# Including Indigenous health in climate change assessments: Overview of methods and results from Swinomish



June 12, 2018 National Indian Health Board webinar Presented by: Jamie Donatuto





Impact Assessment Technical Report Swinomish Climate Change Initiative







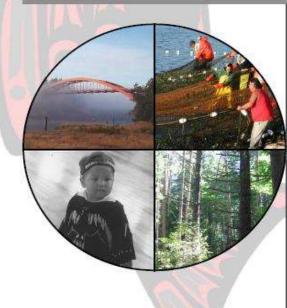
Office of Planning and Community Development

La Conner, WA 98257





**Swinomish Climate Change Initiative** Climate Adaptation Action Plan



Swinomish Indian Tribal Community

Office of Planning and Community Development La Conner, WA 98257

October 2010

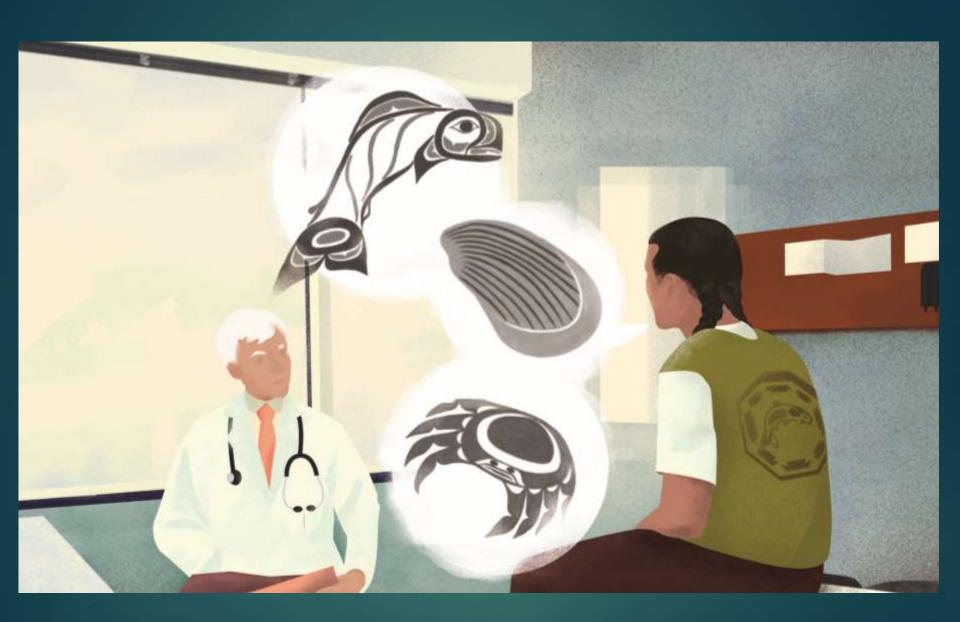


www.swinomishnsn.gov/climate\_change/project/reports.html

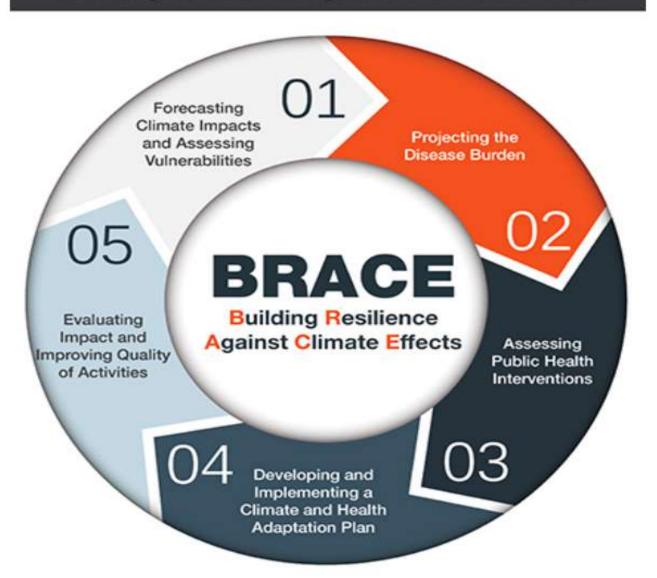
POTENTIAL CLIMATE CHANGE IM		Y SECTORS				PROBABILITY:	HIGH <-		> POSSIBLE	(UNSHADED: 1			
SWINOMISH INDIAN RESERVATION VICINITY					50-100 YR PROBABILITY:		HIGH <	-> POSSIBLE		(UNSHADED: NOT LIKELY/NOT APPLICABLE)		T APPLICABLE)	_
IMPACT TYPE	Inundation	Tidal Surge	Severe Storm	Erosion	Salinization	Temp A	Heat Stress	Precip &	Nutrient Δ	Habitat A	Species A	Pest/Disease	Fire
ECTOR/ELEMENT:													
ATURAL SYSTEMS			-		100		. 1		dia .	100		1	
horeline/Beaches												1	
idelands/Marine Habitat									-				
ish & Wildlife:													
Shellfish					1				-	_		<del> </del>	
Salmon					_				7				
Forage fish		t											
Waterfowl/shorebirds	1								ŧ.			-	
Upland wildlife & habitat	_												
Vater resources:					_								
Freshwater									1				
Groundwater	_		_									_	
Wetlands					a M.					United States		-	
			_							_			
orest resources	_				-	_							
Air Quality													
HUMAN/BUILT SYSTEMS	_												
and uses:													
Near-shore development													
Housing/Residential													
Commercial/Industrial						_							
Stormwater management													
Hazardous Sites/Materials													
Agriculture						- 1							
Recreation													
Public/Private Utilities:													
Water			1										
Wastewater													
Communications													
Energy/Power													
Waste management/disposal													
mergency Services:													
Police													
Fire													
Other emergency response			1 1										
luman Health						- "							
ransportation:													
Access/circulation													
Road system integrity						-							
Bridges													
Public transit													
	-												
			-						-	-			
Marine/port facilities Cultural Resources													

