FISHABLE WATERS

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INTRODUCTION

Tribes have long recognized that degraded environments mean both depletion and contamination of the salmon and other fish,[1] including shellfish, on which they depend. As tribal leaders contemplated litigation against the states in the 1960s to defend their treaty-secured[2] right "to take fish," they sketched the problems for their attorneys in its multiple layers: tribal fishers were being assaulted and harassed on the waters; the state was discriminatorily "regulating" harvest; the once-abundant salmon runs had declined precipitously; the aquatic environments that support the salmon and other fish had become degraded to the point that

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This article would not have been possible without the work of many people, to whom I am deeply grateful. I would like to acknowledge Dave Babcock, Jamie Donatuto, Eric Eberhard, Doug Nash, and Zach Welcker for their comments on earlier drafts of this article. I would also like to acknowledge Todd Bolster, Jeff Dickison, Larry Dunn, Barb Harper, Craig McCormack, Darrell Phare, Denice Taylor, Jim West, Rich Zabel, and the participants in the tribal fish consumption workgroup for sharing their expertise in numerous helpful discussions. I would like to acknowledge the unparalleled research of Librarian Kerry FitzGerald and the research assistance of Jenny Campbell. Finally, I would like to thank the AILJ's superb student editors Jenny Campbell, Nga Nguyen, and Shay Story, as well as its exceptional leaders, Emily McReynolds and Bree BlackHorse. Although I am indebted to these many teachers and friends, any errors in this article are my own.

[1] The term "fish," here and throughout, is understood to include all species of fish, including shellfish.

[2] Tribes' fishing rights have been recognized, from the U.S. perspective, through various means, including treaties, agreements, and executive orders. *See, e.g.*, United States v. Anderson, 6 Indian L. Rep. F-129 (E.D. Wash. 1979). This article recognizes the aboriginal origin of tribes' fishing rights, and does not mean to exclude any of the various forms of recognition for these rights by use of the terms "rights," "fishing rights," and "treaty-secured" rights, unless the context suggests otherwise. Nonetheless, the analysis in this article focuses on tribal rights reserved by means of the treaties between the tribes and the United States; a complete analysis of other sources of tribal fishing rights is beyond the scope of this article.

Carlo" analysis similarly stems from an assumption that no one's actual circumstances of exposure are likely to be represented by a composite of high-end values; rather, we are all equally likely to be among the winners or the losers, as in a crap shoot at Monte Carlo. Thus, the argument goes, we should input distributions (rather than point estimates) for each parameter and then consider risk in terms of the probabilities – noticing, in particular, the low probability in the abstract that any individual will experience the high levels of risk associated with the upper end of a distribution for each parameter.[293]

However, this argument again would require us to deny what we know about fish consumption practices in Washington. We know that the fishing tribes here, as elsewhere in the Pacific Northwest, are comprised of actual people whose exposure *is* described by a composite of maxima: actual individuals do live in the same place, and harvest from the same locations, and consume relatively large quantities of fish per day, for an entire lifetime.[294] We have the identifying information that permits us to consider risk in terms of actualities, not probabilities.

Although not an exhaustive recitation, this account nonetheless affords a sense of recent experience in Washington and in the Pacific Northwest more generally with revising state water quality standards.[295] As the description above suggests, the arguments and strategies are several: delay issuance of a more protective FCR; denigrate the science

[293] *But cf.* EPA, EXPOSURE FACTORS HANDBOOK, *supra* note 239, at 1-17 to 1-18 (cautioning against the use of Monte Carlo techniques where the variables are not independent but dependent).

[294] Moreover, they are legally entitled to do so – a point taken up in the next Part, *infra* Part VII. And, indeed, many Indian people feel that they could not do otherwise. *See, e.g.,* Columbia River Inter-Tribal Fish Commission, Tribal Salmon Culture, *available at* http://www.critfc.org/salmon-culture/tribal-salmon-culture/ (last visited Apr. 20, 2013) ("Salmon and the rivers they use are a part of our sense of place. The Creator put us here where the salmon return. We are obliged to remain and to protect this place."); *see also* O'Neill, *Variable Justice*, *supra* note 10, at n.265 (quoting Margaret Palmer, Yakama tribal fisher).

[295] Indeed, many other issues and arguments have emerged during the process in Washington and elsewhere, some of which may have important implications for tribal rights and interests, e.g., arguments that sediments standards ought not be considered water quality standards within the meaning of the CWA. These are not considered here in the interest of managing the scope of this article.

that supports an updated FCR; dilute the impact of an increased FCR; distort the scientific data regarding species' behavior and sources of contamination; and deny that we know precisely who it is that is among the most highly-exposed – it is Indian people – and so who it is that will be burdened by calls for tolerating greater risk. In fact, while delay is considered here as a separate feature of the states' standard-setting efforts, it is worth remarking that each of the other tactics can have the advantage, from the perspective of those with anti-regulatory designs, of at least forestalling whatever protective revisions are ultimately secured.[296] Thus, even irrelevant arguments and poorly supported assertions can have the desired effect if agencies and members of the public feel they must take the time to respond on the merits.

The arguments canvassed in this Part are often familiar and many come from the standard anti-regulatory playbook.[297] Indeed, many of the examples offered by industry and other commenters are inapt precisely because they are taken from this general stock of arguments. Arguments that reference where and when "most anglers" harvest fish[298] or how frequently "individuals" move[299] or what quantities of geoduck one can "envision" consuming [300] are explicitly or implicitly grounded in assumptions that don't match practices in Washington, most notably, tribal members' practices.

However, the arguments have sometimes been crafted in a manner particular to the tribal context and disturbingly so. Thus, for example, while it is a standard anti-regulatory move to call for "sound science," and under this umbrella urge agencies to wait for further study (when delay would be advantageous), or to rely exclusively on one's favored studies,[301] the language in which criticisms of the tribally conducted surveys were

[296] *See generally* CATHERINE A. O'NEILL, ET AL., THE HUMAN AND ENVIRONMENTAL COSTS OF REGULATORY DELAY, CENTER FOR PROGRESSIVE REFORM WHITE PAPER #907 (Oct. 2009).
[297] *See, e.g.,* THOMAS O. MCGARITY, ET AL. SOPHISTICATED SABOTAGE: THE INTELLECTUAL GAMES USED TO SUBVERT RESPONSIBLE REGULATION (2004).
[298] *See* Pope Resources, *supra* note 255.
[299] *See* NCASI, RISK ASSESSMENT WHITE PAPER, *supra* note 279.
[300] *See* McCrone, *supra* note 246.
[301] *See, e.g.,* MCGARITY, ET AL., *supra* note 297, at chapter 2 "The Myth of 'Junk Science'" 31-65.

leveled sometimes echoed too closely the discriminatory standards that have been applied to tribal science and knowledge in the past.[302] To question the believability or veracity of tribal respondents and so critique the professionalism of tribal study authors and the credibility of their results, one ought proffer more evidence than a mere assertion that portrays tribal members' practices as different from those of the dominant society.[303] Recorded quantities of Indian people's fish intake aren't inaccurate simply because they don't square with the quantities non-Indians consume or could imagine people consuming.

