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RECOGNITION AND SUPPORT OF INDIGENOUS CALIFORNIA LAND STEWARDS, PRACTITIONERS OF KINCENTRIC ECOLOGY

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"I can't help but cling to the notion that it's not the land that's broken, it is our relationship to land that's broken."

Robin Wall Kimmerer,
author of *Braiding Sweetgrass*

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PREAMBLE

The authors would like to acknowledge that the original intention of this paper was to articulate the intersection of Traditional Ecological Knowledge (TEK) and regenerative agriculture. However, the authors made a change in direction after realizing that what is needed is not an attempt to fit Indigenous land stewardship and food systems into a Western framework, but to deepen the understanding of these practices, cultural mores, and knowledge from a California Native perspective. In the section "Problems with TEK and Regenerative Agriculture Models" it is noted that TEK and regenerative agriculture are Western ideologies and frameworks. While TEK may be the most commonly understood way to frame and understand Indigenous food production and land stewardship practices, and many modalities of regenerative agriculture are rooted in Indigenous knowledge, it is more meaningful to the authors to rightfully acknowledge and deepen understanding of California Native communities as practitioners of kincentric ecology and leaders of land stewardship and food systems.

We hope that this paper deepens the understanding of how inseparable Indigenous people's kinship is with their local ecological systems and the cultural and spiritual practice to steward land and produce food. For philanthropists who want to engage more deeply in support of tribal-led organizations, we offer guidance at the end in the resources section.

TWO PLACE-BASED EXEMPLERS OF KINCENTRIC ECOLOGY

Among the forest-covered hills of the Capay Valley, just west of the Sacramento Valley, the Yocha DeHe Wintun Nation has been stewarding thousands of acres of the northern California landscape for centuries. The lush and fertile lands are some of the most scenic and biologically diverse areas of the country, ranging from rolling oak-studded hillsides to steep creek canyons and ridge lines with expansive views. Their ancestral lands are located on the eastern edge of the Coast Range in the beautiful hills, characterized by fertile fields of small farms, orchards, and ranches.

Today much of the Wintun ancestral lands are managed by the Bureau of Land Management, the U.S. Forest Service, and private landowners while the Wintun Nation works to reclaim as much of their ancestral lands as they can through re-purchase. Currently Yocha Dehe is stewarding over 40,000 acres and practicing traditional food cultivation as well as production agriculture. Of their current lands, 1,119.88 acres are held in trust. In the low areas between the hills, the Wintun Nation farms 250 certified organic acres. They manage 1,200 acres in permanent conservation easements and 12,000 acres of rangeland that are part of a sustainable grazing program of 700 head of cattle, and they cultivate 500 acres of olive trees that produce premium certified extra virgin olive oil. Séka Hills, one of Yocha DeHe's businesses, is named after their landscape in the Capay Valley and has more than 17,000 acres in production. Séka Hills produces high-quality extra virgin olive oil, vinegar, wildflower honey, nuts, wine, and other products. Through their successful business ventures, they are able to be generous donors to the Yolo County area and expand philanthropy throughout their ancestral territories and beyond.

Yocha DeHe is an example of an Indigenous community that is reclaiming ancestral lands, and it reflects the possibilities of diversifying tribal food production as well as a modern business portfolio. Yocha DeHe, which translates into "home by the spring water," was formerly known as Rumsey Rancheria, and has been federally listed as Patwin Indians. The Yocha DeHe nation has been successful in expanding its businesses to include enterprises that reflect traditional cultural values and maintain their connection to their land. They have accomplished this by working throughout their aboriginal territory while placing the Séka Hills olive oil and wine tasting room in Clarksburg on the Sacramento Delta. This area has always been immensely wealthy in natural resources and traditional foods including acorns, fish, large and small game, numerous berries, basketmaking materials, and many other plant-based materials like corms, tubers, and other edible, medicinal, and dye plants. Located within a complex trade network, the Yocha DeHe people traded with the Pomos to the West, the Miwok and Maidu to the East, the Yokut to the South, and the Wintun to the North. The abundance of large game, nuts, and goods traded far and wide led to this area having the densest pre-contact population north of Mexico. The carrying capacity, the health of the landscape, and abundance of water has been noted in all early accounts.

