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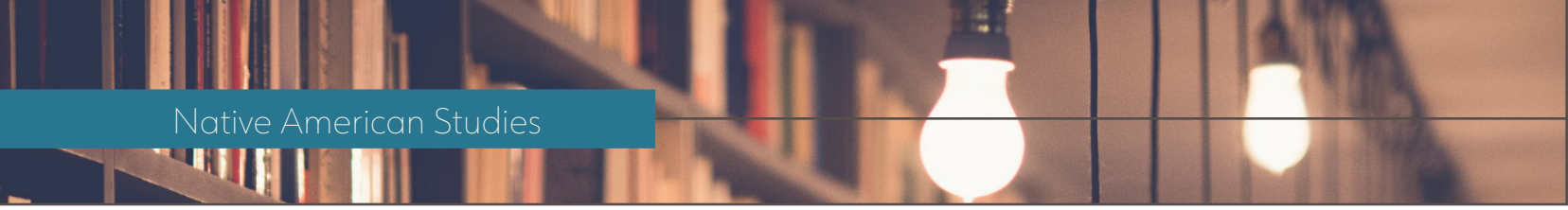

A Clash of Cultures: The Struggle of Native Americans to Participate in Traditional Ecological Knowledge and Western Science Under California's Marine Life Protection Act

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European settlers encountered developed Native American cultures living a nearly idyllic life centered on the bounty of the marine environment and salmon in the rivers of Northwest California. Despite the horrific events of the 19th and 20th centuries, this section of California still supports vibrant, federally recognized, and unrecognized, tribal communities living near the sea. Traditional subsistence harvesting is ongoing for food and ceremonial items, which are bartered with inland Tribes. The Yurok Brush Dance, the Wiyot World Renewal, the Tolowa Dee-Ni Nation Feather Dance, the Pomo Celebration Dance, and other traditional ceremonies, are still practiced by various North Coast (NC) Tribes. The staff of Tribal governments vary greatly. Some have scientists, cultural departments, and lawyers. Significantly for this study, Tribes have participated in federal marine sanctuary planning but continue to face the delegitimization, exclusion, and exploitation of settler colonialism.

The pattern of discounting Indigenous epistemologies and practices is visible everywhere in environmental discourse (Bacon). Of particular concern for this study is the marine planning by the California Department of Fish and Game (CDFG), and their contracted Initiative Science Advisory Team (SAT), systematically excluding Native Americans from providing science input regarding the California Marine Life Protection Act (MLPA). The exclusions have included highly qualified Ph. D. marine scientists and native cultural representatives. It is our assertion that the process completed in 2012 was not fair to all parties, and the actions of the SAT violated the California and U.S. constitution's anti-discrimination provisions, the 1974 Human Research Act, and California open meeting laws. Furthermore, North Coast Study Region SAT models ignored 10,000 successful years of subsistence harvesting and predicted Native take/harvest numbers so high that major marine species would be gone in ancestral territory in a matter of weeks. The failure to allow the participation by native scientists and cultural representatives resulted in science models of lesser quality than those that would have been obtained by the inclusion of Tribal presentations of Traditional Ecological Knowledge (TEK), analytical data developed by Tribes, and an acceptance of Tribal Western science and environmental management.

Attempts to rewrite, or "whitewash," this recent planning history are occurring by claiming Native Americans were not qualified educationally, that Tribal and Western Science could not work together (Olmeta-Schultz), that Native Americans were granted the same participation rights as others, and that the Initiative process provided excellent opportunities for all to be heard. Removing distrust and obtaining

support for future reserve planning will require developing a process that all parties agree is fair (Ordonez-Gauger). Native scientist and cultural representatives must be appointed to future science advisory panels.

In 1999, the California Legislature passed the Marine Life Protection Act (MLPA) to establish a statewide reserve system along the entire 1,150-mile California coastline. The MLPA was intended to protect marine resources from overharvest and to establish a scientifically based interconnected system. The MLPA legislation was silent on the intended effects on Native Americans. Private foundation monies and state funding raised 38 million dollars for the "Initiative," a statewide organization whose purpose was to create a master marine plan. A consortium of foundations utilized the Resource Legacy Foundation (RLF) as the sole funder to distribute grant funds. The Initiative agreement was executed in a Memorandum of Understanding (MOU) between the California Resources Agency, CDFG, and RLF. The MOU required the process be "transparent" and "allow for public participation" (California Department of Fish and Game). This agreement did not include sovereign Native American Tribes and the openness provisions were not met by the SAT.

The MLPA legislation divided up the state into four regions. The North Coast study region boundary was the Oregon border to Alder creek Mendocino. Each region had a Blue-Ribbon Task Force (BRTF) to serve as a policy and oversight body, a Stakeholder Group (SG) to draft proposed reserves, and the SAT, which would be tasked with "reviewing and commenting on scientific papers," "addressing scientific questions presented," and reviewing alternative MLPA proposals (California Department of Fish and Game). The results were the creation of a statewide marine reserve system of worldwide significance. California marine reserves, many of which allow no fishing or harvesting of any kind, increased from 1% before the initiative to 16.12% statewide of statewide waters, while north coast marine reserves increased to 13.37%.

In 2010, (NC, BRTF, SG) fishing, environmental, governmental and the vast majority of Native American Tribes came up with a "unified plan" supported by either silence in not objecting or active support (Yaffee). The SAT gave a dismal evaluation of the unified proposal as not meeting science guidelines, for spacing and size of reserves. The unified proposal process started to overcome an impasse with the SAT and dissatisfaction with the planning process. Tribal stakeholders began meeting. Incentives to negotiate were as follows: (a) fishers ("fisher" is a gender neutral term for "fisherman") wanted to participate to limit the number and size of marine reserves, but also had sympathy with Indigenous peoples (Olmeta-Schultz); (b) Tribes' desired to bypass the SAT, preserve gathering rights, and get governmental recognition; and (c) Environmentalists concerned about blocking fisher low reserve proposals (Yaffee) and sympathies with Native peoples (Olmeta-Schultz). According to Poncelet, a facilitator for the NC, the rural nature of the area meant everyone was a neighbor and would have to live with them after the process, which proved to be a strong motive (Yaffee). A distrust of the SAT process also fueled the desire to work together locally (Yaffee). Motivations by each party to reach agreement, as occurred here, are necessary for a stable Marine Life Protection agreement (McCreary). This resulted in the only durable unified plan in the state and the first original master marine plan to designate Tribal ancestral areas.

Key concepts of the unified plan were a reservation of rights to allow for future Tribal challenges and the designation of reserves. Tribal fishing was allowed in some conservation areas, and for the first time, many marine ancestral native territories were recognized on official CDFG maps. However, Tribal fishing requires a license and must conform to state recreational fishing gear types, catch limits, and seasonal closures. Ultimately, important Tribal rights regarding management, co-management, subsistence harvesting, rights to present Traditional Ecological Harvesting, as well as Western science were not settled.

