

Addressing seafood contamination for subsistence fishers: Community participatory learning & action

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Environmental Protection Agency, Region X
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Acknowledgements

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- Washington State Department of Health (Liz Carr; Lindsay Herendeen. MPH, MCRP)

What are unintended consequences of the cleanup?



Technical Advisory Group

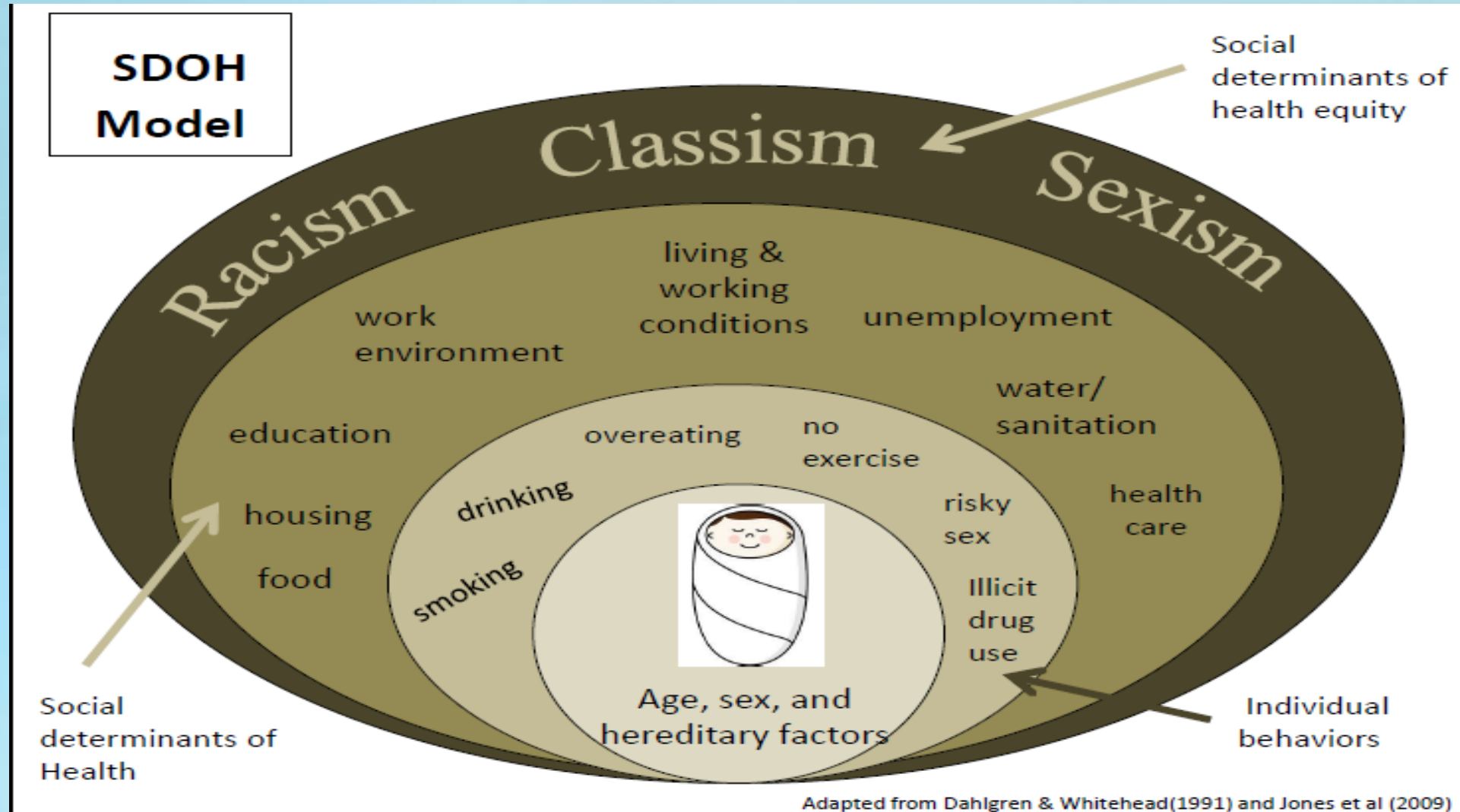
Health Impact Assessment: Proposed Cleanup Plan for the Lower Duwamish Waterway Superfund Site



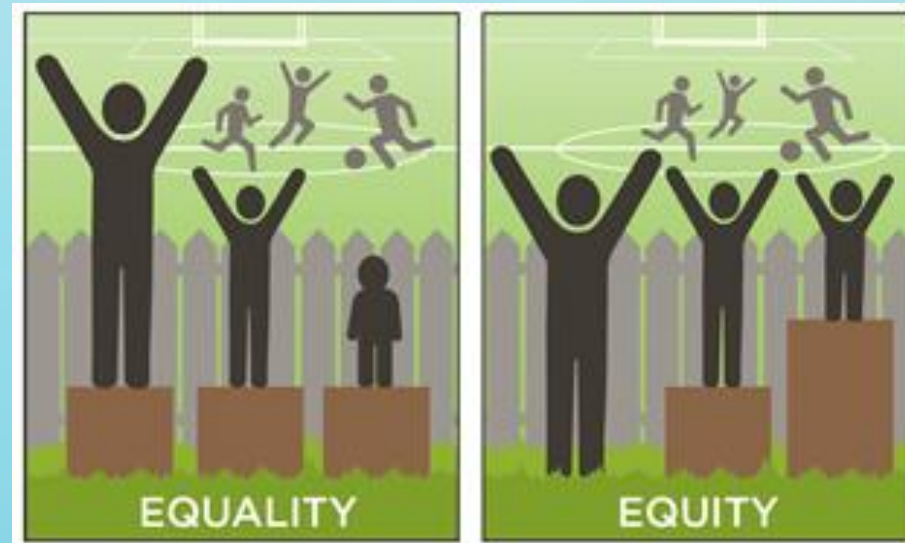
Photo: Patrick Robinson, West Seattle Journal