Still, what is perhaps most remarkable about the way that the "fish consumption issue" has transpired in Washington, especially, is that the process and arguments have not been *more* different here, given the tribal context, than had this issue been debated elsewhere. That is to say, in Washington, despite an engaged and technically sophisticated tribal presence throughout (and, indeed, prior to) the state's efforts to revise its FCR and related environmental standards, the tribal context for the relevant state and federal agency decisions has often not been visible. Indeed, tribal leaders made this point in the strongest of terms in reaction to Ecology's announcement of its "revised" process in July of 2012.[304]

[302] *See, e.g.,* Rebecca Tsosie, *Indigenous Peoples and Epistemic Injustice: Science, Ethics, and Human Rights*, 87 WASH. L. REV. 1133, 1152-58 (2012) (discussing history of various forms of epistemic injustice and how these have impaired Native peoples' rights, considering among these "testimonial injustice," which "arises when someone is wronged in his or her capacity as a knowledge giver" and may involve, for example, qualifying some speakers as capable or credible givers of testimony whereas others are excluded from such qualification based on their identity).

[303] *See generally* Robert A. Williams, Jr., *Columbus's Legacy: Law as an Institution of Racial Discrimination*, 8 ARIZ. J. INT'L & COMP. L. 51 (1991) (discussing history of colonization in United States and describing systemic discrimination based on cultural differences between European colonizers and Indigenous peoples in which real or perceived cultural differences are highlighted, and the colonizers' practices privileged whereas the Indigenous practices are portrayed as deficient).

[304] Letter from Babtist Paul Lumley, Executive Director, Columbia Inter-Tribal Fish Commission, to Dennis McLerran, Regional Administrator, Environmental Protection Agency, Region X (Sept. 14, 2012); Letter from Frances G. Charles, Chairperson, Lower Elwha Klallam Tribe, to Dennis McLerran, Regional Administrator, Environmental Protection Agency, Region X (Sept. 7, 2012); Letter from Merle Jefferson, Executive Director, Lummi Nation Natural Resources Department, to Ted Sturdevant, Director, Department of Ecology (Oct. 18, 2012); Letter from Billy Frank, Jr., Chairman, Northwest Indian Fisheries Commission, to Dennis McLerran, Regional Administrator,

Tribal leaders underscored their disappointment with the substantive results of Washington's process to date by declining the invitation to sit at the table with other invited "stakeholders" as part of Washington's new round of process. Instead, tribes insisted that any future exchange be conducted on a government-to-government basis.

Although the fish consumption issue profoundly affects tribes' rights and interests, the implications of tribes' unique status and rights are often not engaged. In the next Part, I turn attention to this last point, and explore how the debate ought to have been (and ought, in the future, to be) different, were the agencies and other participants to take more seriously their obligations as successors to the treaties and apply more thoroughly the reasoning of the culverts and other decisions by which the U.S. courts have affirmed these obligations.

VII. ENVIRONMENTAL DECISIONS IN THE TRIBAL CONTEXT

Given the tribal context that permeates environmental regulatory decisions by Washington and other states in the Pacific Northwest, one would expect a different process and a different result than that witnessed to date. In view of the legal constraints imposed by the treaties and other sources of law, state and federal agencies may not in fact be free to entertain arguments or permit tactics that might be plausible were only non-tribal populations affected – were the entire landscape not imprinted with a prior suite of rights reserved by its first peoples. Thus, whether the

Environmental Protection Agency, Region X (Aug. 24, 2012); Letter from Jeromy Sullivan, Chairman, Port Gamble S'Klallam Tribe, to Ted Sturdevant, Director, Department of Ecology (Oct. 12, 2012); Letter from Rudy Peone, Chairman, Spokane Tribal Business Council, to Ted Sturdevant, Director, Department of Ecology (Oct. 15, 2012); Letter from David Lopeman, Chairman, Squaxin Island Tribe, to Dennis McLerran, Regional Administrator, Environmental Protection Agency, Region X (Sept. 13, 2012); Letter from Leonard Forsman, Chairman, Suquamish Tribe, to Ted Sturdevant, Director, Department of Ecology (Oct. 19, 2012); Letter from M. Brian Cladoosby, Chairman, Swinomish Indian Tribal Community, to Dennis McLerran, Regional Administrator, Environmental Protection Agency, Region X (Aug. 24, 2012); Letter from Terry Williams, Commissioner, Fisheries and Resources, The Tulalip Tribes, to Dennis McLerran, Regional Administrator, Environmental Protection Agency, Region X (Sept. 18, 2012); Letter from Harry Smiskin, Chair, Yakama Nation Tribal Council, to Ted Sturdevant, Director, Department of Ecology (Oct. 3, 2012).

benchmarks and hammers built into the CWA can appropriately be ignored elsewhere, whether aspirations for the future of aquatic environments ought generally be measured by fish intake and resource use in a degraded present, these questions must be differently engaged where the answers affect tribes' rights and interests. Given that tribes' rights to fish were reserved throughout the Pacific Northwest, and given the interpretation that these rights have been given by U.S. courts, agencies' work here should be different. This Part examines more closely how the particulars of courts' interpretations in the relevant cases speak to the environmental decisions at hand.

A. Tribes' Fishing Rights and Their Implications for Environmental Standard Setting

First, the treaties guaranteed a source of food, forever; as such they promise fish fit for human consumption. As Judge Martinez emphasized in the culverts case, a central concern for the Indians during the treaty negotiations was the survival, health, and well-being of their generations to come. Their expressed worry about their ability to fish once they ceded so much territory was an apprehension about a constrained future – a future in which they might be thwarted in their lifeways by an influx of settlers. "The question," as Judge Martinez noted, "was not whether they could now feed themselves, but rather whether in the future after the huge cessions that the treaties proposed the Indians would still be able to feed themselves."[305] But these apprehensions were met with promises by the U.S. that the Indians could continue to take fish at all of their places, including those off-reservation, and that their people would retain this source of subsistence and the means of earning a livelihood in perpetuity. It was this guarantee of a right with future force and vitality that persuaded the Indians to sign. In framing his holding, Judge Martinez emphasized the reliability, abundance, and practical function of the fish resource, citing the "significance" of "the right to *take* fish, not just the right to fish," to the tribes, the "[t]ribes' reliance on the unchanging nature of that right," and the assumption by all parties that the

[305] Culverts Order, 2007 WL 2437166 at *9 (W.D. Wash.).