Our goal is to outline where the process went wrong and what is needed to remedy it. Throughout the process, the SAT deliberately excluded Native voices, did not adhere to best science practices of inclusiveness, they authorized and approved their own models, displayed a lack of compliance with public meeting laws and an ignorance of Native perspectives. Level of Protection (LOP) numbers were inflated by catch studies that were not plausible. This egregious disregard for Native scientists and Native perspectives left California with a flawed and inadequate scientific result. Reforms, including anti-discriminatory provisions, must be made. Best Available Science (BAS) guidelines that include standard inclusionary provisions used by federal agencies need to be adopted. Ironically, the CDFG Code Section 33 defines credible science as requiring inclusiveness (Code). Similarly, Fish and Game uses inclusionary BAS for all other regulatory rule making except for the SAT MLPA reserve designation process. A public apology to the Tribes and the establishment of a clear, open, and participatory science process is the surest way to restore trust (Ordonez-Gauger).

From 2005 to 2010, the Yurok Tribe was actively pursuing a federal marine salmon sanctuary with the support of National Oceanic and Atmospheric Association (NOAA) fisheries (Congress, 16 USC Section 1431 Marine Sanctuaries et seq.). There were numerous trips to Washington D.C. to get agreement from NOAA. This started by having NOAA designate the mouth of the Klamath River as a biologically significant area for research to support the creation of a marine sanctuary. The creation of a joint NOAA and Yurok Tribe project to monitor ocean species was agreed to. To carry out these agreements, the federal science research vessel and remote underwater videos were jointly staffed by Native Americans and NOAA fisheries personnel for phase one monitoring. Stakeholders for the federal reserve planning process were contacted and stakeholder planning meetings were held. This planning effort was abruptly stopped in 2010 without notice or apology when the CDFG requested that NOAA stop the program, lest it "interfere" with the MLPA Initiative process. The state ban on Tribal planning has never been lifted. Five years of substantial expenditures spent by the Tribe on this planning process were lost.

A common error in marine planning with Indigenous people is the failure to adjust to cultural differences and differing staff capacities of Tribes (Singleton). The SAT failed to recognize Tribes and their cultural and scientific staffs and, as a result, Tribes were not allowed to present to the SAT. Tribal participation must be an integral component of future marine planning. The lack of participation left intact model conclusions contrary to the peoples' coastal way of life, and model assumptions exaggerated the Native harvest in outlandish ways.

Public interest advocates have been criticized for defining the underlying causes of environmental problems in things such as technical deficiencies, rather than a difference in values (Shellenberger) (Mazur). To implement an advocacy coalition framework, the MPA stakeholders must be studied, and a good understanding of the political context and the values of the parties be ascertained. Christopher Weible contends this was not done by the MPA marine plans. As predicted, this creates suspicion between the parties and the projection of maliciousness on disagreeing parties, as Weible says, "true technical marine science can only occur after recognizing the value conflicts of the parties" (Weible).

Many Tribes live a traditional life, of native traditions, foods, gathering, and use native tongues, yet they must also function in the world of Western culture, analytical science, the English language, and U.S. judicial systems. The mastery of Western ways of science was necessary to protect federally recognized fishing rights created first by a Presidential executive order and then by the 1988 Hoopa Yurok Settlement Act 25 USC 14. These rights must be asserted and defended in federal agency meetings, administrative hearings, and court nearly every year and are primarily based on Western science. To lose the right to participate in the science of these proceedings would create an existential crisis.

Tribes have found that when they supplemented TEK with their own Western analytical and modeling science, they did better in court than solely relying on the Western science of the federal government and water agencies. For decades, many Tribes have supplied science data to the North Coast Air Quality Regional Board, California Public Health, U.S. E.P.A., North Coast Regional Water Quality Control Board, and the Pacific Coast Fisheries Commission. Tribes mistakenly assumed their scientific participation would be welcomed by the SAT. Hillemeier, a Fisheries Director for the Yurok Tribe said in a statement to the SAT: "We really ought to be allies, and we're very distressed, discouraged, and challenged that hasn't been how we have been greeted" (SAT). A science process that excludes tribes and their knowledge is unacceptable.

Clearly any assessment of the SAT science process is dependent on an accurate historical record. Such a record regarding the SAT does not currently exist. This document is intended to contribute to a true history of this process. Past reviews have assumed in published descriptions an open and free process of the SAT: "*The Science Team's process...was open to the public...with ample opportunity for interaction with the public"* (Saarman)*;* "ensuring local stakeholder perspectives…multiple opportunities for public participation existed" (Kirlon); "successfully navigate challenges to public policy science" (Fox); "The Initiative provided numerous opportunities for broad involvement" (Gleason); "...numerous opportunities for participation" (Sauyce). Such an open process did not occur with the SAT, and highly qualified Native American scientists were excluded from participation. Ex ad Hoc rationalizations by the SAT leadership still deny the reality of turning away quality tribal presentations.

The basic structure of the SAT advisory team was an independent science body, free from political interference, in order to provide a marine planning process that was science driven. The MLPA 2855 (c) provides for a Team having one member from Parks and Recreation, CDFG, and the State Water Resources Control Board (SWRCB). The legislature provided for five to seven additional scientists, selected to serve

at the pleasure of the CDFG Director. The Director then added ten additional scientific positions until the Team consisted of 21 members. The SAT consisted of 62% academics, 24% were from state agencies, 9.5% private consultants and 4.5% environmentalists and 14 % were women. There were no Afro-Americans, Asians, Latinos, or Native Americans.

The SAT had the common challenge of using science in the context that the final result was mandated by the MLPA. This requires a delicate scientific balance to maintain objectivity within the legislative guidance. The challenge became even greater as some of the scientists had contracts related to the initiative process to make reports that would be used by the SAT. Studies show contacts by SAT members were the highest with environmental groups and the State Government (Weible). The challenge to the science was even greater because many of the scientists working on these reports were also members of the pro MPA advocacy coalition. Of course, a science panel can have both supporters and opponents to the process, but extra efforts need to be made to show fairness to the public. Generally, having members from an advocacy group makes the task of showing fairness very difficult. Turning away citizen concerns by stating the SAT doesn't have conflict of interest appeals suggested great sensitivity. SAT efforts, to ensure public confidence, if any, were enfeebled. The technical marine science can only occur after recognizing the true value conflicts of the participant's (Weible).

Table 1.