FINAL REPORT
September 2013

HIA: Social determinants of health



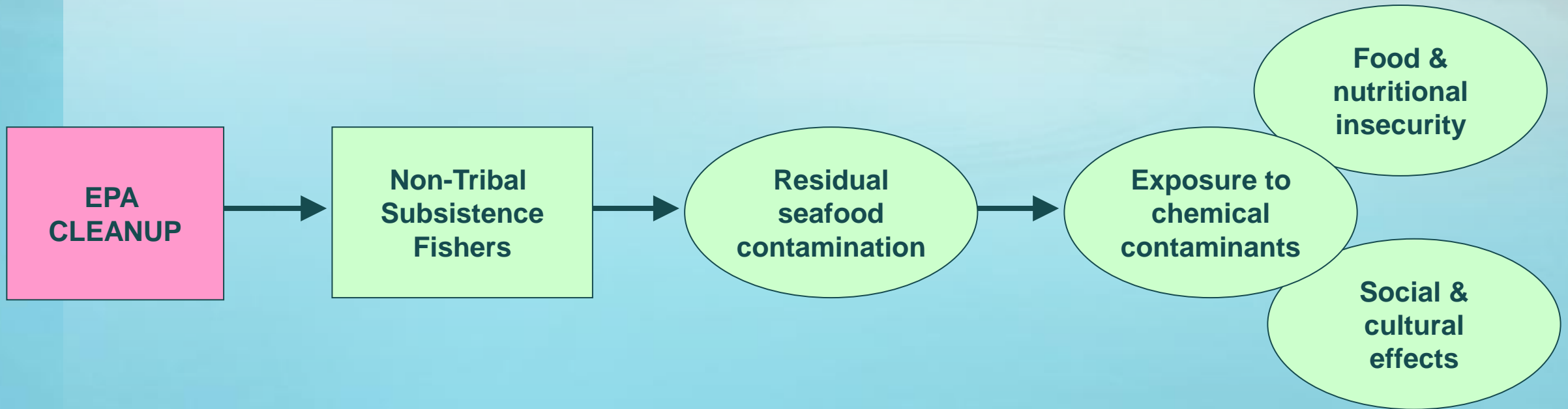
HIA principles explicitly address social justice and equity



RACE & SOCIAL JUSTICE INITIATIVE

VISION & STRATEGY
2015-2017

HIA: Non-tribal Subsistence Fishers



HIA: Who is currently fishing on the Duwamish?

- Asian and Pacific Islander immigrants and Americans
- Other immigrant populations (Latino, Russian, and others)
- People of color
- Low-income, food-insecure
- Urban American Indians and Alaska Natives

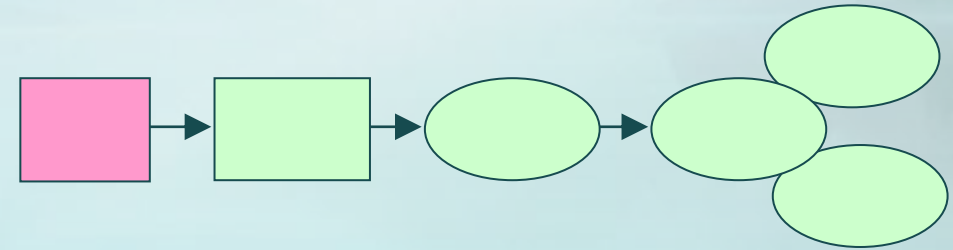


HIA: Why are people fishing on the Duwamish River or other urban waters?

- cultural and traditional reasons
- recreation and relaxation
- convenient and inexpensive source of perceived healthy and culturally relevant food
- opportunity to spend time with friends and family

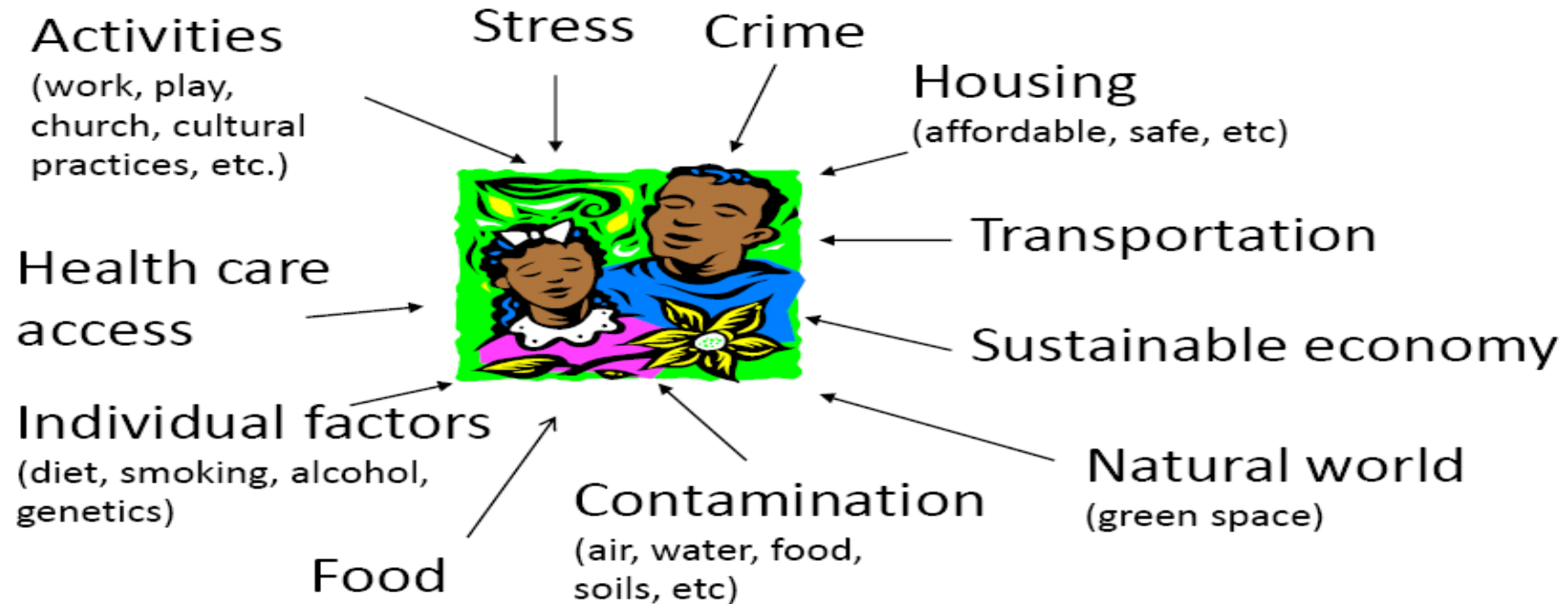


HIA health impacts: Non-tribal subsistence fishers



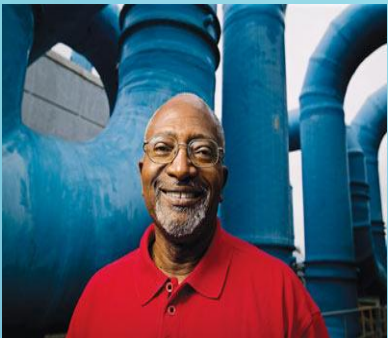
	Direction	Likelihood	Magnitude	Who
Exposure to chemical contaminants	Adverse	Very likely	Limited to moderate	<ul style="list-style-type: none"> • Lower income • Non-English speaker • People who fish for social, cultural or traditional reasons
Food & nutritional insecurity	Adverse	Likely	Limited to moderate	<ul style="list-style-type: none"> • Lower income • Food-insecure people
Social & cultural effects	Adverse	Likely	Limited to moderate	<ul style="list-style-type: none"> • People who fish for social, cultural or traditional reasons

ENVIRONMENTAL JUSTICE



“The environment is everything: where we live, work, play, go to school, as well as the physical and natural world. And so we can’t separate the physical environment from the cultural environment.”