Indians' "cherished fisheries would remain robust forever" as a source of food and commerce.[306]

This concern for what might be termed a functional aspect of the treaty guarantees – the point that one of the ends of harvesting fish is, ultimately, consuming fish – has been recognized by other courts as well. For example, in interpreting a similar fishing clause in treaties between the Great Lakes tribes and the U.S., a district court in Wisconsin observed that the treaties guaranteed to the tribes the right to make a living "off the land and from the waters … by engaging in hunting, fishing, and gathering as they had in the past and by consuming the fruits of that hunting, fishing, and gathering, or by trading the fruits of that activity."[307] The Indians were not and are not "catch-and-release" fishers. This is not to downplay the importance of the other facets of fish and fishing and all of the lifeways that are bound up with the fish. It is simply to recognize that the point of securing a "robust" fishery, from the tribes' perspectives, is not to have salmon runs to marvel at from a distance. Thus, while the culverts case dealt with facts presenting impairment of the tribes' rights via depletion of the fish resource, its rationale applies equally to impairment of the tribes' rights via contamination that renders the fish resource unfit as a source of food for tribal fishers, their families, and others to whom they might sell their catch. Moreover, as noted in Part III, many of the same toxicants that lead to contamination of the fish tissue *also* cause depletion of fish numbers, given their adverse effects on reproductive success and other essential behaviors for many species.

Second, the treaty promises create obligations that exist in perpetuity. In finding the duty on the part of the State of Washington in the culverts case, Judge Martinez stated that he was guided by earlier

[306] *Id.* at *7-*9.

[307] Thus, for example, in interpreting 1837 and 1842 treaties with the Chippewas, the district court explained that, by dint of the treaties, the tribes were "guaranteed the right to make a moderate living off the land and from the waters in and abutting the ceded territory and throughout that territory by engaging in hunting, fishing, and gathering as they had in the past and by consuming the fruits of that hunting, fishing, and gathering, or by trading the fruits of that activity for goods they could use and consume in realizing that moderate living." Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Wisconsin, 653 F. Supp. 1420, 1426 (W.D. Wis. 1987).

decisions in which courts had recognized that the promises that the treaties would protect the fish as a "source of food and commerce" could be undermined in practice by "future settlers." Judge Martinez, like judges before him, understood that the Indians' rights could be rendered a nullity were settlement permitted literally or figuratively to "crowd the Indians out" of the meaningful exercise of their rights – that fish-blocking culverts could undermine the right by impairing the resource on which the right depends. In his March 2013 decision, Judge Martinez emphasized that the treaties "were negotiated and signed by the parties on the understanding and expectation" that "the salmon would remain abundant forever" to support tribal harvest for the generations to come, but observed that, instead, the salmon stocks "have declined alarmingly since treaty times."[308] He found that "[a] primary cause of this decline is habitat degradation" and "one cause of the degradation of salmon habitat is blocked culverts."[309] While Judge Martinez' ruling pertained only to this artifact of settlement, its logic was of a piece with other cases in which courts have recognized that the settlers' dams, development, and industry could effectively undercut the perpetual nature of the treaty guarantees.[310]

Moreover, the fact that tribes have been prevented from fully exercising their right to take fish in the intervening period since the treaties were signed doesn't limit their right to do so in the future. In granting the permanent injunction requested by the tribes in the culverts case, Judge Martinez catalogued "the human caused factors that have greatly reduced the salmon available for tribal harvest" and noted that "[m]any members of

[308] Culverts Decision, No. 9213RSM, Subproceeding 01-1, slip op. at 32 (W.D. Wash. 2013).
[309] *Id.*
[310] *See* Kittitas Reclamation District v. Sunnyside Valley Irrigation District, 763 F.2d 1032 (9th Cir. 1985) (upholding district court's order, in response to Yakama Nation challenge, of measures to protect eggs in salmon nests in Yakima River from adverse effects of dewatering occasioned by management of Cle Elum dam); Confederated Tribes of the Umatilla Indian Reservation v. Alexander, 440 F. Supp. 553 (D. Or. 1977) (finding that a proposed dam on Catherine Creek would infringe rights guaranteed to the Umatilla tribe); No Oilport! v. Carter, 520 F. Supp. 334, 372-73 (W.D. Wash. 1980) (finding that sedimentation from proposed pipeline crossing Puget Sound and two rivers subject to treaty rights could adversely affect salmon and ordering evidentiary hearing to determine whether habitat would be "degraded such that rearing or production potential of the fish will be impaired or the size or quality of the run diminished");

the Tribes would engage in more commercial and subsistence salmon fisheries if more fish were available." [311] Relatedly, courts have consistently rejected attempts to construe alterations to the land and resulting changed circumstances to the disadvantage of tribal rights. Rather, they have found that the rights secured to the tribes by treaty are permanent, such that "[t]he passage of time and the changed conditions affecting the water courses and the fishery resources in the case area have not eroded and cannot erode the right secured by the treaties . . ."[312]

Third, the treaties reserved a means for ensuring tribes' survival and well-being in a changing world; they presumed resilience, not stasis. To this end, courts have held that tribal members are not restricted in their harvest to a particular mix of species, whether a mix taken in the past or in contemporary times. Rather, the right to take fish secured by the treaties is a right "without any species limitation."[313] As the court in the Rafeedie decision explained, "[at treaty] time,... the Tribes had the absolute right to harvest any species they desired, consistent with their aboriginal title.... The fact that some species were not taken before treaty time - either because they were inaccessible or the Indians chose not to take them - does not mean that their *right* to take such fish was limited." [314] Subsequent courts have continued to reject attempts to cabin tribes' fishing rights by excluding certain species argued not to have been harvested historically.[315] Tribes' rights cannot be thus pinned down.

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[311] Culverts Decision, slip op. at 4-5.
[312] United States v. Washington, 384 F. Supp. 312, 401 (W.D. Wash. 1974); *see also,* United States v. Oregon, 2008 WL 3834169 (D. Or. 2008) (holding that the "Wenatchi and Yakama have joint fishing rights to fish at the Wenatshapam Fishery, which is located at the confluence of the Wenatchee River and Icicle Creek. Due to the alteration of this site by white settlement, and the fact that the evidence demonstrates fishing on Icicle Creek, in addition to fishing on the Wenatchee River, the nearest location for the Wenatshapam Fishery is the Leavenworth National Fish Hatchery on Icicle Creek").
[313] United States v. Washington, 873 F. Supp. 1422, 1430 (W.D. Wash. 1994) (emphasis in original).
[314] *Id.* (emphasis in original).
[315] *See, e.g.,* Midwater Trawlers Co-operative v. Department of Commerce, 282 F.3d 710 (9th Cir. 2002) (rejecting challenge to allocation of Pacific whiting fish to coastal tribes on grounds that they had not fished for whiting at the time of the treaties, stating "the term "fish" as used in the Stevens Treaties encompassed all species of fish, without exclusion and without requiring specific proof").