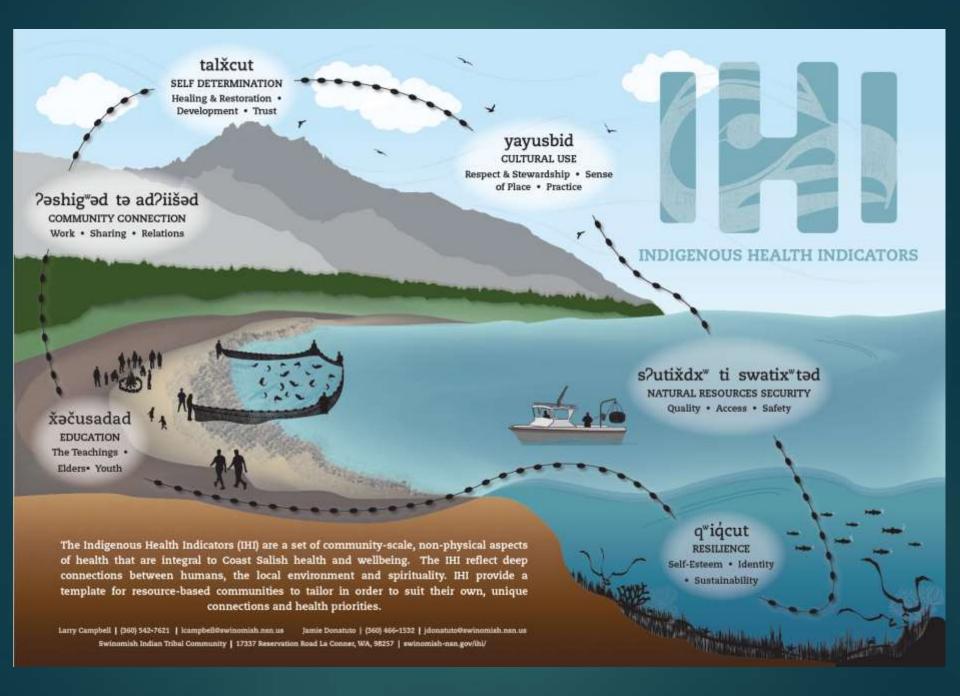




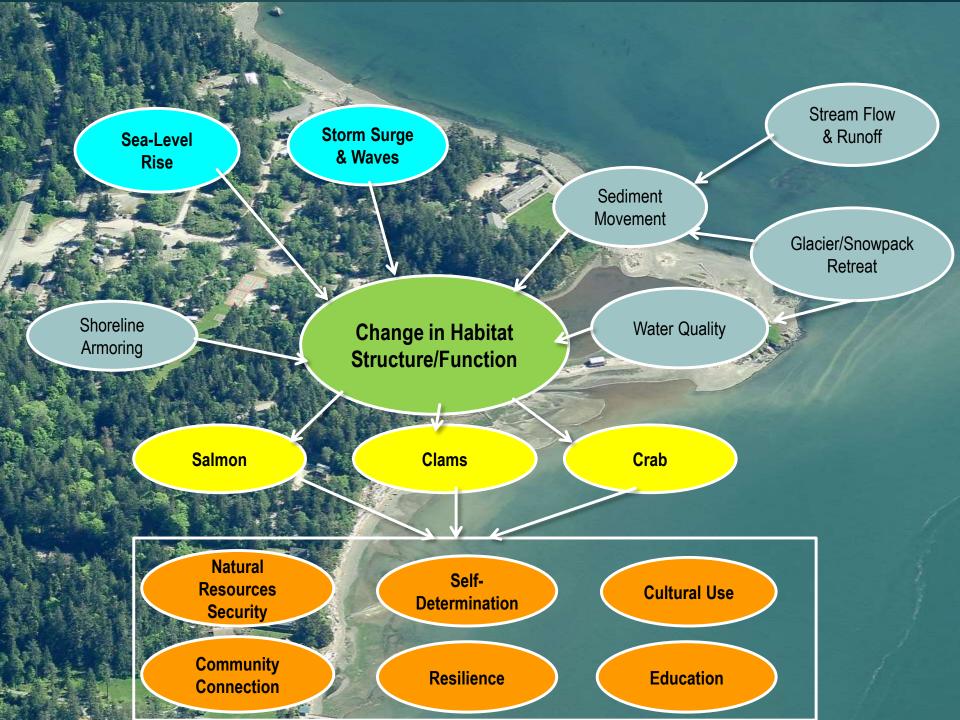


#### **Building Resilience Against Climate Effects**









### Snee-Oosh Beach during storm, early 2016



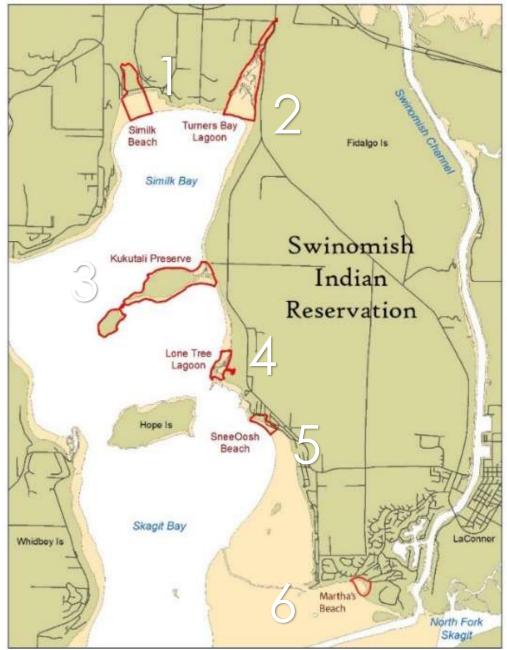


Figure 1: Map of Swinomish Indian Reservation highlighting the six project focus areas (in red).

## **Study Sites**

- 1. Similk Beach
- 2. Turner's Bay
- 3. Kukutali Preserve
- 4. Lone Tree
- 5. Snee-Oosh Beach
- 6. Martha's Beach



#### Most important to protect from climate impacts

	Indicator Score and Rank – All Participants Averaged (n=68)							
	Community Connection	Natural Resources Security	Cultural Use and Practices	Education	Self- determin- ation	Resilience		
Score (average rank)	3.04	2.56	2.78	2.26	3.50	4.32		
Rank	4	2	2 3		5	6		
Level of Agreement	Moderate	Strong	Strong	Strong	Weak	Moderate		