(Robert Bullard, 1999)



Our concern: Advisories ineffective for subsistence fisher populations

November 2002 (revised)

FISH CONSUMPTION AND ENVIRONMENTAL JUSTICE

A Report developed from the National Environmental Justice Advisory Council Meeting of December 3-6, 2001



A Federal Advisory Committee to the U.S. Environmental Protection Agency



Environmental Justice Analysis for the Lower Duwamish Waterway Cleanup

February 2013



Institutional Controls (fish advisories)

- Photographic and survey evidence that advisories ignored on LDW
- Burden placed on vulnerable populations vs those responsible for risk
- Advisories assume that behavior change is best when cultural/spiritual and food insecurity are higher priority
- Unintended health consequences of changing from seafood diet to another food source



Rhonda Kaetzel, PhD and Sinang Lee, MPH

HIA Subsistence Fisher Recommendations

1. *Institutional controls should go beyond restrictive and informational actions.*
2. Interventions should emphasize positive *alternatives*.
3. There is a clear need for innovative thinking.
4. Target audience should include people who *might* fish on the Duwamish; not just current fishers.
5. Efforts should be *culturally appropriate*, and should be designed to help people make informed choices.
6. Efforts should engage and empower members of fishing populations, to *participate meaningfully* in all stages of intervention.

EPA Mission:

Protect human health and the environment



- All Americans are protected from significant risks to human health and the environment where they live, learn and work;
- All parts of society -- communities, individuals, businesses, and state, local and tribal governments -- have access to accurate information sufficient to effectively participate in managing human health and environmental risks...

For fish advisories to be effective: Community capacity building and empowerment



...It is crucial that those affected play central roles in developing and disseminating the information that they deem appropriate to their needs. Such efforts- led by those in the community, and supported by the EPA and other agencies, can contribute to the large goals of... "participatory learning and culturally-appropriate organizing" (P. 104)



HIA Outcome: Duwamish River Opportunity Fund (aka DROF)



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HOME

MY VISION FOR SEATTLE

NEWSROOM

GET HELP

GET INVOLVED

DUWAMISH RIVER OPPORTUNITY FUND



The Duwamish is our city's only river, but that is not the only thing that makes it special. Native Americans use the Duwamish as a resource and for cultural purposes. Salmon and trout use it as a migration corridor and a large number of fish and wildlife species use the estuary for rearing. The Duwamish is also a working waterway that supports many of Seattle's shipping and industrial businesses.

Decades of industry near the Duwamish have left significant contamination in the mud and along the river's banks.

In 2001, The United States Environmental Protection Agency (EPA) listed a 5.5 mile stretch of the Duwamish River as a [Superfund cleanup site](#). Since then, the City of Seattle, King County, the Port of Seattle and the Boeing Company have invested over \$100 Million in early cleanup actions to reduce contamination by 50 percent, while we also work to eliminate ongoing sources of

RELATED LINKS

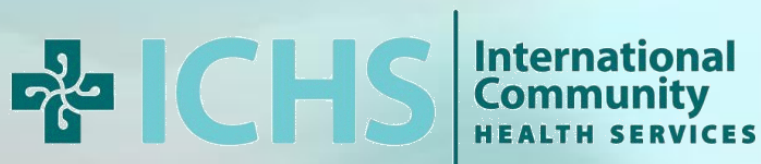
- [2014 Recipients](#)
- [2015 Application](#)
- [Review and Approval Process](#)
- [2015 Implementation Schedule](#)
- [Learn more about the Duwamish](#)
- [Learn more about early actions](#)
- [EPA proposed clean-up plan](#)

OPEN HOUSE

Prospective applicants are encouraged to attend a community event about the Duwamish River Opportunity Fund on Wednesday, April 8 from 5:30 to 8:30 p.m. in Georgetown at:

[Coliman Restaurant](#)
6932 Carleton Avenue S ([Map](#))

Vietnamese Subsistence Fisher Case Study (aka “DROF1”)



Participatory Learning & Action Model

Participatory Learning and Action (PLA) is one of the names now given to participatory processes of critical reflection, analysis and collective action by local people.

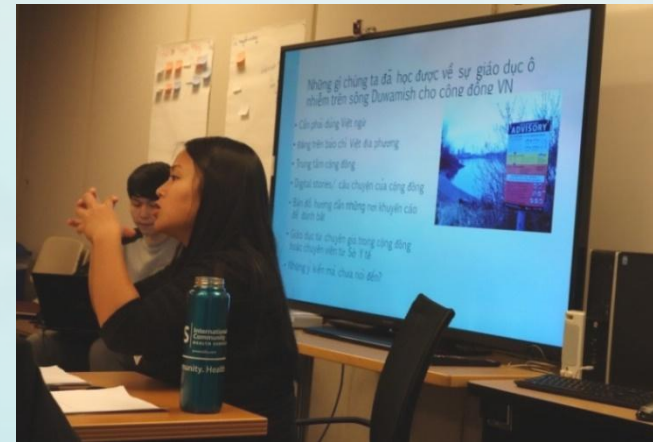
Many participatory methods are used to support PLA and other similar processes. They are ways of learning that empower people to imagine a different world. Through facilitation that aims to bring about change, such processes focus on learning by all participants, valuing diversity, supporting group interactions and addressing the importance of context.



“DROF 1” Partners



Vietnamese Advisory Group and project team



Khanh Ho/ICHS Community Mobilizer



Paul Le/ICHS HealthCorps



Sinang Lee and Dr. Rhonda Kaetzel/PHSKC



Emi Yoko/UW MPH



Dr Bill Daniell/UW



Linn Gould



Vietnamese recruitment flyer

Subsistence Fisher Alternatives Pilot Program

Bạn có phải là một ngư dân người Việt?
Bạn có biết những người muốn đánh bắt hoặc ăn hải sản ở vùng sông nước địa phương của chúng ta?

Chúng tôi đang tìm kiếm các cư dân người gốc Việt ở Quận King:

- **Tham gia Nhóm Tư vấn Việt** để chia sẻ niềm tin văn hóa, giá trị và thực tiễn của cách đánh bắt hải sản có liên quan đến bạn và sức khỏe của gia đình bạn. Chi phí sinh hoạt được đài thọ.



Để biết thêm chi tiết xin liên lạc với:
Khanh Ho, ICHS (Nói tiếng Việt & tiếng Anh):
khanhh@ichs.com, (206) 788-3682

Có quan hệ hợp tác với:



Subsistence Fisher Alternatives Pilot Program

Are you a Vietnamese fisherman?
Or do you know people who like to harvest seafood or eat seafood from our local waters?

We are looking for King County residents from the Vietnamese-American community to:

- **Join a Vietnamese Advisory Group** to share cultural beliefs, values and practices of how fishing is connected to the health of you and your family. Stipends provided.