Fourth, the treaty guarantees exist in theory and in practice; as such, courts interpreting the treaties have been sensitive to the potential for evisceration of the right by governmental inaction or delay. In the culverts case, the court addressed facts showing that the State of Washington had neglected properly to build and maintain culverts, with the result that spawning habitat would be blocked and salmon numbers decreased. The State of Washington responded to the tribes' request for a determination as to a treaty-based duty by arguing that it was in fact in the process of addressing its stream-blocking culverts. Evidence before the court showed that the state's progress, however, was agonizingly slow: according to the state's projections, it could take "about 100 years" for the culverts to be fixed.[316] The fact that Judge Martinez was not persuaded by this tack and ultimately saw fit to require "[s]tate action in the form of acceleration of barrier correction"[317] suggests a sensitivity on the part of the courts to the very real possibility that the treaty right to take fish could be rendered a nullity if the habitat on which the fish depend is permitted to be degraded while a state delays. In other cases, too, courts have appreciated that governmental inaction could undermine tribal exercise of their rights as a practical matter, for example, recognizing that a state that declined to regulate harvest by non-tribal fishers in the oceans and bays would have the effect of leaving no salmon to complete their journey to tribal fishers in the rivers.[318]

[316] United States v. Washington, subproceeding 01-01, State of Washington's First Amended Answer and Counter Requests for Determination (Revised 2004) 2004 WL 4005685 (W.D. Wash.) (admitting this figure and suggesting that shorter timelines would also be possible, depending on funding from the legislature).

[317] Culverts Decision, No. 9213RSM, Subproceeding 01-1, slip op. at 34 (W.D. Wash. 2013). The court found that "[a]n injunction is necessary to ensure that the State will act expeditiously in correcting the barrier culverts which violate the Treaty promises. The reduced effort by the State over the past three years, resulting in a net increase in the number of barrier culverts in the Case Area, demonstrates that injunctive relief is required at this time to remedy Treaty violations." *Id.* at 35.

[318] United States v. Washington, 384 F. Supp. 312, 344-47 (W.D. Wash.) (recognizing the factual evidence that "substantial numbers of fish, many of which might otherwise reach the usual and accustomed fishing places of the treaty tribes, are caught in marine areas closely adjacent to and within the state of Washington, primarily by non-treaty right fishermen. These catches reduce to a significant but not specifically determinable extent the number of fish available for harvest by treaty right fishermen…. while it must be recognized that these large harvests by non-treaty fishermen cannot be regulated with

Taken together, these features of tribes' rights have implications for the various arguments and tactics encountered in Washington and elsewhere in the Pacific Northwest, outlined in the previous Part. Specifically, they mean that many arguments that might at least be considered as a more general matter, i.e., were the fishing tribes' rights and interests not at stake, become untenable here.

As noted at the outset of this article, every day that federal and state agencies permit a 6.5 g/day-driven standard to remain in force, they leave in place a *de facto* ceiling on safe fish consumption. These agencies thereby condition tribal members' exercise of their right to take fish – to harvest and consume the fruits of that harvest – in excess of this amount on their "willingness" to also take in toxicants at levels that have been deemed hazardous and unacceptable by these agencies.[319] That is, once tribal members eat more than twelve fish meals a year, they do so at their peril. I have argued elsewhere that risk avoidance is a misconceived regulatory response as a general matter; fish consumption advisories are not the answer. But in the tribal context, it is not merely a matter of being good or bad policy. Tribes reserved a right to take fish – fish fit for human consumption – not a right to be faced with a false "choice" of consuming fish with a stiff dose of carcinogens or curtailing their fish consumption and all that this would mean.

The fish consumption rate is an input to a method – quantitative risk assessment – used to determine the future state of the aquatic environment and all its components. The output of the method is a determination of the level of contaminants we will permit to be released to or remain in our waters and sediments. We could assess (and some commenters would have us assess) exposure on a bite-by-bite basis –

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any certainty or precision by the state defendants, it is incumbent upon such defendants to take all appropriate steps within their actual abilities to assure as nearly as possible an equal sharing of the opportunity for treaty and non-treaty fishermen to harvest every species of fish," and setting forth method for determining each group's "harvestable portions" accordingly).

[319] Recall that a woman consuming walleye from the Umatilla River at contemporary levels documented by the CRITFC survey (i.e., at 389 g/day) is exposed to methylmercury at a level nearly ten times EPA's "reference dose," that is, the level it has deemed safe for humans. *See* discussion, *supra* note 117 and accompanying text.

ascertaining precisely how much of which species, containing which contaminants with which bioaccumulation factors people currently consume – but the FCR, like other exposure parameters, is merely an input. It allows us to reach the end of setting an environmental standard, but it is not an end in itself. Thus, the FCR and other exposure parameters can be used to measure (ever more precisely) present practice, but there is a separate question whether present practice is representative of future practice. Given that risk-based standards determine future conditions for our waters, standards founded on present practice *in fact will be* predictive of future practice. That is, they will set the ceiling for safe consumption for the future. If the FCR is too low, if it is diluted by applying a diet fraction, if it is reduced by excluding certain species (including salmon) – if any or all of these devices are enlisted – the future health of our aquatic ecosystems will be limited accordingly. Again, whether this is an appropriate approach for some place where tribal fishing rights are not affected, it is not appropriate here. For the fishing tribes, the rights to use the fishery resource that they reserved constitutes the appropriate "baseline,"[320] and suggests the environmental conditions necessary to support that baseline. An unsuppressed tribal FCR is a way to accomplish this, the input that, along with other appropriate assumptions, allows one to derive environmental standards that ensure future conditions equivalent to those reserved. Assumptions in the other direction, conversely, guarantee that future conditions will be degraded relative to this baseline, and allow future settlers, with their PCBs and PAHs, to crowd the Indians out of the meaningful exercise of their fishing rights.

The implications of tribes' treaty-secured rights for some of the approaches and arguments encountered in the Pacific Northwest are explored in greater detail in the following three subsections.

[320] The term "baseline" is used here as Harper, et al. use the term to refer to how resources were used before degradation and contamination and how they "will be used again in fully traditional ways after cleanup and restoration." *See* Harper, et al., *Subsistence Exposure Scenarios*, *supra* note 152 and accompanying text.

1. Asking the Wrong Question

As the tribes have argued, it is tribes' unsuppressed, historical or "heritage" practices and fish consumption rates that they reserved in the treaties and other agreements. Yet state and federal agencies' focus on contemporary, suppressed consumption rates tethers tribal members to practices that reflect a legacy of non-tribal governments' actions in contravention of the treaties. As noted above, consumption rates derived from studies of present consumption capture a snapshot of practices that have been shaped by intimidation, denial of access to fishing places, depletion and contamination of fishery resource. Environmental standards set by reference to suppressed rates will ensure aquatic environments that in the future will support no better than suppressed rates.