MLPA Elite Scientist	Central Coast	North Central Coast	North Coast	South Coast	OST	Chairman	Total
Carr	Central Coast Chairman (1) MPT (1)	North Central Coast Chairman (1) Chairman (1) MPT (1)	North Coast Chairman (1) Chairman (1) MPT (1)	South Coast Chairman (1) MPT (1)	1	1	**12**
Bjorkstedt		North Central Coast Chairman (1)	North Coast Chairman (1) Chairman (1) MPT (1)	South Coast Chairman (1)			**5**
Costello		North Central Coast Chairman (1)	North Coast Chairman (1)	South Coast Chairman (1) MPT (1)	1		**5**
Morgan		North Central Coast Chairman (1) Chairman (1) MPT (1)	North Coast Chairman (1)	South Coast Chairman (1)			**5**
Murray	Central Coast Chairman (1)		North Coast Chairman (1)	South Coast Chairman (1) Chairman (1)	1		**5**
Neilson		MPT (1)	North Coast Chairman (1)		1	1	**4**
Gregoria		North Central Coast Chairman (1) MPT (1)	North Coast Chairman (1)	South Coast Chairman (1)			**4**
Scholz		North Central Coast Chairman (1) MPT (1)	North Coast Chairman (1)	South Coast Chairman (1)			**4**
Gaines	Central Coast Chairman (1) MPT (1)	MPT (1)		South Coast Chairman (1)			**4**

Most of the SAT work was done privately in a committee system with no agenda, minutes, or papers available to the public. Without any representation on the Team, Tribes were dependent on the public meeting process and the right to present written papers. Such presentations never materialized.

In contrast to the makeup of the SAT, the BRTF and SG had Native participation and worked to be inclusive. None of the SAT scientists appeared to be familiar with TEK. The most frequent background favoring appointment to the MLPA SAT was affiliation with Partnership Interdisciplinary Studies of Coastal Ocean (PISCO). According to the PISCO website. " The Partnership for Interdisciplinary Studies of Coastal Oceans is an academic consortium that conducts research to advance understanding of the coastal ocean within the California marine ecosystem and inform management and policy." There was an elite group of scientists who moved from one Regional SAT to the next Regional SAT.

The Team Co-Chair, who was one of the most active in the censorship of the Yurok Tribe, was subject to an ongoing complaint of science fraud by the Yurok Tribe in matters unrelated to the Marine Initiative (Y. T. Corbett). The SAT staff refused two requests for an ethics review, without any hearing or support information being allowed to be submitted, yet the Co-Chair was subsequently convicted in the federal courts for conspiracy to commit science fraud and was sentenced to prison (North District Case). This created a leadership bias against Tribes during the SAT process. It is recommended that the CDFG provide for ethical appeals for the protection of the public. Most agency science panels do provide systems of ethical reviews to ensure fairness.

Some have suggested that adaptive management and the use of after-the-fact monitoring solves all problems. The CDFG has declared reserve monitoring results to be anecdotal and therefore not acceptable to refute model assumptions. According to CDFG, "even historical records of take (i.e., how many mussels were taken from each and every cove, each year, along the whole North Coast) were available to the SAT but it is still uncertain how this may change" (Game, Letter sent to Yurok Tribe from Becky Ota). Since it is considered unprovable that something won't change, Native Americans will never be allowed to challenge the SAT assumption. Past and future Native American presentations have, and continue to be, denied by this reasoning. The rejection of all West coast mussel studies as insufficient erodes the basic concept of data driven science.

The required 3-minute general meeting/public time was confined to issues that did not involve the SAT agenda and policy matters, i.e., not science data (Team, Public Speaking Regulations). It was recommended that longer comments be put in writing, but all written comments were denied to the Tribes by saying no to all requests to present. The SAT lacked any scientists familiar with anthropology and Native American customs. The SAT adopted the bad policy of excluding written and oral presentations by Tribes, which resulted in immediate significant protests and the development of approaches to bypass the SAT as described below. To obtain public support for the Tribes, stakeholder group member Reweti Wiki, a Māori representing Elk Valley Rancheria, circulated a stakeholder petition to the BRTF. The petition advocated for the "aboriginal right to take marine resources for traditional subsistence, cultural, religious, ceremonial, and other customary purposes" (Yaffee). The petition was signed by all but two RSF members, but also by city councils, Tribes, county supervisors, harbor districts, and environmentalists. This petition was backed by the strongest local support there has ever been for a Native American Rights issue (Olmeta-Schultz).

On June 29, 2010, at the Eureka SAT meeting, there were 75 Native protesters representing Hoopa, Talowa, Wiyot, Karuk, Yurok, and various tribal members who marched on the sidewalk outside of the Red Lion where the meeting was held. About 30 demonstrators subsequently entered the SAT meeting room. Protestors demanded to be included on the SAT. As protest leader Frankie Meyers stated, "We would like to ask the SAT to have a representative of the Tribe on the SAT." Dr. Tucker, Ph D. in Chemistry, and member of the Karuk Tribe natural resources department requested peer review papers. Mr. Colegrove of the Hoopa Tribe, Ms. Stevenson (from Laytonville), and others spoke as well (Team, Public Speaking Regulations). Since they were not on the agenda, the SAT cut off the microphone while Susan Burdick (a Yurok elder) was speaking. Mrs. Burdick continued speaking without a microphone and the meeting was adjourned. After consultation, presumably with Sacramento, about how the SAT should respond, the meeting re-opened, and a total of fifteen minutes was granted to thirteen native representatives. Susan Burdick reminded the room of the historic context: "villages being emptied, then the parks come and take over and try to regulate us" (Burdick). This is the classic order of events in settler colonialism, a multi-stepped process moving from expelling Native Americans from the land, to occupying the space, regulating its use, and discounting native epistemologies (Bacon).

On July 21, 2010, in one of the largest demonstrations in Fort Bragg history, over 300 members of over fourteen Tribes marched through the main street on the way to a meeting of the Blue-Ribbon Task Force. The outpouring of support from the Fort Bragg community was amazing,' said Jim Martin, West Coast Director of the Recreational Fishing Alliance" (Bacher). Cars honked in support. Banners were placed on highway overpasses. "Recreational anglers, commercial fishermen, seaweed harvesters, environmentalists, sea urchin divers and seafood industry workers walked side by side with tribal members in a show of solidarity" (Bacher). After hearing the Native American demonstrators, BRTF members pointedly suggested that a Native person be appointed to the SAT.

On November 17, 2010, there was a quiet demonstration at the Eureka SAT meeting consisting of three Ph.Ds., two holders of master's degrees, and Tribal scientists who stated their qualifications and expressed their regret they had not been allowed to present and that they were looking forward to being able to work together in the future with the scientists. No one offered to place them on the agenda or schedule testimony or invite them to present papers. They were met with complete silence. The official SAT minutes state, "they had all showed up to work together in the future" (SAT). This statement erased the substance of the demonstration from the official minutes.