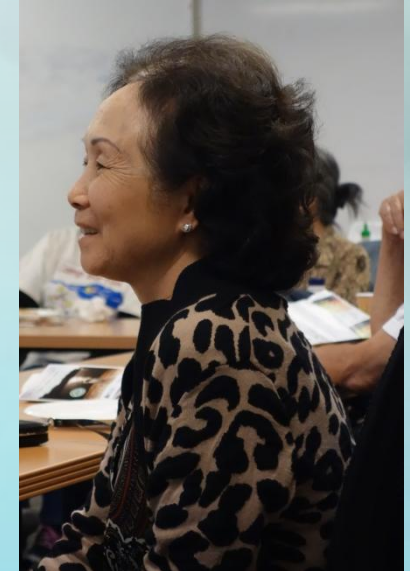
For more information, contact:
Khanh Ho, ICHS (English & Vietnamese):
khanhh@ichs.com, (206) 788-3682

In Partnership with



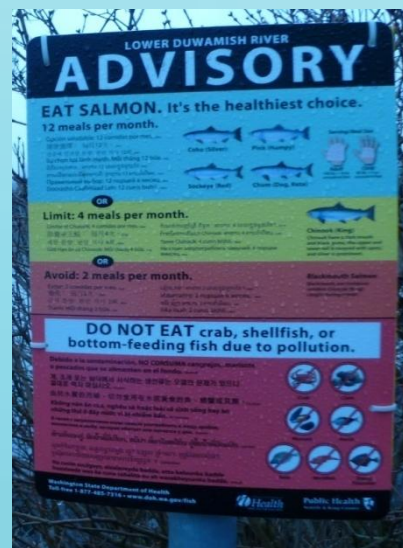
Vietnamese (VN) subsistence fisher model

- Set up a VN Advisory Group (AG) as “community experts” (13 members, 4 meetings, \$50 stipends/meeting)
- **Learn** about VN values and practices around fishing
- **Learn** how to share messages with the VN community about the contamination in the Lower Duwamish River
- Ask AG’s **opinion/advice** about **alternatives** to fishing the Lower Duwamish River
- Continuous check-in to assure consensus
- Share AG’s opinions with government agencies, non-profits and the community can collaborate for action



Meeting 1: Values and beliefs around fishing

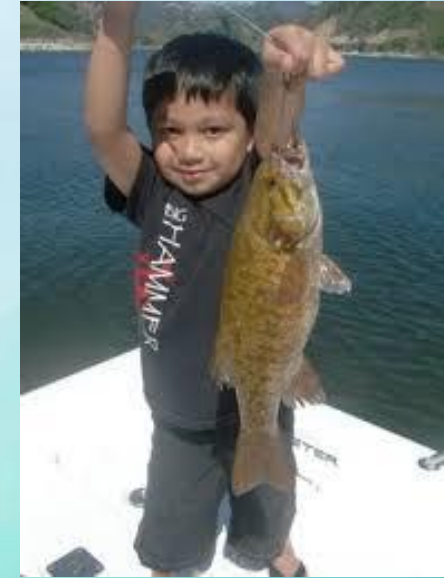
Multiple slides: *What comes to mind when you see.....*



What we learned:

- CULTURE

- Fishing is part of Vietnamese culture
- Pass on knowledge from generation to generation “cha truyền con nối”
- Fish for passion/recreation
- Share catch with others



- HEALTH

- Fish are healthy and delicious to eat, esp. for pregnant women and children
- Freshly caught fish is more healthy and natural than raised fish



- FISH ADVISORIES AND WARDENS

- Recognize and understand warning signs
- Fishing laws in US are confusing and strict—but rational
- Established and more regulated places are safer to fish in
- Wardens are scary

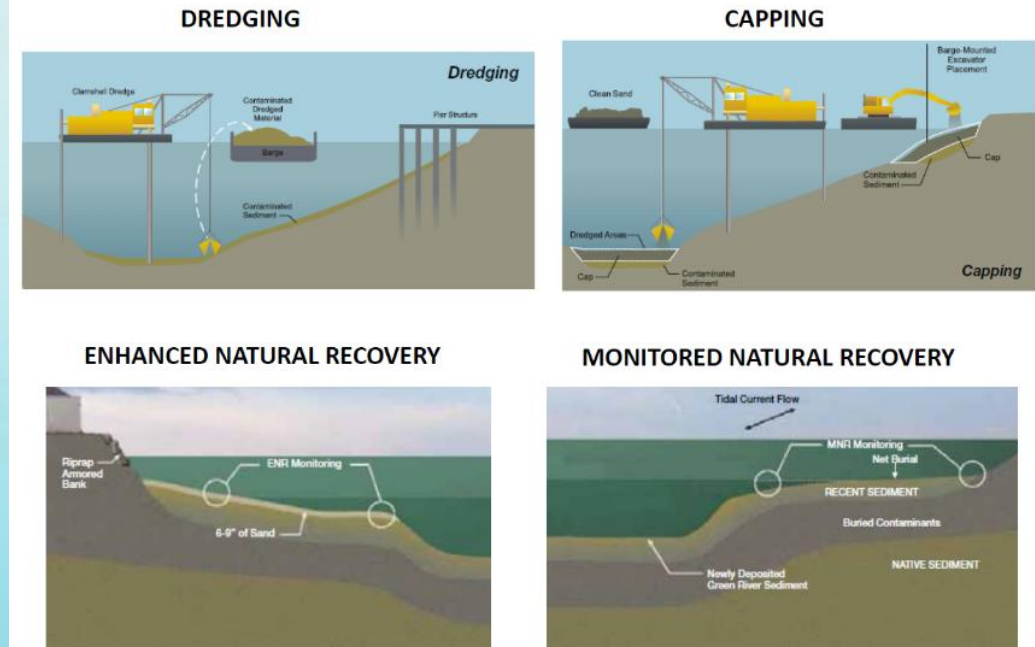


Meeting 2, Part 1: “Expert” panel on contamination in LDW

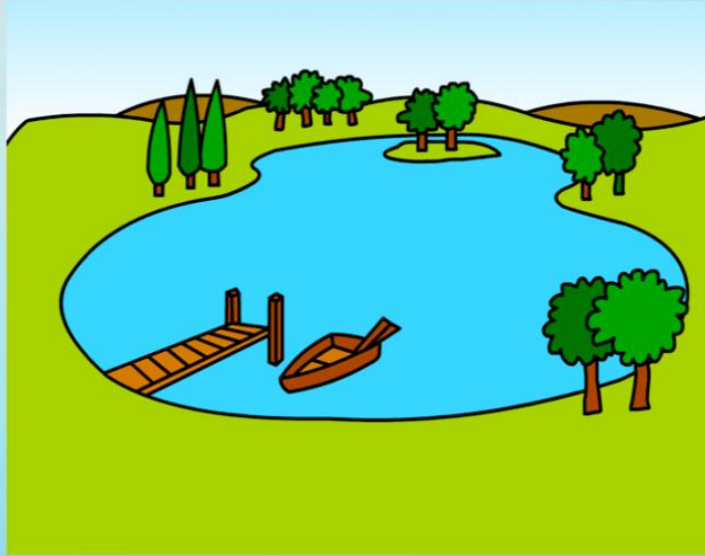
- “Expert” panel:
 - Sinang Lee, MPH – PHSKC public health outreach
 - Rhonda Kaetzel, PhD – PHSKC toxicologist
 - Linn Gould, MS, MPH – Community technical advisor on LDW cleanup issues