#### Most important to protect from climate impacts

	Location Ranking								
	Similk Beach	Turners Bay	Kukutali Preserve	Lone Tree	Snee-Oosh Beach	Martha's Beach			
Score (average rank)	3.05	4.01	3.60	1.58	2.70	3.83			
Rank	3	6	4	1	2	5			
Level of Agreement	Strong	Moderate	Weak	Strong	Strong	Weak			

## 13 Moons Curriculum



Moon of the Salal Berry

## Clam Science

- Shellfish toxin testing
- Marine debris art project
- Creating water filters
- Indigenizing lab coats



# Clam gardens

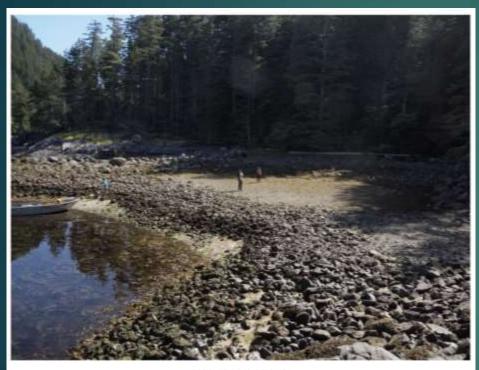
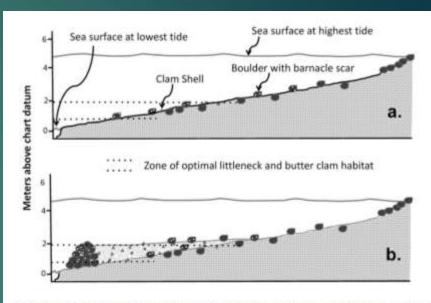


Photo: Dana Lepofsky.



Sequence of clam garden construction, (a) Naturally sloped, unmodified beach. (b) Infilled clam garden terrace.

# IHI online learning modules



## tigwicid thank you



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Beach seining at Lone Tree.—Photo by: Tyler Long

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