Thus industry commenters miss the mark when they suggest that tribal members' current consumption and other practices necessarily impose a limit on their future practices. Boeing, for example, takes Ecology to task for failing to indicate the portion of tribal populations that "live on or near reservations" or that "live lifestyles comparable to the subsistence lifestyles described in some of the published surveys."[321] Boeing argues that this information is relevant because "[i]t seems likely that American Indians and Alaskan natives who live away from reservations may eat a larger proportion of fish that is not locally raised or harvested, particularly if they live in urban areas."[322] Having argued that non-locally raised or harvested fish should be excluded from Ecology's FCR, the implications of this information are clear.[323] But the point is not to zoom in ever more tightly on individual tribal members' practices as revealed by a contemporary snapshot. The point, in view of the treaties, is to ask: to what practices are tribes entitled in the future – the future provided for by tribal negotiators at treaty time?

We ask the wrong question when we gauge environmental standards that determine the future health of our waters to practices constrained by the present, contaminated state of our waters. The future

[321] Boeing, FCR TSD 2.0 Comments, *supra* note 222, at 13.
[322] *Id.*
[323] *Id.* at 4-6.

condition of Washington waters, indeed, is now determined by reference to the amount of fish people across the nation ate in 1973-74 – when the lakes were dead, the rivers were on fire, the fish depleted and contaminated, and tribal harvest still under open attack. Because we set risk-based standards based on assumptions about exposure measured in this bleak period, we aim for a future that is not improved. That is, we impose a limit on the health of our waters – and a ceiling on the safe consumption of fish from those waters – that reflects not a level of fish intake that is healthful or to which tribes are entitled, but a level that is simply equal to present, constrained practice.

Ecology has, to its credit, acknowledged the problem of suppression in the tribal context, but it has not discussed how it might account for suppression effects in practice.[324] The relevant EPA guidance, it should be noted, does not preclude a future-oriented exposure assessment.[325] Rather, it observes that such assessments may be past-, present-, or future-oriented. Given the CWA's restorative aspirations, it makes sense that exposure analysis is oriented toward a future in which aquatic ecosystems are healthy and whole. And, given the tribal context, it is arguable that exposure analysis not only may but must be oriented toward a future in which the fish resource is robust and tribal members may exercise fully their right to take fish.

Tribes and tribal researchers are leading the way in operationalizing these insights and reframing the question to reflect more closely the future secured by the treaties. Tribes have conducted fish consumption surveys that seek to identify and address suppression effects. For example, studies by the Suquamish, Swinomish, and Lummi

[324] Ecology, FCR TSD, *supra* note 149, at 96, 107-08.
[325] EPA, EXPOSURE ASSESSMENT GUIDELINES, *supra* note 143, at 72, 74-75 (describing among the uses of exposure scenarios in risk-based environmental standard setting, "exposure scenarios can often help risk managers make estimates of the potential impact of possible control actions. This is usually done by changing the assumptions in the exposure scenario to the conditions as they would exist after the contemplated action is implemented, and reassessing the exposure and risk" and pointing out that "if the [exposure] scenario being evaluated is a possible future use or post-control scenario, an assessor must make assumptions in order to estimate what the [exposure] distribution would look like … if the possible future use becomes a reality.").

tribes have all sought to document the forces of suppression.[326] The Lummi Nation, further, in a survey published in 2012, measured consumption as of 1985, which was "the peak fish harvest year for the Lummi Nation in recent history."[327] Thus, "[w]hile not at Treaty-time levels, seafood abundance and availability was less of a limiting factor for seafood consumption during 1985 than in 2012. Consequently, the seafood consumption rate would be less suppressed due to environmental degradation or the lack of available fish."[328] The study documented an average consumption rate at 383 g/day, a 90th percentile consumption rate at 800 g/day, and a 95th percentile consumption rate at 918 g/day.[329] The study notes that it expects the results of this survey to inform an update of the Lummi Nation's water quality standards, as well as Washington's water quality and sediment management standards, which affect the waters of the Lummi Nation's usual and accustomed fishing areas and thus the health of tribal members.[330]

Tribes and tribal researchers have also developed methods that have reframed exposure assessments to focus on practices that are healthful, that are in accordance with historical or heritage practices, and to which tribes are entitled under the treaties, and have adopted environmental standards founded upon these methods. For example, as noted above, Barbara Harper, Stuart Harris, Darren Ranco, Anna Harding, and their colleagues have outlined a method for developing tribal exposure scenarios that consider exposure in view of a healthful future, rather than a degraded present.[331] Exposure assumptions to be used in

[326] *See, e.g.,* SUQUAMISH TRIBE, FISH CONSUMPTION SURVEY, *supra* note 13, at 53-54; Donatuto & Harper, *supra* note 14; LUMMI NATION SEAFOOD CONSUMPTION STUDY, *supra* note 15, at 1-2, 11-14.
[327] LUMMI NATION SEAFOOD CONSUMPTION STUDY, *supra* note 15, at 1.
[328] *Id.* This baseline year was chosen for study as well because it would permit reliable estimates of fish consumption, given the availability of data on seafood abundance, as fishery data for 1985 are "well documented," and given that meaningful data "could be elicited in recall studies that reach back 25 years." *Id.* at 1, 11-14.
[329] *Id.* at 2.
[330] *Id.* at 7.
[331] Harper, et al., *Subsistence Exposure Scenarios*, *supra* note 152; *see also* BARBARA HARPER & DARREN RANCO, WABANAKI TRADITIONAL CULTURAL LIFEWAYS EXPOSURE SCENARIO (2009), BARBARA L. HARPER, ET AL., TRADITIONAL TRIBAL SUBSISTENCE EXPOSURE SCENARIO AND RISK ASSESSMENT GUIDANCE MANUAL (2007).

risk-based standards follow from practices in accord with this scenario. The Spokane Tribe has adopted WQS that use a FCR of 865 g/day, supported by a tribal exposure scenario developed according to such methods.[332]

Tribes have also worked to develop alternatives to risk-based approaches to environmental standard-setting. The Swinomish tribe, for example, is leading an effort to elaborate a "health and well-being"-based approach.[333]

2. Cabining Treaty-Secured Rights

Relatedly, arguments that attempt to pin tribal practice to currently available species or currently accessible or suitable habitat are a move in the opposite direction to the treaty promises. Arguments for a diet fraction and arguments for a site use factor take as a baseline currently constrained practice and operate to ensure a future in which present constraints will serve as the measure of our waters' future ability to support the fish. Thus, a host of the arguments canvassed in the preceding Part have no place in Ecology's deliberations.