One SAT member quit attending meetings because of the Levels of Protection (LOP) modeling concerns and the treatment of Native Americans. Various CDFG staffers supported the tribe until told to stop or else they would be disciplined. The Chairman of the joint State Senate and Assembly Marine Affairs Committee supported Tribal rights to present testimony and papers to the SAT. While the SAT did not respond, the community demonstrations proved decisive in winning public and political support. The SAT decision to exclude Native Americans converted the independent, supposedly neutral SAT into a highly politicized body deeply involved in settler colonialism and discriminatory race relationships.

It is important to clarify science standards so the public can understand the process. The science standards to be used by the SAT and the MLPA Initiative were never published in their entirety, causing confusion throughout the process. Most public stakeholders and Tribes favored Best Available Science (BAS), as defined by the National Research Council and the 1976 Magnuson Stevens Fishery Conservation and Management Act. This science standard requires that all points of view be considered (Council). While published authors, the majority of the SAT scientists were unacquainted with public regulatory science law, which requires public hearings to receive testimony from all parties. This is to protect the right to due process of law through review by the courts. The SAT applied many BAS principles, but their definition had no provisions for inclusiveness (Harty).

The legal department of CDFG maintained that the word "readily," in best readily available science, referred not to availability of materials but was a rejection of BAS standards and interpreted MLPA specific legislative science standards to be discretionary (Coast). This standard had no requirement to hear from all parties. This legal opinion was adopted by the CDFG (Commission) and provides an institutional structure that supports the opportunity for discrimination. In one instance, a Yurok Tribal presentation that was prepared well before agenda deadlines with copies, accompanied by peer reviewed articles and a flash drive, were turned away under the legal department standard as not meeting the best readily available science standard. The SAT scientists and California Fish and Game legal departments have persisted in their misinterpretations of BAS to this day.

The NG was the last to take up marine planning. The SAT made a series of decisions to support and encourage the participation of fishers. For example, the SAT welcomed fishers at a hearing. In response to fisher Bob Berchale's public comments, Co-chair Dr. Mark Carr states "he raises a very important point that people are finding, preparing, and making data available to the SAT. The time frame is any time you can get it to us before the final evaluations are done. We will absolutely take a look at that…so please don't feel that the window is closing to get information in" (SAT). Yet, for Tribes, there was no invitation to present papers or give testimony, nor were experienced scientists and policy leaders allowed to testify. Seven Ph.D.'s, four master's degree holders, and tribal cultural representatives were turned away. One of the presenters had a Ph.D. in biology, was a Professor emeritus at Humboldt State University, and had conducted marine studies of the local area since the seventies, and many consider him the most knowledgeable scientist of north coast marine communities. Another presenter, who worked on the appointment of a Native American to the SAT, has a law degree from Yale University, was the former Deputy Assistant Secretary for the U.S. Department of Interior as well as the former California Secretary of Natural Resources, was a Central Coast BRTF member, and was

on the Dean's Advisory Committee of the Bren School of Environment, Science, and Management. He is considered an outstanding national leader in resource planning. Another presenter was a Ph D. Anthropologist who is a long-term lecturer at San Jose State University with nine publications and was the Yurok Cultural affairs officer of many years, a Yurok Tribe elder, whose testimony was routinely accepted in public forums. Initiative Director, Ken Wiseman, reduced qualified native scientists and culturists to the role of making policy statements to other Initiative bodies (Wiseman, Executive Director of Initiative).

Taped interviews with top Initiative and SAT leaders, conducted by Dr. Olmeta-Shultz, showed that Tribal scientists were viewed as not having a high enough "academic or professional level that typically made it to the SAT" (Olmeta-Schultz). This statement disregards that the SAT itself does not have all Ph.D. scientists and that published marine Ph.D. scientists were turned down. The SAT staff told the Yurok Tribe that "Indian Science had no credibility" (Aireme). And, by e-mail, a Tribal request to get on the agenda was denied because "tribes had no data to present" (Wiseman, Executive Director Marine Life Protection Act Initiative).

From the Yurok Tribe alone, there were over fifteen papers and presentations that were not heard, fifty-two emails sent requesting to be heard, nine phone call requests, two hand-delivered requests, three meeting video tapes, and nine unanswered letters asking what data and modeling science could be presented/or introduced. Requests for peer review articles from Dr. Tucker of the Karuk Tribe were never responded to (Tucker). Clearly, by comparison to others appearing before the SAT, the aforementioned Native Americans were extremely qualified. No other Ph.D.'s were denied the right to present papers during the process. There were more proposed Native American Ph.D.'s to present science to the SAT than there were for the entire state over the MPA five-year process. This is a clear example of settler colonialism and completely negates an often-heard SAT contention that Native Americans were treated like everybody else.

The SAT explained to the Tribes that meetings were private and so there was no right to a public hearing (Wiseman, Executive Director of Initiative). The reasoning was that while the legislature established the SAT as a public body, the SAT had been changed to a new private entity consisting of the old SAT and additional appointed scientists. It was argued no entity existed that could be sued (Gurney vs. California Department of Fish and Game). The private and public body having the same name was apparently a coincidence. CDFG Legal counsel contended the matter was of a first legal impression thereby requiring a court decision. No matter how soft the voice, Native Americans were labeled as "obstructionists" with a "reputation" because they expressed the view that meetings were public (Olmeta-Schultz). There were many Superior Court rulings on this issue, and they all found the Native Americans were right that SAT meetings were public. As part of an appeal of a trial court ruling The California Appellate court opinion stated… "our conclusion that the Task Force is not a private entity or non-governmental body" (Coastside Fishing Club v. California Fish and Game Commission).

There were five principal reasons for the poor public meeting compliance of the SAT: (1) There was a lack of training and knowledge of public meeting laws; (2) there was inadequate legal advice and oversight over meetings; (3) support staff were untrained in the public meeting process; (4) the Initiative process was extremely complex, and understandability suffered; (5) there was a lack of commitment by the SAT leadership to comply with the public meeting laws. Public meetings laws were considered a "Barnum and Bailey" circus by SAT chairs (SAT).

The Attorney General's *Open Meeting Law Manual* for California was distributed to each NG Team member. The manual was unsuccessful in guiding SAT behavior. The SAT consistently had late notices and filings and was unable to make multiple thick agenda packets available to the public. The SAT required everything be done electronically when the law required that hard copies be provided to those that requested them. Every single meeting had packet changes less than the ten-day Open Meeting Act requirements. Seventy two percent of agenda changes occurred only 48 hours ahead of the meeting and many were on the day of the meeting. Large packets were many times not available to the public. A sportfishing representative, Mr. Greenberg, stated to the SAT, "everything you have been discussing on this document was not available publicly minutes literally…if they can even find it" (SAT). There were hundreds of violations of the open meeting laws in a mere 11 meetings.