Three hundred miles north, near the California/Oregon border in rural Humboldt and Siskiyou Counties, are the Karuk Tribal lands. For millennia the Karuk have performed the annual *Isivsanen Pikiavish* (world repairing) ceremony at their sacred site called *Inam*. The intention of the ceremony is to maintain and revitalize the local ecosystem so that it remains healthy for humans, plants, and animals. The ceremony is also performed to assure the continuation of local resources such as acorns and especially the abundance of salmon. Á'uuyich (Sugarloaf Mountain) is regarded by the Karuk as the center of the world. The cone-shaped mountain marks the location where the Salmon River meets with the Klamath River. The mountain is the center of a landscape that the Karuk feel is their responsibility to sustainably maintain and is characterized by

the deep canyons carved by the Klamath River and its tributaries. The banks of the rivers and streams and the uplands are covered with mixed pine and deciduous forests underscored by a diversity of Native shrubs and herbaceous plants. The Karuk Nation manages 931.85 acres[1] of this land that is held in trust by the Bureau of Indian Affairs (BIA). Additionally, the nation manages over one million acres of aboriginal homelands in the Klamath River watershed with the U.S. Forest Service and other federal partners.

Like many other Native California nations, the Karuk people and their land were adversely impacted by placer mining, logging, and other extractive industries. The federal government discouraged cultural land management practices in the late 1800s and forcibly prevented Karuk cultural burning in the 1930s. Karuk traditional families continued to gather hazel, willow, acorns, mushrooms and other forest products, despite hostility. Regardless of this extraction and the entry of colonists in their territory, the Karuk have persevered and still live along the river system and subsist off the bounty found in the forests and watersheds of their ancestors.

One method by which the Karuk managed their lands was through periodic, prescribed burning for a multitude of reasons. Ceremonial back burning of the landscape is important not just to Karuk worldview and spiritual covenants with animals and plant biota, but also for safety as young men trek up to the mountains in the height of fire season for spiritual renewal. Until recently, the U.S. campaign of fire suppression was successful in keeping Native peoples from practicing cultural preventive burning. Without continuous forest management and ongoing low-intensity brush clearing via fire, California's forests have become choked with thick undergrowth, downed logs, and fast-growing Douglas fir that thrive in the deep shade of the unburned forest.[2] This type of forest has shaded out California's more fire-resistant trees like the Quercus species, or oaks, that have adapted to fire through human management and natural fires that historically were commonplace. When fires start in these altered forests without ongoing management, they burn hotter and spread farther than they did in pre-settlement times. For the Karuk, unprecedented catastrophic high-intensity fires in the Klamath basin and larger brush have adversely affected water quality and salmon spawning important to tribal values.[3]

Today the Karuk Nation collaborates with the U.S. Forest Service and the BIA Fire Management to conduct cultural burning on and near Karuk tribal territory. The Karuk Fire Team conducts low-intensity burning of underbrush and places where traditional people gather materials such as bear grass so that basketry materials will have straight shoots and be easy to maintain for their children, elders and cultural practitioners, and to have an active part of stewardship. The Karuk engages interested tribal members to conduct this work upon the landscape through the Tribal Historic Preservation Office and Pikyav Field Institute[4] that is dedicated to environmental education and co-management within Karuk ancestral homelands.

1 Bureau of Indian Affairs, Pacific Region, personal communication September 23, 2019, for Karuk, Yurok, Yocha DeHe Wintun Nation, and Pauma Band of Luiseño Indians trust lands.

2 Levy, Sharon. Rekindling Native Fires. Oxford University Press on behalf of the American Institute of Biological Sciences. Bioscience, Vol. 55, No. 4 (April 2005), 305.

3 Norgaard, Kari Marie. Karuk Traditional Ecological Knowledge and the Need for Knowledge Sovereignty: Social, Cultural and Economic Impacts of Denied Access to Traditional Management. Prepared for the Karuk Tribe Department of Natural Resources, 2014.