First, while tribes at present obtain most or all of their fish from local sources, it is crucial to note that at treaty time, Indian people obtained *all* of their fish from local waters. And tribes' reserved rights under the treaties and other legal agreements entitle them to do so in perpetuity. So even if tribal members at the time of a contemporary survey obtained 25% of their fish intake from non-local sources, it would not be appropriate to apply a diet fraction of 0.75 to the FCR and thereby place a limit on future consumption of locally harvested fish at more robust levels. As the Suquamish, Swinomish, and Lummi surveys document, many tribal members *would like to consume more fish and shellfish*, were these resources not depleted or contaminated, were they better able to access

[332] Spokane Tribe of Indians, Surface Water Quality Standards, RESOLUTION 2010-173 at § 6(6) (2010) ("aquatic organism consumption rate" of 865 g/day).
[333] Swinomish Indian Tribal Community, "Key Indicators of Tribal Human Health in Relation to the Salish Sea," Prepared in fulfillment to Swinomish Action Agenda Goal 4, Objective 1 for EPA grant #981-90-03-00 in coordination with the Puget Sound Partnership (2010).

and harvest the resources, were they not still recovering from the legacy of illegal restrictions on their fishing and confiscations of their boats and gear. This point was echoed by Judge Martinez in the March 2013 culverts decision. Tribes envision and have worked toward a future in which the ecosystems that support fish are restored to health, and the fish resource is returned to abundance. Thus, even if tribal members currently obtain less than 100% of their diet from regulated waters, they have not only the potential, but also the expressed desire, intention, and right to do so in the future. To apply a diet fraction is to assume and ensure that future generations will not be able to look to local waters for their fish. This is not the future that tribal negotiators understood themselves to be securing.

Second, tribes' rights are not limited to certain mixes of species consumed historically or at present: these rights encompass all species of fish. So, while a survey of contemporary tribal fish consumption practices may document a particular proportion of species consumed (e.g., in the hypothetical example above, of the 75 g/day of locally-harvested fish, 50 g/day salmon and 25 g/day other finfish and shellfish), tribal members are not in any sense bound to consume this mix of species in the future. Rather, to use the terminology of EPA Region X, tribal members are free to undertake "resource switching."[334] Yet industry has called for – and Ecology's draft SMS guidance appears to anticipate -- slicing and dicing, even down to the level of species-specific fish consumption rates, based on contemporary consumption patterns. This approach is at odds with tribes' rights to determine the mix of species that will comprise their dietary intake in the future. A dearth of a particular species today ought not be used to compromise an aquatic environment's ability to support that species or other species tomorrow.

Third, even in cases where an individual's fish intake can only partially be supported by productivity (current and future) of resources affected by a contaminated water body or site, the application of a diet fraction is problematic. Again, consider a hypothetical tribal member whose total FCR is 100 g/day. Assume that he obtains (or would obtain)

[334] EPA REGION X, FRAMEWORK, *supra* note 240, at 9.

all of his fish from local sources, within his tribe's adjudicated U&A area. Assume further that Site A is a small lake that, even if pristine, is only likely to support productivity of fish sufficient to supply 50 g/day. Application of the diet fraction concept would result in environmental standards (e.g., a sediment cleanup level) that permitted fish at Site A to harbor twice the level of toxic contaminants, on the theory that this individual would only ever obtain half of his fish diet from the lake at Site A. But this calculus does not consider the remaining 50 g/day of fish comprising this man's diet. Suppose he obtains it from a nearby bay, Site B, which is also within his tribe's U&A area. The calculus for Site A means either that Site B must be cleaned up to a level twice as protective as would otherwise be required (presumably, simply because Site B is batting second) or, if the same logic is applied to Site B, that our hypothetical individual would be left exposed to *twice* the level of contaminants that would otherwise be healthful. It is telling that Ecology's proposed SMS guidance mentions only that the diet fraction may be "reduced" (as to Site A), but does not mention that it may be increased (as to Site B). And, it nowhere provides for consideration of aggregate risk. Moreover, the aggregate effect of applying a diet fraction and/or a site use factor at multiple sites that provide habitat for fish and shellfish at their various lifestages may lead to depletion and contamination of resources to which tribes have treaty-secured and other rights. Thus, for example, while Dungeness crab or pacific herring or salmon may be present at or affected by contaminants from Site A at one point in their respective lifecycles, they may be present at or affected by Site B at another point in their development. If the calculation of risk at each site excludes or steeply discounts its contribution to the contaminants harbored by the various species, the resulting standards will be overly permissive of toxic contamination.

3. Delaying Standards, Undermining Rights

If the watersheds are degraded, so that the fish are too few or too contaminated for tribal people to harvest and consume, tribes' treaty-secured rights to take fish are eviscerated as surely as if tribal fishers were hauled from their boats or tribal harvesters barricaded from the beaches. Under the CWA and other laws, state and federal environmental

agencies set the terms for permissible degradation. To delay enacting standards that limit permissible toxicants in our waters to healthful amounts is, of course, to allow harmful levels to remain. The contaminant levels, for example, in the Columbia River Basin currently burden tribal consumption (at even contemporary rates) with several orders of magnitude greater cancer risk than is generally deemed acceptable or several times the levels of methylmercury thought to be "safe" from neurodevelopmental damage. Such inaction and delay by the agencies charged with addressing these habitat- and resource-degrading conditions is analogous to the inaction and delay that the culverts court found problematic under the treaties.

Yet, the presence of treaty-secured and other tribal rights seems not to have lit a fire under the EPA or the states in the Pacific Northwest. Instead, the states and EPA have failed to invoke their authorities, have reneged on executive and other commitments, and have even ignored mandatory statutory and other obligations, as canvassed in the preceding Part. The states and EPA have "danced" their way around the CWA.[335] Whether by issuing final WQS that cannot be approved (and then going back to the drawing board), or by rehashing the supporting science, or by repeatedly "kicking the can down the road,"[336] states have created – and EPA has sanctioned – a blueprint for evading the CWA's benchmarks and deadlines for water quality standards. The EPA's unwillingness to exercise the hammer of its own 303(c)(4) authority similarly deserves reproach, not only for its substantive effect on the ground but also for the message that this cavalier treatment of its obligation to uphold the purpose of the CWA sends to the states. This provision is no dead letter: EPA has acted under this obligation in the past in the face of states' (including

[335] The reference is to EPA Regional Administrator Dennis McLerran's description of the process for updating states' WQS in the Pacific Northwest, quoted in Columbia Basin Fish & Wildlife News Bulletin, *supra* note 233, and discussed in the accompanying text.
[336] Letter from M. Brian Cladoosby, Chairman, Swinomish Indian Tribal Community, *supra* note 304 (expressing "deep disappointment" with Ecology's "abrupt change of course [as announced in July, 2012] which effectively stalls all progress," including years of research and discussion, and chiding Ecology for "kick[ing] the can down the road by adding yet another lengthy planning process" before the FCR is updated in the state's water quality and sediments rules).