Additionally, the SAT decided to independently author new assumptions for the Levels of Protection (LOP) model. The standard practice of using peer reviewed publications avoids the problem of not finishing the model on time. The SAT ran out of time and did not finish the LOP

Table 2.

Violation of Agenda Laws **Bagley Keene Open Meeting Law Illegal (less than 10 days Agenda Revisions)**	**Number**	**Percent**
10 days' notice requirement	0	0%
Emergency finding necessary to legally shorten time	0	0%
Day of meeting	2	18%
One day before	4	36%
Two days before	4	36%
Three days before	0	0%
Four days before	1	9%

**Over 90 % of the notice revisions were for two days or less. *Meeting packets for revisions were commonly not available until the day of the meeting and often were not available for the public.*

model until the very last meeting. The model had no data, published protocols, or complete model assumptions.

The next section will first cover attempts to submit Traditional Ecological Knowledge (TEK) and the following will cover Western science. TEK is defined as a "cumulative body of knowledge, practices, and beliefs, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (Ramos). The choice between science and TEK is not either or. Western science is useful to supplement TEK. For instance, science can help in many ways: to ensure that laws and protocols designed to protect Tribes be enforced, such as the Human Research Act of 1974; for situations where the natural environment has been completely changed such as pesticide and nutrient pollution in the Upper Klamath River; to provide an alternative to other Western models that are clearly wrong and adverse to Native American interests; and if the sovereign Tribes wants to make such presentations. However, Western science is no substitute for TEK.

Direct presentations for subsistence harvesting and traditional knowledge were universally turned down by the SAT without any context for local customs and harvesting and, consequently, marine planning for the north coast region suffered. By rejecting Tribally sourced harvesting data available to the Team, subsistence harvesting vanished from consideration in the SAT process. Becky Ota of the CDFG stated to the SAT that what was needed was an anthropological report. An anthropological report is a term often used by Western scientists referring to Tribal practices, and it often implies they are no longer practiced. TEK was turned down because "Indian science" was not credible. This is ironic as the SAT determined that there was insufficient data on Native American harvesting. In response, the Yurok Tribe met with SAT staff to try to determine who could be credible. After turning down a Tribal Ph. D the conversations centered on hiring an outside anthropologist Dr. Jeanine Pieffer. It was the Tribe's understanding that the report would be given in writing to the SAT ahead of time and then presented.

On July 28, 2010, the SAT had an agenda item titled "Review and Discussion of SAT Study Conclusions to Science Questions." Yet, the SAT agenda questions were not available before the meeting so there was no way to know what was going to be discussed. The SAT meeting did answer questions covering important Native American issues, but the notice was so vague and late not a single Native American was in attendance. After the fact, the Yurok Tribe learned the scheduled presentation of the Tribal TEK anthropological report was cancelled, since it was already covered in SAT answers to questions.

E-mail correspondence between John W. Corbett (Attorney for Yurok Tribe) and Sate' Aireme (Principal investigator SAT), describe the lack of Tribal satisfaction with the process:

> "*The Yurok Tribe is also puzzled that the format which we proposed earlier of presenting a Tribal paper to the SAT as a regular agenda item changed, without notice, to no Tribal input…and the process was going forward without the presentation of our paper." … In summary, the Yurok Tribe and Native peoples may have lost our opportunity to have informed the SAT with a written report from a qualified consultant. The Yurok Tribe will have spent $6,000 to $10,000 to have a report prepared that can't be submitted to the Science Panel and the Tribe is still not on the agenda"* (Y. T. Corbett).

The SAT decided to conduct their own study of TEK and subsistence harvesting. The 1974 Human Research Act requires behavioral research permits to protect the rights of human subjects. There seemed to be no awareness of this requirement to get a permit and the survey proceeded without proper authorization starting on March 3, 2010. The gathering of information cutoff date was July 27, 2010. The data was gathered, and tentative conclusions were being shared. The survey forms had no risk disclosures that this was part of a regulatory program that might criminalize existing subsistence harvesting by putting them into a no-take reserve. In a no-take reserve, no harvesting of any kind or species is allowed and violators can be criminally charged.

Internal Review Board (IRB) rules state the following regarding human research: *"The protocol must be reviewed and approved by the UCSB Board before the research begins. Failure to comply with these rules may have serious consequences, including the suspension or termination of research, allegations of research misconduct, and personal civil and criminal liability.* **PLEASE NOTE THERE ARE NO PROVISIONS FOR RETROACTIVE APPROVAL OF RESEARCH PROTOCOLS"** (Cruz). There are two types of I.R.B. permits: One comes after the full board hearing and there is another option for a conditional permit, called exemption, because a full I.R.B. hearing is not required. Conditional exemptions from a full I.R.B. hearing board revies are usually granted for minor permits, limited risk, and uncontroversial projects. All results from survey forms collected between March 3, 2010, until August 9, 2010, before the exemption permit was granted, are void. Given the absolute prohibition, the Yurok Tribe requested that any new information gathered not be comingled with data before a permit is issued. The SAT ignored this advice, and by mixing the data, it is all tainted and unusable under I.R.B. regulations.

Exemption permit conditions required the I.R.B. Human Subjects Committee be immediately notified if there is "adverse reaction…distress regarding the subject matter or procedures" (Cruz). The numerous protests and demonstrations and legislative criticisms make it hard to imagine a stronger record of an adverse reaction. The required report of controversy was never filed by Satie Airame' as required by permit conditions. The whole purpose of the I.R.B. process is to independently review research projects that can affect the rights of subjects. The 1974 Human Research statute is an essential component of protecting Native cultural rights. No such adherence occurred. There is little doubt that the late date, failure to disclose risk, and the absence of disclosing controversy, resulted in serious violations of the spirit, letter, and substance of the Human Research Act of 1974.

Western science has been defined as the systematic study of the structure and behavior of the physical and natural world through observation and experiment (Google Dictionary). In natural resources, this often takes the form of predictive models. The SAT ignored MLPA (Section 2858) peer review requirements and changed the LOP assumption to the following take/harvest assumption in the model it was writing: "Any extractive activity can occur locally to the maximum amount allowed by federal and state law" (SAT). No data or peer reviewed research of any kind was introduced to support the unique SAT take assumption. The following chart immediately shows what is wrong with LOP harvest numbers in estimating the NA harvest for mussels.

Table 3. CDFG license statistics. Recreational Marine Regulations 2010 (Game, Marine Sport License Statistics).

License Analysis Northern California	**Number**
Resident Fishing License	1,112,783
Non-Resident Annual	9,942
Reduced Fee Veterans License	11,244
Subtotal	1,133,969
1,133,969 x 365 day =	486,898,685
Minus purchase date	135,019,587
	351,879,098

A literal interpretation of the assumption would result in even higher numbers. There are two no-license days a

Table 4. CDFG license statistics. Recreational Marine Regulations 2010 (Game, Marine Sport License Statistics).