Cleaning up the Lower Duwamish Waterway Superfund Site



Disconnect: Where contamination comes from



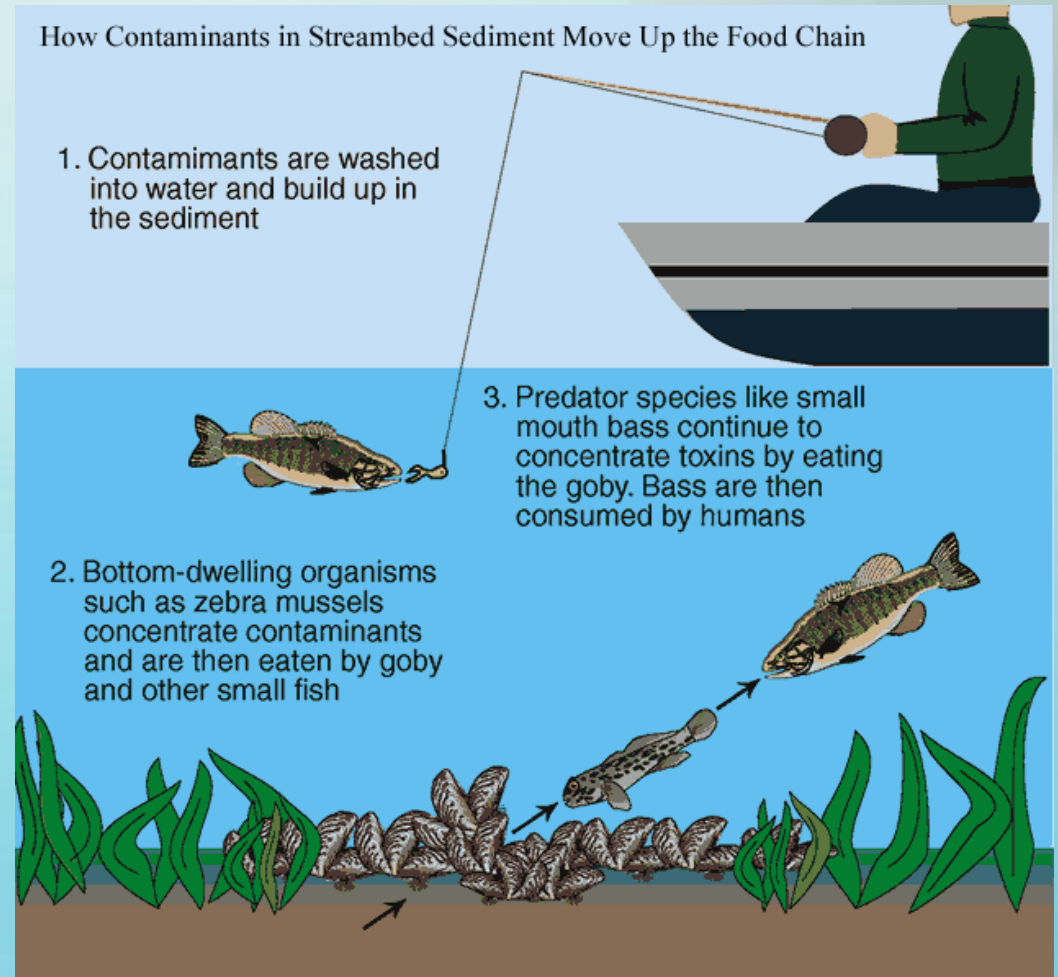
The bottom of the river is already contaminated, fish and shrimp living there will eat the mud and algae that are toxic and when we eat those fish and shrimp, we will be consuming that toxic too.

How Contaminants in Streambed Sediment Move Up the Food Chain

1. Contaminants are washed into water and build up in the sediment

3. Predator species like small mouth bass continue to concentrate toxins by eating the goby. Bass are then consumed by humans

2. Bottom-dwelling organisms such as zebra mussels concentrate contaminants and are then eaten by goby and other small fish



Comments after expert panel: Sharing fish

Our friends and neighbors share their catch with us..... We see that it's freshly caught and that's already so delicious, we didn't even ask, we didn't know whether it's from that river or not.



Two agencies have different messages

- Oh, so two departments not talking so one let you fish but one says it's harmful to eat. I see how it is.*
- So they (WDFW) know that the fish are toxic yet they still sell us the license to fish without warning us what fish are bad for us to eat.*



08_DOC#: 56908506587124									
SUMMER Puget Sound Dungeness Crab Catch Record Card Valid through September 1, 2008									
Name: _____					VWLD ID: _____				
City/State of Residence: _____					Issue Date: _____				
Dealer ID: _____					_____				
Report Crab Catch Option 1 Return card to address below by September 15, 2008									
Return To: WDFW Fish / CRC Office 600 Capitol Way N Olympia WA 98501-1091									
Option 2 Report catch card information on the Internet between September 2-15, 2008, at www.fishhunt.dfw.wa.gov									
NOTE: Card must be returned or information reported on the Internet even if no crab were kept									
Season opening dates, closures, and restrictions are available in the Sport Fishing Rules pamphlet, on the toll-free shellfish rule change hotline 1-(866) 880-5431, and on the Internet at www.wdfw.wa.gov									
Use ballpoint pen only. Do not use a felt tipped pen									
No more than 5 legal-sized male Dungeness crab can be kept on each open day.									
Immediately upon retaining a Dungeness crab, you are required to record your catch by completing the record below. Failure to do so is a violation of WAC 220-52-175.									
SUMMER CATCH CARD 08_DOC#: 56908506587124									
	Month	Day	Marine Area	Check (✓) one box for each crab kept					Crab Kept Per Day
EX	7	5	8-2	✓	✓	✓	✓	✓	5
EX	8	7	12	✓	✓	27			3

Meeting 2, Part 2: What should educational outreach to VN community look like?