4 http://www.karuk.us/index.php/departments/natural-resources/eco-cultural-revitalization/pikyav-field-institute (accessed September 29, 2019).

OVERVIEW

These two tribal examples demonstrate the possibilities for kincentric land stewardship and ecology today. Indigenous knowledge systems are derived from a different framework and worldviews and are based on kincentric relationships based in deep relational, cultural, and ecological practice. The recognition and inclusion of the practitioners and teachers of these systems is of utmost importance in the realization of regeneration of our lands. California Native nations manage over 511,000 acres[5] of land across California officially, and unofficially, the Indigenous nations manage much more in their stewardship of watersheds and ecosystems that go beyond political and private property lines. Watershed and ecosystem management should occur with input from these original landowners, those tied to the lands through generations with lived experience and connection to the land. Tending the land, walking upon the land, coppicing and pruning traditional plants, burning the underbrush, and gathering and hunting important foods and cultural materials – all this and more is the manifestation of a human/nature-centered relationship. It is through physical activity and sustenance that unprecedented understanding of the cycles of the environment can be strengthened through consistent practice and over generations.

Therefore, the authors are suggesting a more Indigenous approach to land management is needed to truly regenerate our landscapes and relationship as part of our natural world. For the longest time, the conservation and environmental movement had assumed that the human-environment interface equation would always result negatively for the land. The last 200 years of exponential human population growth coupled with massive expansions of industry and globalization have certainly done little to balance out the equation. As a result, until recently, researchers had not considered the possibility that humans could actually enhance their landscapes; that human communities might actually play a role in increasing diversity, or that humans are as essential to the ecological functioning of a landscape as saguaro cacti are to the Sonoran Desert or Oak trees are to the California landscape. In landscapes such as those of California there was little awareness that human communities could be keystone species in some

ecological systems. The Great Yellowstone Fire of 1988 played a catalyzing role in waking up conservationists to the once taboo concept of allowing wildfires to continue unabated. After the fire, historical studies emerged showing that forest fuel levels, reflected in the amount of under story and relative thickness of new and old tree growth, was at its highest in recent decades. Land managers began to question what, in the past, allowed for conditions where fuel levels were lower, thereby creating conditions for less intense fires that were not as catastrophic as the ones burning today. The answers that slowly emerged all pointed to pre-Columbian human interaction with the landscapes.

Wherever people have been in sustainable contact and cultivation of a landscape there has emerged a culturally recognized and sanctioned pattern of using, talking about, celebrating, and interacting with that environment. It should not be surprising then to notice that residing in most of the most biodiverse regions of the world there are human communities that continue their cultural legacies reflected first in the survival of their language and worldviews.

An Indigenous worldview does not differentiate or separate ontological spaces beyond and between the human and non-human worlds. It is felt that humans are directly related to everything around

5 The Bureau of Indian Affairs (BIA) holds approximately 511,000 acres of land in trust for California Tribes and individual allottees. Tribes also own thousands of acres in fee simple absolute, subject to State rules and regulations.

us. The trees are us, we are the trees. I am rain, rain is me. The rain is all around me, it aligns inside me. These feelings are reflected in how Native peoples classify things such as plants and rain.

This interconnected view of all life as a being related to people as are human kin can be considered the basis of "kincentric ecology." Through this approach everything is a relative. Such a worldview and corresponding classification system of the natural world leaves no room or need for a category such as the notion of "wild." If everything is a relative, and if we are interconnected to everything around us, then there is no need for a category of thought nor a specific term to denote a part of the world that is separate from ours. Kincentricity is the idea that gathering on the land ensures healthy social, cultural, and environmental symbiosis.

Through the compilation of this information and case studies, the authors seek to impart the importance of 1) recognition of Indigenous land stewardship and kincentric ecology as the foundational framework to all Indigenous food production and land management; 2) acknowledgement of Indigenous peoples and their ancestral wisdom; 3) how these systems continue to provide a regenerative and resilient foundation to modern-day ecological farming practices; and 4) supporting Native practitioners and nations. The authors have focused on the state of California for this paper; however, there are efforts underway across the U.S. to uplift and invigorate Indigenous land stewardship practices as essential during these times.