License Analysis Northern California	Number
Lifetime Fishing 11,639 x 365	4,248,235
1 Day Sport Fishing 529,129 licenses =	529,129
2 Day Sport Fishing 122,493 x 2 days =	244,986
10 Day Non-Resident License 14,081 x 10 =	140,810
Annual Fishing Opportunities	357,671,088
Daily Total	988,140
Hourly Total	41,172

year open to all California citizens for marine fishing that were not counted. Below the age of sixteen no license is needed for marine harvesting. The SAT and CDFG have refused to answer questions regarding the inclusion of these higher numbers. In addition to high license numbers, other contributing factors are long seasons and high daily take numbers for species.

All data is from CDFG marine sport fishing regulations. The vast majority of seasons are 365 days, which requires multiplying 365 by somewhere around a million licenses. Any species with a 365-day season and a daily harvest take of five or more has a harvest in the billions. A review of CDFG historical data usually shows annual catches of far less than one million of a species and there are no billion catch recordings ever. The scale differences of the numbers have existing data contradicting the LOP take projections.

Species are concentrated in high daily allowable catch categories. The number 51 on the chart is used for unlimited harvest, which is one more than the highest permitted harvest, in order for there to be a way to graph it. Of course, the infinite harvest results in immediate extinction. In summary, the high number of nearly a million licensed fishers, long seasons, and high catches contribute to such excessively high numbers for mussel harvest that they are not plausible.

The year-round season for mussels has a limit of 10 pounds per day. This creates a projected annual mussel harvest of 3.577 billion pounds. The Yurok Tribe has an estimated 5,700 members, which results in every man, women and child harvesting for personal consumption 627,493 pounds of mussels a year or 1,993 pounds of mussels per day. Hans Voight, a scientist contracted by the Yurok Tribe to present on mussels, worked with SAT principal investigator Sate Aireme' who provided peer reviewed studies to be used for his mussel report. When his study was completed,

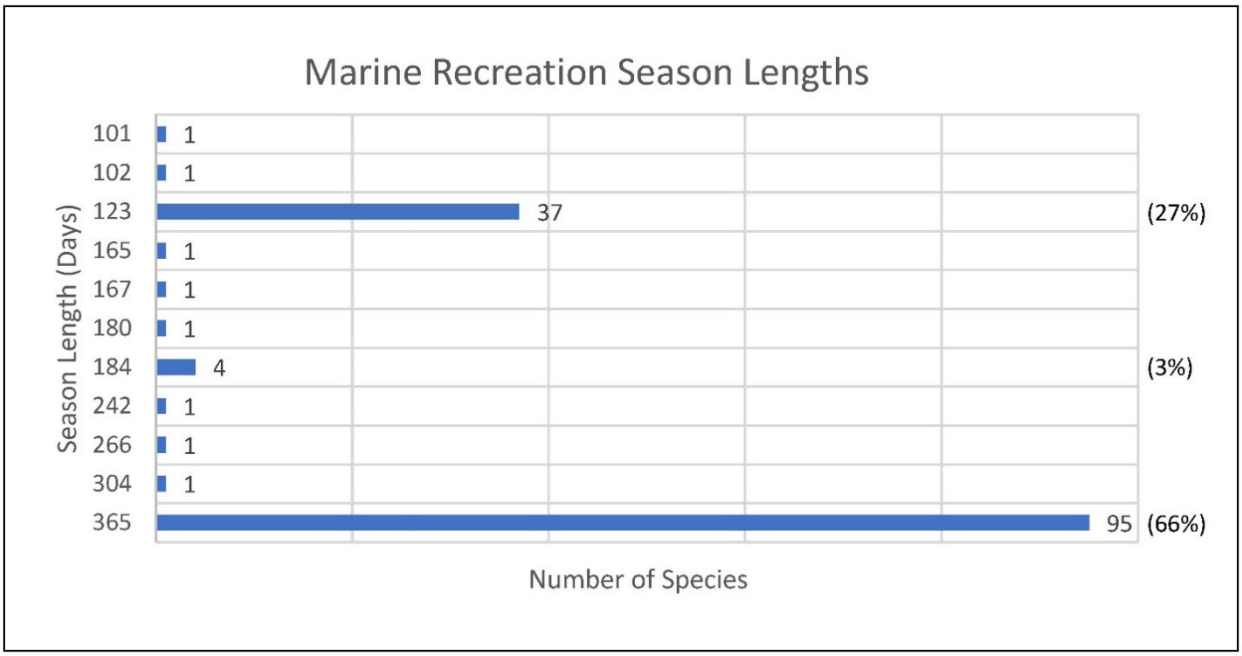

Figure 1.

and his fees paid by the Tribe, the SAT suddenly determined there would be no submittal or agenda presentation. No record could be found of SAT calculations using the LOP assumption model as they were never developed. A complete list of model assumptions is required as a prerequisite for many scientific or legal reviews for the validity of a model formula. Tribes are concerned that these faulty take license numbers project native subsistence harvesting that would result in widespread localized species extinction. The model results are anathema to the reality of subsistence harvesting, are inconsistent with all known studies, and are not a reasonable scientific conclusion.

The SAT failed to develop models that showed the entire population of a species against which the plausibility of the recreation harvest assumptions could be measured. The Yurok wanted the adoption of the peer reviewed Klamath Harvest Ocean Monitoring model (KHOM) figures for total abundance of Chinook salmon in the Klamath Management Zone (KMZ). Any SAT LOP assumption for the subcategory of recreational harvest resulting in more than 50 times the number of the total population should be rejected, due to being so inaccurate it is not of value to marine planning. Tribal calculations showed that the assumption did not pass the test. Consideration of using the KHOM sub-model for predicting recreational harvest of KMZ Chinook was rejected, even though the model follows best practices including peer review and is checked each year for accuracy. As we have argued, it is clear is that the SAT has not established credible harvest projections and has been recommending policy based on these inadequate estimates. There is no doubt their models, which lacked peer review, would have been better with Tribal input.