Washington's) recalcitrance, by adopting the National Toxics Rule.[337] And EPA has options at hand. As the Kalispel tribe recently pointed out in the context of Idaho's ongoing efforts to revise its WQS, as of 2000 the EPA could easily have enacted WQS using its national subsistence default FCR of 142.4 g/day to serve as a placeholder in the interim while states here dithered.[338] EPA's posture in the Pacific Northwest is particularly troubling given its obligations as federal trustee.

In short, it is difficult to imagine a clearer confluence of statutory directive, scientific support, and treaty-based duty. Yet the months and years go by, while state agencies and EPA stand by, and the fish resource is allowed to be rendered an unfit source of food.

Given proper consideration, tribes' treaty-secured and other rights have implications for the various arguments and approaches that have emerged in the Pacific Northwest. If these rights are to be honored and healthy fisheries restored, the regulatory question ultimately needs to be reframed. If these rights are not to be cabined, arguments for diet fractions and species exclusions ought to be eliminated from the table as non-starters. If these rights are not to be eviscerated through inaction, state and federal agencies at least cannot ignore the CWA's deadlines and authorities. While there are science and policy questions to be grappled with, the answers cannot be permitted to eviscerate tribes' treaty rights through the back door. Here, it will be important to recognize the

[337] *See, e.g.,* EPA, National Toxics Rule, *supra* note 18, 57 Fed. Reg. at 60,852 ("The CWA allows some flexibility and differences among States in their adopted and approved water quality standards, but it was not designed to reward inaction …The CWA authorizes EPA to promulgate standards where necessary to meet the requirements of the Act. Where States have not satisfied the CWA requirement to adopt water quality standards for toxic pollutants, which was re-emphasized by Congress in 1987, it is imperative that EPA act.").

[338] Letter from Deane Osterman, Executive Director, Kalispel Natural Resources Department, to Mary Lou Soscia, Columbia River Coordinator, U.S. Environmental Protection Agency (Jan. 9, 2013) (setting forth concerns with further delay that will result from Idaho's process, which includes conducting a new fish consumption survey, and suggesting that EPA has had a ready solution in the form of a placeholder at the subsistence default of 142.4 g/day since 2000). This is an approach, note, that some tribes have taken. The Lummi Nation, for example, has employed the 142.4 g/day default FCR while working on the fish consumption survey that will support more protective standards. See *supra* note 15 and accompanying text.

legal status of the various instructions that inform agencies' work. Guidance, for example, is merely guidance. As the EPA states at the outset of its *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health*, this guidance "does not impose legally-binding requirements … and may not apply to a particular situation based upon the circumstances."[339] The treaties, by contrast, are the supreme law of the land.

B. Taking Seriously Our Obligations as Successors to the Treaties

We are all successors to the treaties. As Billy Frank, Jr., has pointed out, we have had no trouble in honoring some facets of the treaty promises – namely, the United States and successors on its side have retained the vast ceded territory as a home for white settlement.[340] But we should also ask how we can live up to *all* of our duties under the treaties, given our respective roles and authorities. The answers to this question should be crafted together, with tribal governments and non-tribal governments engaged side by side. Rob Williams has explained that the treaties, from the perspectives of Native peoples, are revered as sovereign compacts of alliance, as charters for respectful co-existence on this continent.[341] This understanding might usefully inform environmental decision making in the tribal context, where tribal and non-tribal agencies' work affects our shared aquatic ecosystems. Given that so many of the decisions impacting the vitality of the treaty resource are today in the

[339] EPA, AWQC METHODOLOGY, *supra* note 141, at ii.
[340] NWIFC, TREATY RIGHTS AT RISK, *supra* note 85, at 6 (quoting Billy Frank, Jr., Chairman, Northwest Indian Fisheries Commission: "We kept our word when we ceded all of western Washington to the United States, and we expect the United States to keep its word"); *see also* Billy Frank, Jr., Northwest Indian Fisheries Commission, "Being Frank: Time Moves On, But Treaties Remain," (Mar. 22, 2007), *available at* http://nwifc.org/2007/03/being-frank-time-moves-on-but-treaties-remain/ (last visited Apr. 20, 2013) ("People forget that non-Indians in western Washington have treaty rights, too. Treaties opened the door to statehood. Without them, non-Indians would have no legal right to buy property, build homes or even operate businesses on the millions of acres tribes ceded to the federal government").
[341] ROBERT A. WILLIAMS, JR., LINKING ARMS TOGETHER: AMERICAN INDIAN TREATY VISIONS OF LAW AND PEACE, 1600-1800 (1997).

hands of non-tribal governments, there is a particular onus on them to take more seriously their obligations as successors to the treaty promises.

While the states and EPA should thus work together with their tribal partners to chart a path that honors the treaties and other agreements, some lessons might be gleaned from experience to date in the Pacific Northwest.

First, deliberations should be structured in a manner that recognizes tribes' unique political and legal status and rights. This is a matter of both form (i.e., process) and substance. Tribes' governmental status is now frequently acknowledged by state and federal agencies, and this has been true for the states and EPA in the Pacific Northwest. Yet in many ways, tribes' rights and the particular obligations that flow from these rights often do not *structure* the dialogue; rather, when tribal fishing rights are mentioned by the agencies, it may be as an afterword or a subsidiary consideration. Thus, for example, Ecology recently commenced a "WQS Policy Forum," which is the series of public meetings at which science, policy, and legal issues surrounding its revisions to its WQS and the FCR will be debated.[342] This process, recall, is now the first place in which an updated FCR will be considered for official adoption by rule in Washington. According to its draft agenda, the issue of "tribal treaty rights" is not slated for discussion until the seventh (and final) meeting, where it is one among several topics.[343] Yet important questions on which the existence of tribal treaty rights bear will have been discussed in the six prior meetings.[344] The tribes, as noted above, opted to decline participation in this Forum and to engage further discussions with Ecology on a government-to-government basis. But Ecology is not thereby relieved of a need to structure appropriately the dialogue among

[342] Washington Department of Ecology, "Water Quality Policy Forum and Delegate's [sic] Table," *available at* http://www.ecy.wa.gov/programs/wq/swqs/hhcpolicyforum.html (last visited Apr. 20, 2013).
[343] Washington Department of Ecology, *Surface Water Quality Standards Delegate's [sic] Table and Policy Forum: Draft Agendas for Future Policy Forums* (undated document), *available at* http://www.ecy.wa.gov/programs/wq/swqs/PolicyForumOverview.pdf (last visited Apr. 20, 2013).
[344] *Id.* (listing, for example, risk levels; exposure assumptions including exposure duration; and sources of fish and contaminants (i.e., considerations relevant to application of a diet fraction and/or site use factor)).

stakeholders and the public. By contrast, the second attempt at revising Oregon's FCR, which produced WQS that were not only approvable by EPA but that rest on the most protective FCR (175 g/day) of any state, was framed by a process with a tri-governmental lead, namely, the Confederated Tribes of the Umatilla Indian Reservation, the EPA, and ODEQ. Tribes' governmental status and tribes' rights and interests are more likely to be properly understood and considered when deliberations are structured appropriately.