- *VN newspapers is the best to outreach....*
- *And more advisory meetings like this but for other nationalities so everyone has the same information about these issues.*
- *Feasible to have community education, such as meetings like these once in awhile to get updated are more fitting*
- *The young people too busy working, so we the elders can help out reaching and teaching people*

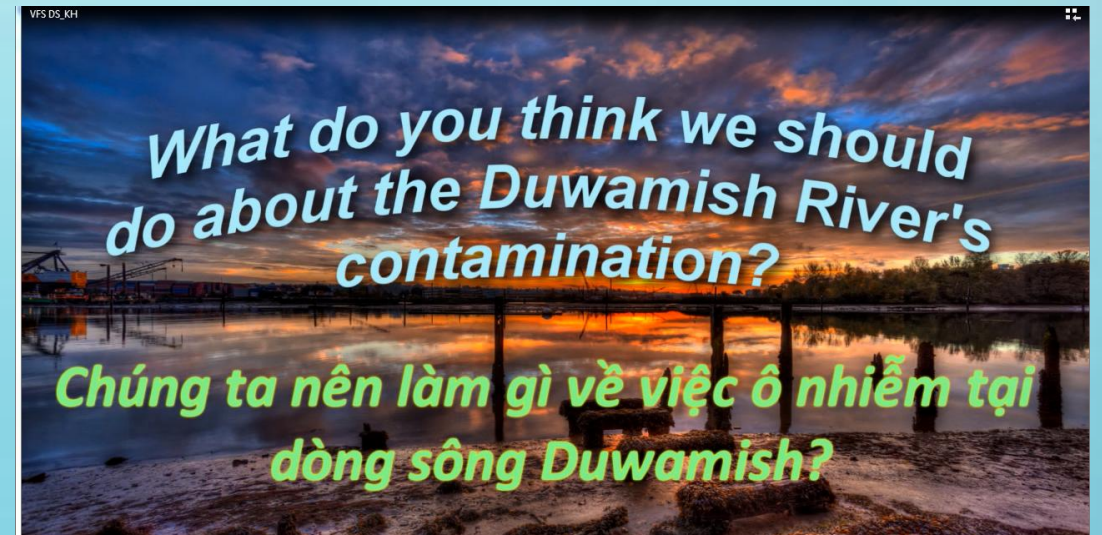


Other things we learned about education to VN community

- Trusted educators
 - PHSKC/DOH
 - Teach community members
- Locations
 - Community centers
 - Internet
 - Editorials
- Must be in Vietnamese



Khanh Ho (VN facilitator) and VN Advisory Group member



Meeting 3: Alternatives - If Duwamish River cannot be fished, what other choices that won't change your cultural or food security needs?

1. Game wardens (WA Department of Fish & Wildlife)
2. Fishing piers around Puget Sound
3. Stocked ponds



Action Tool: VN Newspaper article

In the Vietnamese community, these two newspapers (Viet Today and Viet NW) are the most circulated, almost every body reads it

The river is contaminated, so need to stay away from the seafood, but you can eat salmon. The river is in the process of being clean for the next 17 years.

Người Việt Tây Bắc số 2282 Thứ Sáu Ngày 21 tháng 08 năm 2015

tìm biện pháp giữ an toàn cho hoạt động tiêu thụ hải sản tại sông Duwamish



nghe từ các cộng đồng ngư dân địa phương Việt.

Nghiên cứu thí điểm này đã tạo ra một nhóm tư vấn cho người Việt Nam bao gồm các ngư dân đang hoạt động cũng như các thành viên nấu hoặc tiêu thụ hải sản.

Vì vậy, tổ chức y tế có trụ sở xung quanh khu vực cho dự án này đang tìm các phương án hiệu quả hơn để thay thế nhằm bảo vệ và giáo dục sức khỏe của các ngư dân sinh sống và những người tiêu thụ hải sản đánh bắt được từ sông Duwamish, trong khi vẫn đảm bảo họ giữ gìn và tiếp nối truyền thống ngành chài, khuyến khích họ tiếp tục đánh bắt hải sản để con nôi.

“Chúng tôi muốn khuyến khích ngư dân tiếp tục ăn hải sản bằng cách cung cấp cho họ với các lựa chọn khác hợp lý và phù hợp hơn để bảo vệ văn hóa của họ và không tạo thêm gánh nặng cho họ trong cuộc sống vì thay đổi cách sống và giải trí hằng ngày thường rất khó khăn về mặt lý do về tinh thần và an toàn về thực phẩm.” Linn Gould, Giám đốc Y tế Just Health Action, một tổ chức đặt nặng về vấn đề công bằng trong y tế cho biết.

Với phần tài trợ của Seattle Department of Neighborhoods, Just Health Action và International Community Health Services (ICHS) với phần khuyến cáo pháp cầu là cứ cầu và ăn thoải mái của Public Health Seattle-King County đã hợp tác để tiến hành quy định, một người tham gia nghiên cứu về các hoạt động cho việc đánh bắt hải sản và khuyến

Sau khi thảo luận và tìm hiểu về các vấn đề ô nhiễm sông Duwamish và sự an toàn của việc ăn hải sản cư trú tại khu vực hạ lưu sông Duwamish, nhóm Tư vấn Việt kêu gọi tăng cường thêm nhiều tấm bảng chỉ dẫn tư vấn trên bờ sông Duwamish cũng như giáo dục thêm cho cộng đồng thông qua phương tiện truyền thông và báo chí.

“Nên gắn thêm những tấm bảng chỉ dẫn và tư vấn người cầu, nhưng quan trọng hơn là nên giáo dục những người cầu cá ở đầu an toàn để cầu và tiêu thụ hải sản, và chỗ nào chỉ nên cầu nhưng không nên ăn,” một người tham gia của các nhóm tư vấn ngư dân Việt Nam cho biết, “nhưng phải làm với cách khôn khéo để đừng吓唬 ngư dân tới những địa điểm cầu cá này.”

“Mới đây chúng tôi đã sáng tạo một bản đồ hướng dẫn những trụ cầu, hồ và sông phổ biến để đánh bắt hải sản trong King County. Bản hướng dẫn này để nghị những loại hải sản lành mạnh có thể ăn được ở những địa điểm này và những ai sản nào nên tránh vì có chất độc như thủy ngân (mercury) và PCB”. Sinang Lee, phụ trách giáo dục sức khỏe thuộc Public Health Seattle-King County.

Xin liên lạc sinang.lee@king-county.gov để nhận được một bản hướng dẫn này bằng tiếng Việt hoặc Anh ngữ.

KÍNH MỪNG ĐẠI LỄ VU LAN 2559

Thứ Bảy, August 22, 2015 (9 am - 7 pm)
Chủ Nhật, August 23, 2015 (10 am - 7 pm)

CHÙA PHƯỚC HUỆ
2625 72nd Street East * Tacoma, WA 98404
(253) 536-4996 / (253) 224-2338

Action Tool: Fishing Maps (in 9 languages)

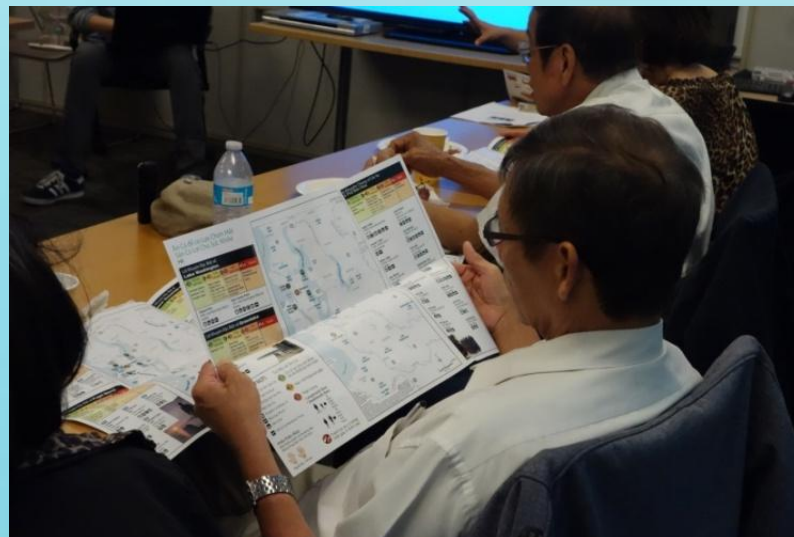
If we have those maps with safer spots to fish in every language that would be best