The Yurok tribe was also concerned about the salmon by-catch numbers. Generally, by-catch calculations are a multi-step process, and it is desirable to use data from the same region. The SAT used a simplified process based upon inadequate sample size in years often as low as four years. All models included the year 2006. CDFG and NOAA have independently found the 2006-year overstated rock fish catch and is not reliable. The central coast data was inappropriately extrapolated to the north coast region without a comparative habitat analysis. The heavily relied upon Commercial Passenger Fishing Vessel (CPFV) data source does not exist as a viable industry in Del Norte County. Specific salmon patterns relating to their river migrations in the KMZ were ignored. The Yurok Tribe desired to present a more complete analysis, specific to the NC region, that rejects the applicability of the North Central study. A recent multiyear Census and Behavioral Survey conducted for False Klamath Cove, shows a projected annual onsite and offsite visitor count of around 250,000 versus the SAT model projection of 358 million fishers. All proposed science-based presentations were rejected. SAT member Craig Strong stated at the January 13, 2011, SAT meeting that, "...the assumption of the maximum allowable take on the North Coast is simply not real and so it renders the whole structure subject to question." When informed that this was the last SAT meeting (1-13-2011), he voted to approve the model anyway. SAT Co-chairman Dr. Eric Bjorkstedt stated: "I think concern was not only reserved to the public with the LOP model. It has been problematic even for the LOP working group because of difficulties (referring to high harvest numbers)" (Bjorkstedt). This is a clear case of the absence of Native American inclusion resulting in an incompetent result.

Conclusion

Before concluding, it should be noted that much of the Initiative and SAT science was of the highest quality. However, as we have argued throughout this article, not all of it was. Marine planning along the California coast came late to this process and on the North Coast the struggle was for Indigenous peoples to participate in the science. The case for TEK could not have been stronger. The SAT, with no members trained in anthropology, rejected all forms of traditional data, subsistence practices, and two TEK reports by qualified Ph.D. anthropologists and Tribal culturists, and then embarked on a survey to substitute their wisdom for that of Indigenous peoples. This effort was not in conformance with the Human Research Act of 1974, violated conditional permit terms, and ended with compromised data.

The SAT self-authored, Western science LOP model fared little better. It was not even completed until the last meeting. No science was ever introduced to support the LOP take assumptions. The SAT and CDFG have never been able to produce a comprehensive list of model assumptions. Such assumptions are an essential prerequisite before a scientific or legal review can even be conducted.

The SAT never made a public calculation of the model predictions. The model harvest assumptions were so high that Native American harvesting was eliminated as being irrelevant. The purpose of the take model assumption was to be able to select where a marine reserve was needed. The SAT assumption of take is so large that every inch of the

coast qualifies to establish a reserve. Consequently, the take assumption is of no value in identifying particular reserve sites. The SAT violated the U.S. and State constitutional provisions against discrimination by excluding Native Americans. Given the evidence provided by this article, it is clear that Native American presentations would have greatly improved the model and provide realistic projections.

To an extraordinary degree, the SAT resisted efforts of qualified Native representatives to participate. At the end of an expensive 38 million statewide public participatory effort, the SAT failed to provide a fair system that could build trust and support for the MLPA among Native peoples (Ordonez-Gauger). The dropping of inclusionary provisions from the National Academy of Science BAS definitions provided the institutional opportunity to discriminate. Inclusion needs to be restored as a fundamental BAS principle by CDFG. Referring to the non-use of SAT criticisms of the Unified proposal a key factor was that "The LOP evaluations seemed tainted by the SAT assumptions" (Yaffee). The CDFG Commission needs to recognize and apologize for systematic exclusions of Native Americans. The inadequacies of the LOP model need to be acknowledged along with the clear fact that input from Native people would have improved the science. Indigenous peoples have every legal, scientific, and moral right to participate in the science and management of their homelands.

The behavior is a clear example of settler colonialism and the failure to provide a system of sufficient fairness to build trust. The systematic exclusion of an entire ethnic group and their representatives, coupled with wildly inaccurate harvest and other assumptions, taints the LOP science work of the North Group SAT.

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Waklow (Thank You) to my dad, mother, sister, daughter, son and my grandkids. It's honor to advocate for the protection of Indigenous religious, cultural, and environmental rights for future generations. North Coast Native Protectors invite you to join in our work and projects contact Ruthie A. Maloney (707) 502-9155 or northcoastnativeprotectors@gmail.com.

References

1431, United States Code. "Magnuson Stevens Fishery Conservation and Management Act." 1976.

Agency, U.S. Environmental Protection. "Estimated Fish Consumption rates Report." Government. 2010. https://www.epa.gov/fish-tech/estimated-fish-consumption-rates-reports.

Aireme, Sate'. *E-mail to John W. Corbett Attorney for Yurok Tribe*. Klamath, CA, 08 July 2010. E-mail correspondence.

Bacher, Dan. "Tribes and Allies Take Control of Fort Bragg MLPA meeting." *The Fish Sniffer*. Fort Bragg, CA, 24 July 2010.

Bacon, J.M. "Settler colonialism as eco-social structure and the production of colonial ecological violence." *Environmental Sociology* (2019): 59-69.

Bjorkstedt, Eric Dr. "SAT Co-Chairman." *Conversation with John W. Corbett*. Eureka, CA, 13 February 2011.

Burdick, Susan. "Yurok Tribal Member." Eureka. CA, n.d.

California Department of Fish and Game, Resources Agency and Resource Legacy foundation. "Memorandum of Understanding." *MOU*. Sacramento, CA: State of California, 2008.

California Fish and Game Code 2850-2863. "Annual CA Sport Fishery Regulations." Sacramento, CA: 2010, n.d.

—. *Marine Life Protection Act*. Sacramento, CA, 1999.

Carden, Kristin. "Bridging the divide: The role of science in species conservation law." *Harvard Environmental Law Review, Vol. 30* (2006): 186-258.

Chesbro, Wesley. *Chairman Joint Senate Assembly for Marine Affairs*. Letter to SAT. Eureka, CA: Joint Senate Assembly for Marine affairs, July 2, 2010.

—. "Joint Senate and Assembly Committee of Marine and

Aquatic Mandated Legislative Hearing." *Public Meeting*. Eureka, CA, 22 01 2011.

Coast, Marine Life Protection Act North. *Final Environmental Impact Report (FEIR)*. Response to comment 3, Section 3, pg 7-8. Sacramento, CA, 2012, May 03.

Coastside Fishing Club v. California Fish and Game Commission. No. 215 CAl. APP. 4th 397. California Appellate Court. 13 April 2013.

Code, California Fish and Game. "Define Creditable Science." *Section 33*. Sacramento, CA: State of California, n.d.

Commission, California Fish and Game. "North Central Master Marine Plan." *North Group Master Plan*. n.d.

Congress, United States. "16 USC Section 1431 Marine Sanctuaries et seq." *Federal Marine Sanctuary Act*. Washington, DC, 1972.

—. "1974 Human Research Act." *Legislation*. Washington, DC: United States Congress, 1974.

Corbett, John W. *Attorney at Law* 1973.

Corbett, Yurok Tribe. *Yurok Tribe Marine Management Plan*. Managment Plan. Klamath, CAaaaa: Yurok Tribe, 2012.

