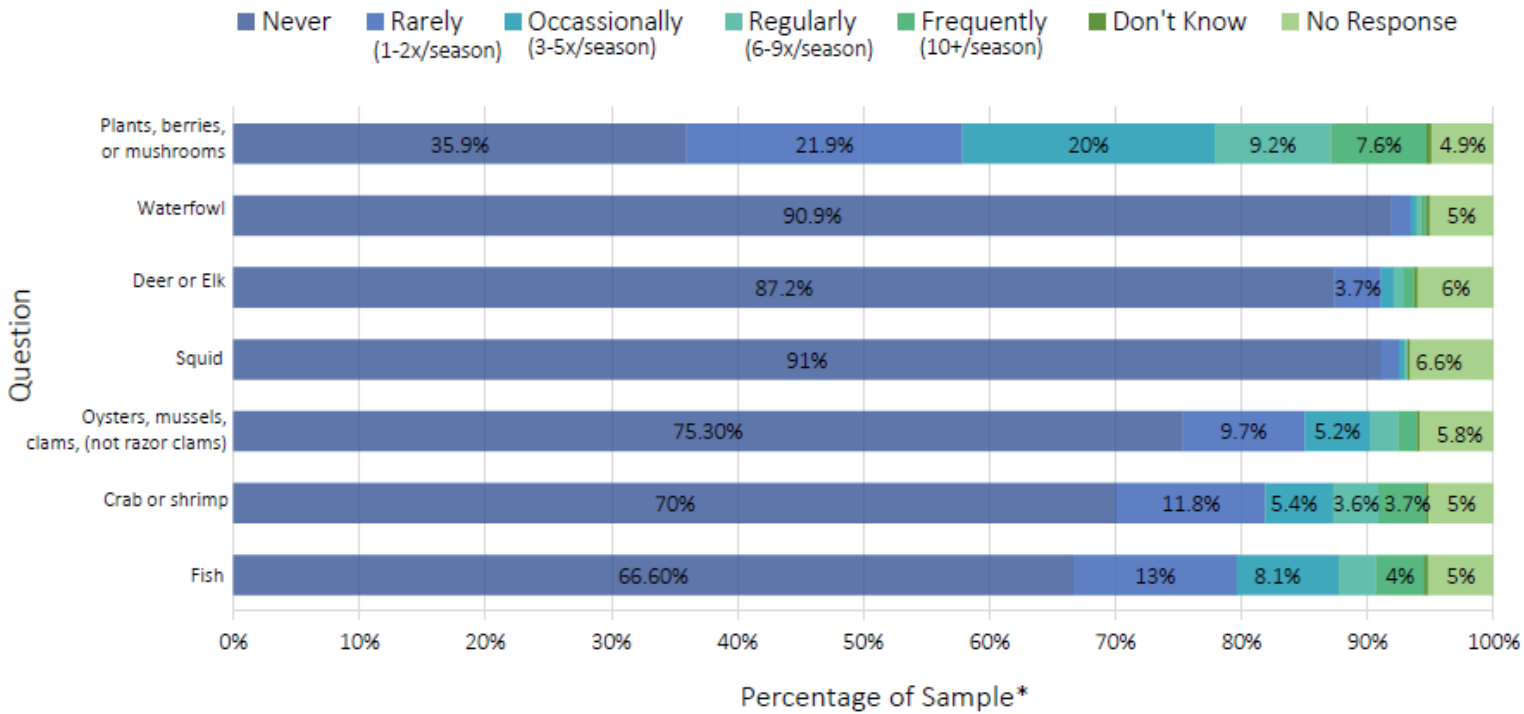
2022 Human Wellbeing Survey Participant Locations



Map created by Krista Harrington
Data Source: Washington Geospatial Open Data Portal
Map Projection: WGS 1984

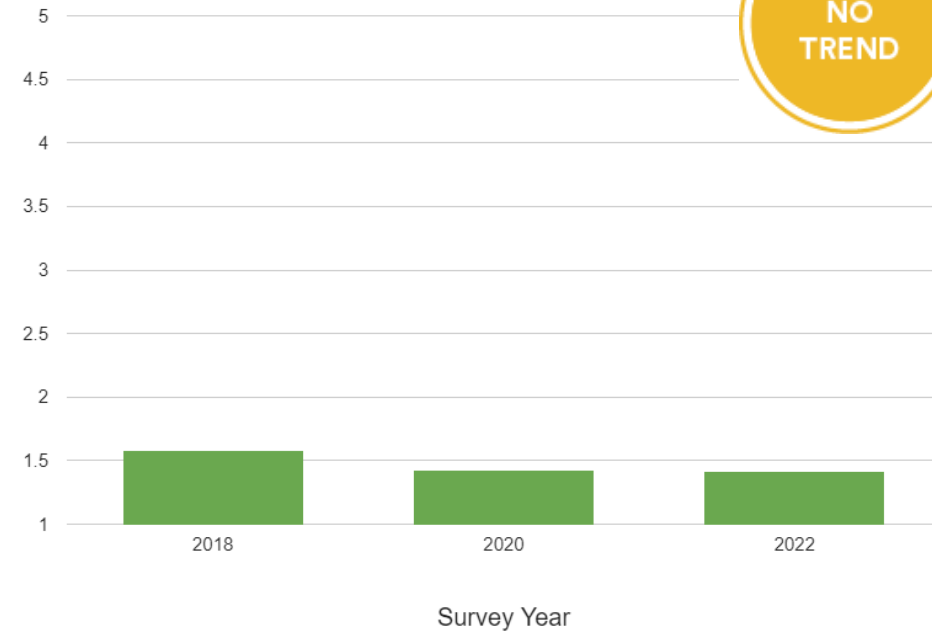
Subjective indicator

Local Foods



Locally harvestable foods

Locally harvestable foods



Why no difference between years?