Second, the delay that has been permitted on the states' and EPA's watch is unconscionable and unnecessary. Both the states and EPA have tools at their disposal to avoid such delay. It is, plain and simple, a matter of commitment. Were the states and EPA to scrutinize their respective authorities from a posture of a successor seeking to uphold their obligations under the treaties, they would find ample muscle to flex. EPA, as a federal trustee and congressionally appointed custodian of the CWA, has a particular obligation to be active rather than passive, to be creative rather than flat-footed.

Third, non-starters might usefully be identified and removed from the table. Arguments that may be plausible elsewhere but are untenable given the tribal context could be identified as such early on, and placed to the side. Arguments, for example, for applying a diet fraction to consumption rates derived from contemporary surveys or other devices that are inappropriate when tribes' treaty-secured rights to take fish are at stake, could be removed from serious contention. The states and EPA might work with their tribal partners to engage the treaties and courts' interpretations of the treaties, and determine their implications for the various technical arguments likely to be encountered in crafting water quality standards. This would require legal and technical expertise; it could then involve broader educative efforts, so that all participants in the process understood the implications of tribal rights for arguments that might otherwise be entertained. This effort might include placing a figurative asterisk by those agency determinations that derived from a pre-culverts era in which the contours of tribal rights may not have been adequately appreciated, for example, Washington MTCA's default

application of a diet fraction of 0.5, so that these determinations' precedential reach is properly limited. Such an approach would not only prevent inappropriate arguments from nonetheless carrying the day, but also make the process more efficient, by alleviating delay and avoiding the expenditure of unnecessary resources to counter on the merits what are, after all, non-starters.

Fourth, agencies might do more to ensure "clean science." This point is in many respects a matter of good governance, and so not unique to the tribal context. However, to the extent that corrosive broadsides are directed at tribally conducted science, EPA, as federal trustee, should be particularly vigilant. Moreover, to the extent that a failure to correct distortions and mischaracterizations permits analyses that undermine tribal rights, each of the agencies involved ought to be more active in setting the record straight. EPA in particular, can assume a leadership role envisioned for it by Congress in ensuring science-based decision making under the CWA. EPA might, for example, have been more active in issuing explicit statements regarding the scientific defensibility of the various consumption surveys, thereby allowing states and tribes to direct their energies to the remaining questions.[345] EPA and the states might also more actively correct inaccuracies and distortions submitted as part of public debate, rather than simply passively repeating all arguments that they "hear" in an effort to appear "responsive." And all agencies might do more to clarify and model appropriate usage of key terms (e.g., "conservative" versus "protective" responses to various features of the data; "marine" versus "open ocean" waters).[346] Again, such steps would

[345] Recall that EPA had already embraced the tribal studies involved, for example, in its Exposure Factors Handbook. *See* discussion *supra* note 239 and accompanying text. But more could be done to reiterate earlier findings of scientific defensibility. States' and tribes' inquiries would thus be appropriately limited to the narrower question of whether these (scientifically defensible) studies were appropriate for the populations affected by their standards.

[346] *See, e.g.,* Ted Sturdevant, Director, Washington State Department of Ecology, Open Letter to Interested Parties (Jan. 15, 2013) ("Much concern has been expressed that using higher fish consumption rates in combination with other conservative public policy choices about exposure and risk could create an impossible burden for regulated dischargers. While these public policy choices have not been made, this is a valid concern.").

also avoid unnecessary delay, occasioned by demands for additional, "sound" science premised on spurious characterizations of the existing science.

Fifth, agencies, particularly EPA, might enlarge their support for efforts to ask the right question, i.e., to take a step back and recognize the potential for water quality standards to impair the future exercise of tribal rights to take fish. Tribes have often been leaders here, and EPA has frequently been among those providing funding and technical review. Efforts might nonetheless be enlarged to reconsider the orientation of exposure assessment, so that standards are set based not on consumption practices in our current, contaminated world, but in a future, resilient world – one in which healthy aquatic ecosystems support robust fisheries fit for humans to eat.

In all of this, non-tribal governments should work with tribal governments to imagine how the CWA and other legal tools can be used as a means to effectuate the treaty promises rather than to undermine them.

CONCLUSION

As state and federal agencies have sought to pursue fishable waters in the Pacific Northwest, they have enlisted risk-based methods to set water quality standards. The genius, from the perspective of those seeking to avoid or forestall regulation, of filtering our restorative efforts through a risk-based approach is illustrated by experience here. The method's demand for quantified inputs affords ample opportunity to call for increasingly fine-grained data in the name of "sound science" – to the point where the ideal of tracing each forkful of contaminated fish from source to mouth is achieved. All of this data, of course, takes time to gather. And all of this data may permit agencies to measure ever more precisely humans' current practices and exposures – but distract them from the more germane question of envisioning future practices in a less contaminated and more resilient world. Risk-based methods also manage the neat trick of removing from view exactly *who* is affected by agencies' decisions. By speaking in abstractions – setting standards to protect the

90th percentile of a particular population to a level of 1 in 1,000,000 risk – agencies and other participants in the process can more easily ignore the import of the choices they make. The language of risk can obscure the fact that, in the Pacific Northwest, these choices impact tribal people and treaty-secured rights.

Agencies' risk-based methods, of course, are just means to an end; they need not eclipse the larger goal nor downplay the responsibilities that ought to frame our efforts. Instead, in the words of Doug Kysar, a "deciding agent would always remain cognizant of the unavoidable burden of discretion and responsibility that lends a tragic cast to capital punishment, environmental law, and other areas of regulated violence."[347]

In the tribal context that permeates environmental decisions in the Pacific Northwest, we all have a responsibility as successors to the treaties. Our choices – cast as they may be in the language of fish consumption rates and exposure duration – determine whether aquatic environments will support or undermine the obligations we undertook to secure tribes' "right to take fish." If we come up short, we indeed permit regulated violence.

The treaties and other agreements between the tribes and the United States are a source of responsibility – they bind us and they will bind our children in the years to come. We should do more to ask how the treaties can serve as a charter for the future – a future in which our waters support a fish resource that is again abundant and healthful, a future in which we keep the solemn promises that shaped this place.

[347] DOUGLAS A. KYSAR, REGULATING FROM NOWHERE: ENVIRONMENTAL LAW AND THE SEARCH FOR OBJECTIVITY 58 (2010).