Council, National Research. *Best Available Science definition*. Washington, DC: National Academy of Sciences, 2004.

Cruz, UC Santa. "https://officeofresearch.ucsc.edu/compliance/services/irb.html." *Delegated authority to administer 45 CFR 46 permits under the 1974 National Research Act usingally referred to as the 1974 Human Research Act*. 2010: The board issued an MSI-AI-SA-007-2N to signed Investigator Satie' Airame, 9 August 2010.

Finance, Department of. *https://esd.dof.ca.gov/doftpublic/viewBcp.html*. 2010. January 2020.

Foundation, National Science. 2004.

—. *Improving the use of the "Best Scientific Information Available" standard in fisheries management*. Washington, DC: National Research Council, 2004.

Fox, Evan., Melissa Miller-Henson., Ugoretz, John., Weber, Mike., Gleason, Mike., Kirlin, John., Caldwell, Meg., and Mastrup, Sonke. "Enabling Conditions to support marine protected area network planning: California's Marine Life Protection Act Initiative as a case study." *Ocean and Coastal Management vol. 74* (2013 March): 14-23.

Game, California Department of Fish and. "Letter sent to Yurok Tribe from Becky Ota ." Sacramento, CA, 12 April 2012.

—. "Marine Sport License Statistics." *Recreational Marine Regulations*. 2010.

—. *Mussel Power/New Zealand Geographic*. n.d. www.nzgeo.com.

Gleason, et al. "Designing a network of marine protected areas in California: achievements, cost, lessons learned and challenges ahead." *Ocean and Coastal Management, Vol. 74* (2013): 90-101.

Google. *Google Dictionary*. 28 June 2021.

Gurney vs. California Department of Fish and Game. No. SCUK CVG 105448. Resources Agency Mendocino Superior Court. n.d. Declaration of Deputy Attorney Genral Counsel.

Harty, Michael J, Dewitt, John. "Report on Lessons Learned from the Marine Life Protection Act Initiative: North Central Coast Study." 2008 October 31.

Jaffee. (n.d.).

Kirlon, et al. "Supporting Implementation of legislation establishing a Statewide work of Marine Protected Areas." *Ocean and Coastal Management, Volume 74* (2013): 3-13.

Legislature, California State. "Joint Committee on Fisheries and Aquaculture." Sacramento, CA, 21 January 2011.

Malloy, Katherine M. "California's Marine Life Protection Act: A Review of the Marine Protected Areas Proposal Process for the North Coast Region." *Southwestern Environmental Law Journal* (2008).

Marine Life Protection Act, North Coast. *Final Environmental Impact Report (FEIR)*. Response. Sacramento, CA: Adopted by the Fish and Game Commission, 2012 May 03.

Mazur, Allen. *The dynamics of technical controversy*. Washington D.C. : Washington D.C. Communication Press, 1981.

McCreary, Scott, Grifman, Philis and Cowart, Meredith. "Case Analyses Creating Stable Agreement in Marine Policy: Learning From The California South Coast Marine Life Protection Act Initiative." *Negotiation Journal* (2016): 23-48.

Miller-Hensen, M. "Joint Senate & Committee of Marine and Aquatic Mandated Legislative Public Hearing." *Marine Life Protection Act Initiative*. Eureka, CA, 21 January 2011.

Minsuk. 2015.

Minsuk, Jun. "Governing Marine Protected Areas (MPAs) in California: Analysis of the MLPA Implementation Process." *Ph. D. Thesis*. London: University College London, 2013.

North District Case. No. 13-CR-00683. U.S. District Court Northern District . n.d.

Olmeta-Schultz, Ph. D. "The North California Coast Marine Protected Area Network: Study of Commercial Fisherman Perceptions of MPA effort." *The Planning Process and Regional Stakeholder Group Collective Action*. UCSC, December 2018.

Ordonez-Gauger, L., Richmond, L., Hackett, J.,. "It's a Trust Thing: Assessing Fisherman's Perception of the California North Group Marine Protected Area Network." *Ocean and Coastal Management* (2018 May): 14-153.

PISCO. "Partnership for Interdisciplinary Studies of Coastal Ocean." 1999.

Ramos, Seafha. "Hikelonah Ue Meggetohl In An Ever Changing World." Cooper-Lara, Kishan & Lara, Walt J. Sr. *Ka'm-t'em A Journey Toward Healing*. Temecula, CA: Great Oak Press, 2019. 85-93.

Saarman, Emily et al. "The Role of Science in supporting Marine Protected Area Network Planning & Design California." *Ocean and Coastal Management Vol 74* (2013): 45-56 pg 47 last paragraph.

(SAT), Science Advisory Team Meeting. "MPA Public Meeting Red Lion." *Meeting Transcripts prepared by an independent certified reporter*. Eureka, CA, 28 July 2010.

Sauyce, K., Shuman, C., Connor, D., Reisewitz, A., Pope, E., Miller-Hensen, M., Poncelet, E., None, D., Owens, B. "Beyond Traditional Stakeholder Engagement: Public Participation rates in California's statewide marine protected area Planning Review." *Ocean and Coastal Management Vol. 74* (2013): 57-66. https://doi.org/10.1016/j.oceacoman. 2012.06.012.

Shelbenberg. 2004.

Shellenberger, Michael and Nordhaus, Ted. "www.thebreakthrough.org/images/Death of Environmentalism.pdf." 04 April 2006. *The Death of Environmentalism: Global warming politics in post environmental world.* 2021.

Singleton, Sara. "Native People and Planning for Marine Protection Areas: How "stakeholder" Process fail to address Conflicts in the complete Real World Environment." *Ocean and Coastal Management Vol 37 (5)* (2008): 425-440.

Staff, California Fish and Game. *Marine Life Protection Act*. Sacramento, July 2010.

Team, Science Advisory. "Public Speaking Regulations." Sacramento: State of California, n.d.

—. *SAT taped meeting video reaffirmed at the July 28, 2010 SAT meeting*. Eureka, CA, 11 February 2010. Video.

Tucker. n.d.

United States Code 1431 et seq and 33. *The Marine Protection, Research and Sanctuaries Act*. Washington, DC, 1972.

Weible, Christoper M. "An Advocacy Coalition Framework Approach to Stakeholder Analysis: Understanding the Political Context of California Marine Protected Area Policy." *Journal of Public Administration Research and Theory* (2006): 95-117.

Wiseman, Ken. "Executive Director Marine Life Protection Act Initiative." *SAT meeting video*. Eureka, CA, 28 July 2010.

—. "Executive Director of Initiative." *e-mail to megan rocha Yurok Tribe from Ken Wisemen*. Sacramento, CA, 19 June 2010.

Yaffee, Steven. *Beyond Polarization Public Process and the Unlikely story of California Marine Protected Areas*. Washington: Island Press, 2020.