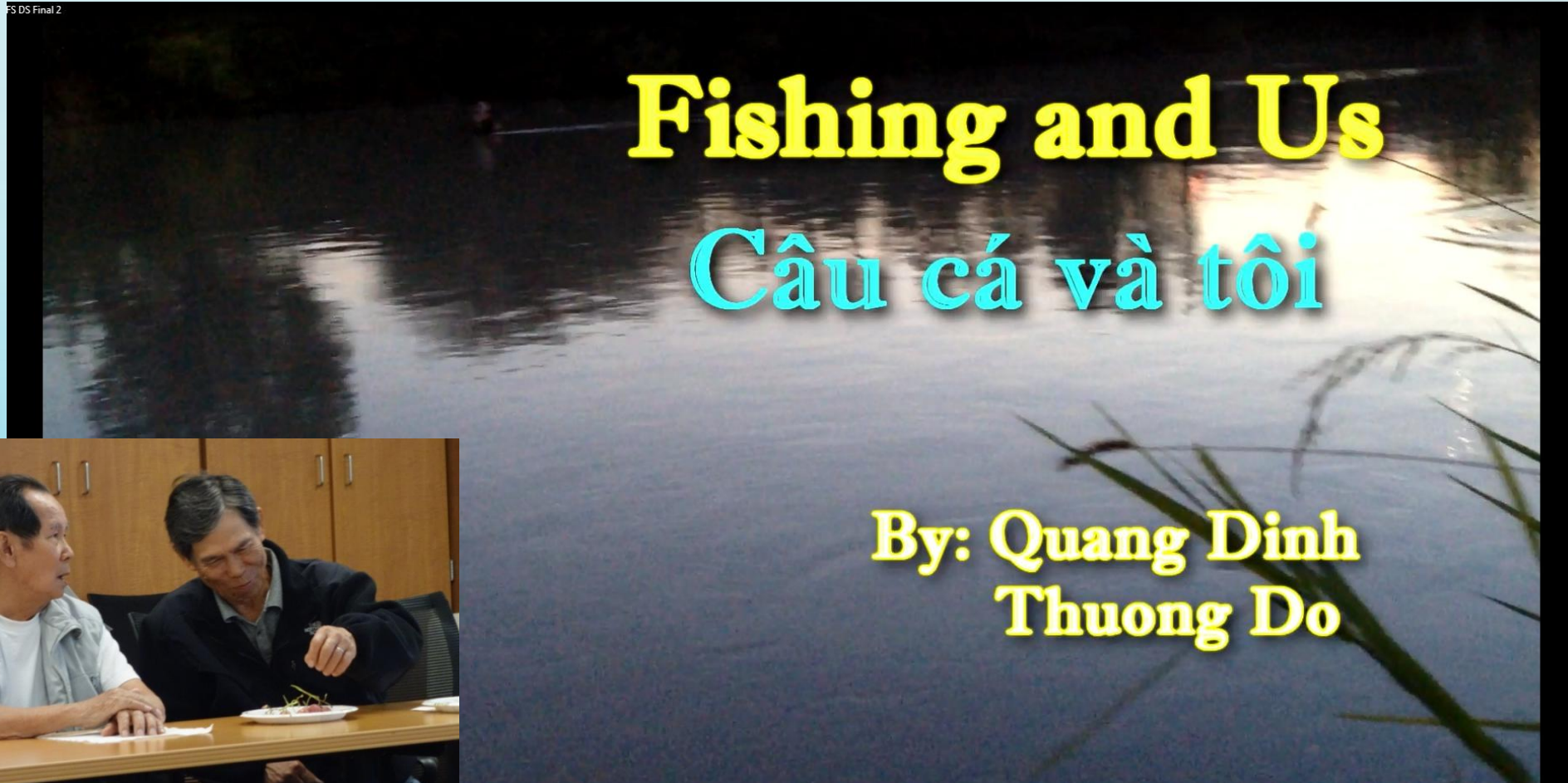
How distribute the maps?



- *We should leave it to public places like the library.*
- *Leave it at the fishing license office so people can take it*
- *Distribute them at health fairs and community education events around fishing*



Action Tool: Digital Story



<https://www.youtube.com/watch?v=NDmkoBJpKYU>

Meeting 4: What are your final thoughts about F&W?

- *Fishing rules booklet in English only, need to be in Vietnamese.*
- *The fines: should be a warning first time*
- VN AG interested in “train the trainer” or community health worker (promotora) model



Meeting 4: What are final thoughts about the fishing advisories

- The signs that are currently at the fishing sites only contain health information of consuming different types of fish.*
- I suggest that at each fishing site, they should post a sign of fishing guidelines and rules (what you can catch, limits, how to catch and whether it's safe to eat that catch), especially laws around licensing*



Final thoughts from VN AG: Cleanup should invest in community health

- *They are only cleaning up the river, aside from that, the years during and after this clean up, whether we consume resident fish and shellfish is up to us...Oh, I was under the impression that they would give us some of that money.*



- *If they are investing in the cleanup of the environment, they should also invest in the health of the community as well.*
- *The funding for the Duwamish Cleanup should be allocated to community outreach and awareness.....community input...the funding of the community participation – the education design, the design of alternatives....*

Process evaluation*: AG survey and team interviews

participatory learning and action

- VN AG interested in continuing and to share what they learned with next phase.
- VN AG loved the meetings and appreciated learning from us and giving us their advice.

I can understand that these meetings are meant for us to create our community voice.



*Process evaluation conducted by UW graduate student Emi Yoko

Vietnamese Latino Subsistence Fisher (aka “DROF2”)

Task 1: Vietnamese

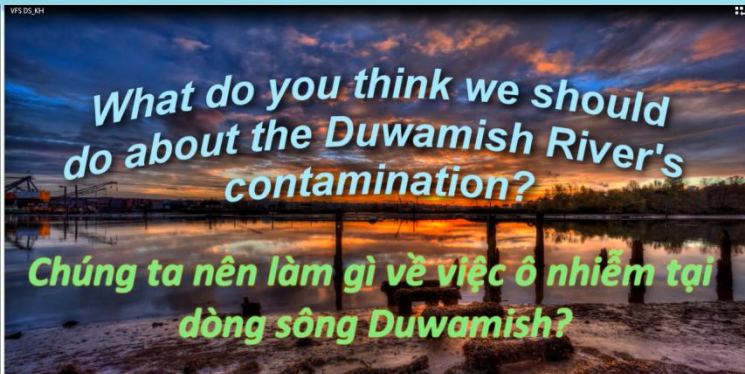
- Explore feasibility of the 3 alternatives
- Disseminate the digital story
- Educate: Environmental Coalition of South Seattle (ECOSS) in Winter/Spring 2016



Alternatives:

VN Priority 1 - WDF&W discussions

- Explore feasibility of “train the trainer” or promotora model
- Officer Loc Do has attended team meeting and has indicated interest in collaborating
- Need to work with F&W to develop action plan for next steps
 - No current funding for education at F&W
 - How make a program sustainable over 30-50 year period?