Local
Foods

Outdoor
Activity

Good
Governance

Cultural
Wellbeing

Sound
Stewardship

Sense
of Place

1. There hasn't been meaningful change to the environment that has changed the perception of human wellbeing
2. Our sampling approach may not find pockets of affected individuals
3. Our questions may not be sensitive enough
4. People are resilient i.e. there is a shifting baseline.

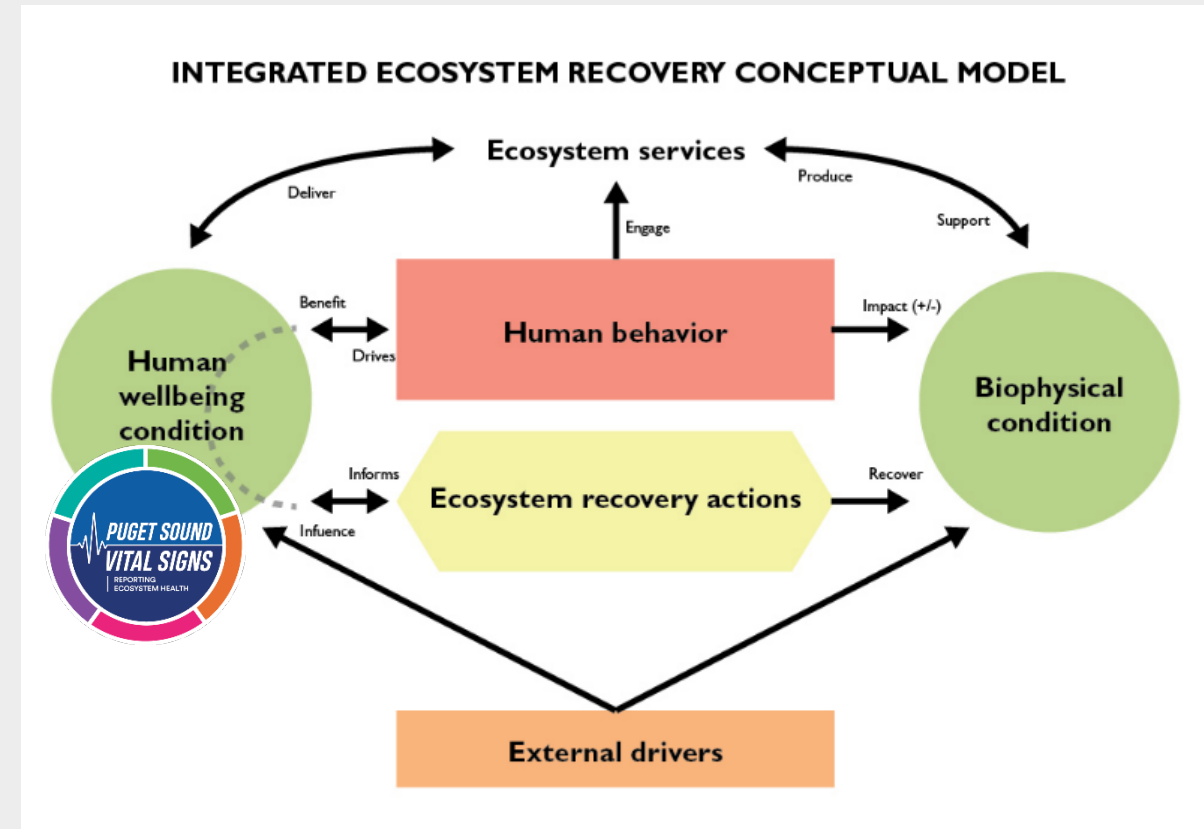
How we are improving our measures

- **Represent and engage more diverse communities**
 - Surveyed Latinx residents (Justiano, 2021)
 - Facilitated discussion in Tacoma minority groups, racial-and placed-based communities, ethnic and linguistic communities (Trimbach et al. 2023)
- **Encourage monitoring partners to think about equity**
 - Equity Guidebook (Sheikh and Noufi, 2022)
- **Define baselines and targets**
 - workshops with professionals (K.Clifton, in prep.)
- **Address human health and environmental inequities**
 - Seek community dimensions of the Vital Signs (R. Hollender and N. Hamel, in prep.)



Wrap up and next steps

- Healthy humans and quality of life goals
- Objective and subjective indicators
- Mostly no trends
- Next frontier: HEAL act, add nuance to our data, human health and environmental inequities, community dimensions



We're hiring!

Job title "Vital Signs Reporting Analyst"

Closes April 30th

Visit careers.wa.gov

Thank you!

Nathalie Hamel

nathalie.hamel@psp.wa.gov