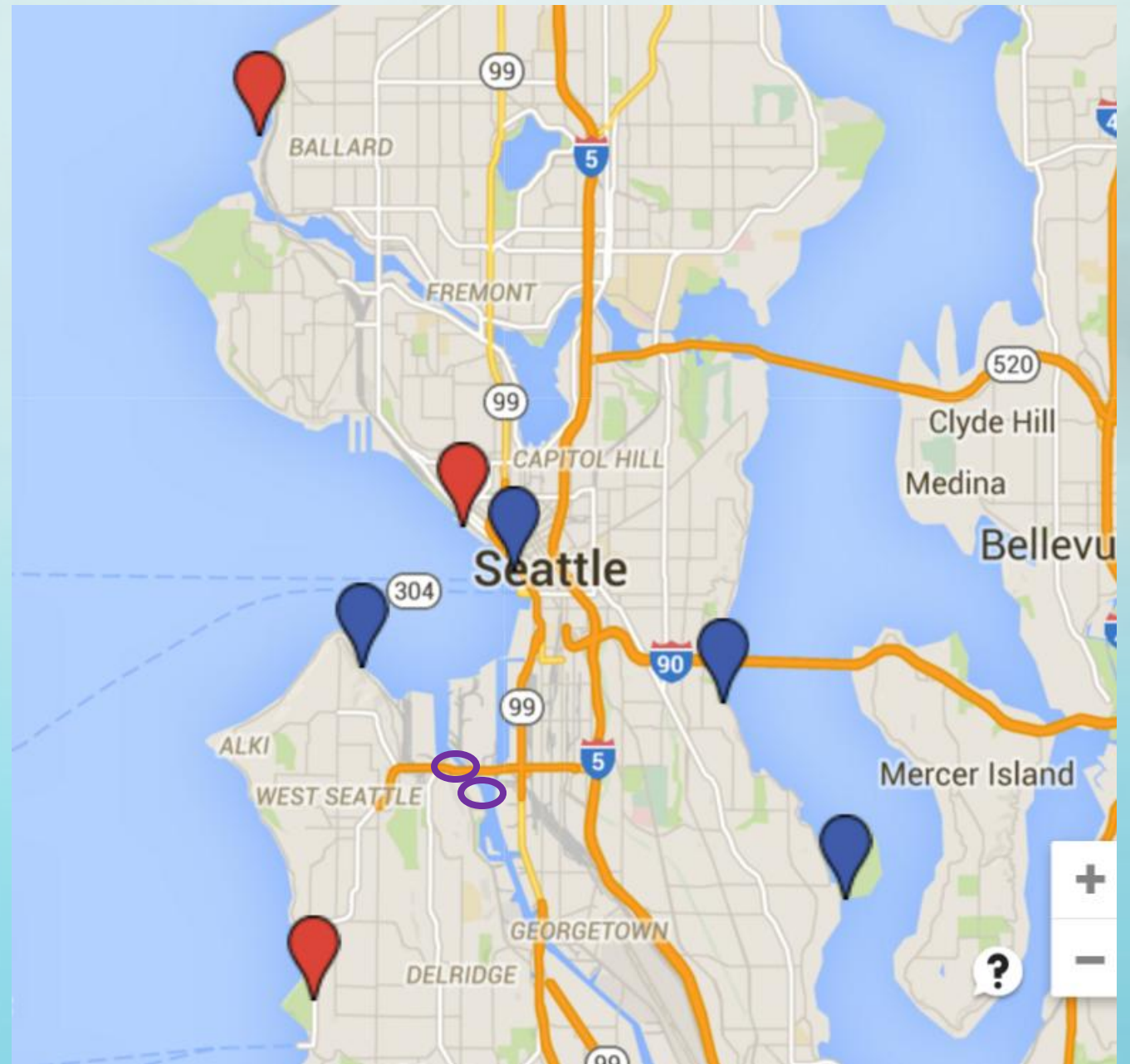


Alternatives: VN Priority 2- Piers

Initial research:

- Pier locations
- Pier amenity needs
- New piers

(Graduate student: Kirsten Clinkscales)



Alternatives: VN Priority 3- Stocked Ponds

- Initial research conducted on where stocked ponds have been established (“fish with a cop” in Minnesota)
- Follow-up with VN AG: Digging and stocking fish ponds vs. stocking existing ponds and lakes in Seattle & KC



“DROF 2” Scope of Work

Task 2: Latino focus group:

- Repeat this same study with Spanish speaking population
- What are their values around fishing?
- How should we do outreach?
- Are their ideas for alternatives the same as VN or different?
- Coordinate with ECOSS



Antoinette Angulo



Khanh Ho



Subsistence Fisher Alternatives Study

Facilitator Guide

November 2015

UW graduate student: Emi Yoko

Community participatory approach

- Addresses NEJAC recommendation of capacity building and empowerment
- More effective than just posting advisory signs
- VN community engagement greatly appreciated



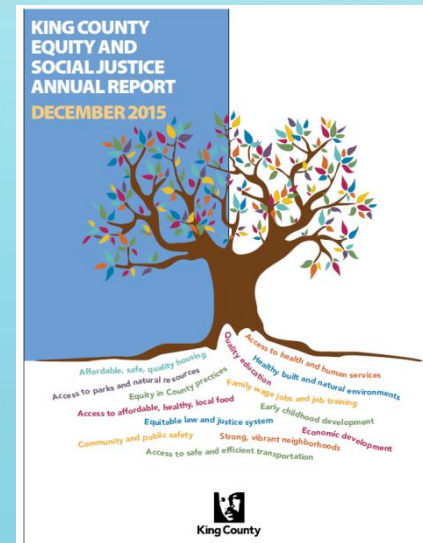
Community involvement in fish advisories are crucial

- Different communities have different needs/concerns
- Content of the message will vary depending on the community
- Medium of the message will vary depending on the community
- Implementation of strategy - by the community for the community
- Evaluation – community helps decide what to evaluate (e.g. products, awareness, improved trust.....)



Final thoughts:

- Institutional controls as fish advisories alone are NOT enough
- Institutional controls need to fund community participatory processes to achieve:
 - EPA mission to protect ALL
 - NEJAC recommendations
 - King County and City of Seattle Equity and Social Justice Initiatives



Thank You Cảm Ơn

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