THE CALIFORNIA CONTEXT

The West Coast of North America has always been a region of abundance. Visitors flock to the coast and sierras to wonder at the giant sequoias and redwoods while the arid regions and deserts that lay in the shadows of the Sierra Nevada Range teem with unique and endemic plant life. The Central Valley of California has often been referred to as America's breadbasket, but, before the arrival of the European agriculture, Native peoples of the West Coast were unfamiliar with this concept. This is because, unlike what was seen among Pueblo peoples in the Southwest, Native peoples of the central and southern coasts did not really have to assume a sedentary agricultural lifestyle in order to secure their sources of plant and animal foods. The numerous species of oaks provided a seasonal crop of acorns, which was supplemented throughout the year by tubers, chenopods, nuts and fruit trees, berries, and herbaceous plants. Rivers and streams teemed with fish and there was an abundance of game for the people to hunt.

Before the arrival of Europeans, the region from Oregon south into Baja California was the most diverse cultural area in North America. It is estimated that over one-third of all Native peoples of North America lived in this region. More specifically, pre-Columbian California's diverse and abundant ecosystems supported the highest population density of Native communities north of modern-day Mexico. The moderate, Mediterranean climate supported acorn, elk, salmon, and other foods of both land and sea. The vast abundance of food available in California also led an unmatched establishment of basketry and other arts practices by tribal members.

These arts are representative of deep ecological knowledge and relationship with place. Contiguous with a substantial arts sophistication, California Natives spoke numerous unique languages, even when located within close proximity of other nations. Over 100 distinct languages were spoken across this landscape. The languages were further separated into over 300 dialects. The languages were derived from several linguistic families, including the Yukian, Maiduan, Uto-Aztecan, and Athabascan groups. Two linguistic families, Esselen and Karuk, are linguistic isolates, meaning that the language has no linguistic connection or relationship with any other language group. In other words, it is a linguistic family with only one language. Each language of this region represents a unique culture with their own worldview and library of ecological knowledge. These past and present-day stewards of California's ocean, rivers, grasslands, and forests ensured sustenance for humans and non-humans alike while managing the land for future generations.

The Native peoples of California all engaged in some form of complex and sophisticated "gardening" of their homelands that included grasslands, mixed woodlands, wetlands, chaparral, and conifer forests. From these habitats they insured their food, medicinal, and utilitarian plant materials through seasonal pruning, coppicing, and low-intensity fire regimes. Their systems of land management not only provided what they needed, but also worked to encourage plant and animal diversity. Their repeated cycles of clearing, fire, and careful use can now be considered a form of advanced permaculture on a scale unimaginable today.

Much of the pre-Columbian landscape of California has been transformed over the last 500 years, but if one knows where to search and what to look for, most of the Native plants can still be found. Despite their relatively peaceful nature, California's Native people were brutally removed from their land and murdered or enslaved by the Spanish and then by the U.S. government and citizens during the Gold Rush. Despite the near genocide of California's Native peoples, many have persevered and remain resilient on their ancestral lands.

Upon the arrival of settlers to California, massive water projects, dams and other infrastructure created agriculture where once it was very limited. This infrastructure and modern-day food production and land ownership continue to impact California Native cultural practices to this day. Today California has just over 109 federally-recognized Indigenous nations, the highest number in the country, that manage over 511,000[6] of the state's 104 million acres. Many of these nations continue to steward land in ways inextricably tied to culture, traditions, and ancestral memory, in order to enjoy earth's bounty despite substantial depletion of, and competition for, resources.

With that, we dive into kincentric ecology and our articulation of these longstanding practices and their influence on food systems and land management.

6 The Bureau of Indian Affairs (BIA) holds approximately 511,000 acres of land in trust for California Tribes and individual allottees. Many tribal nations own land in fee simple, which are not included in this number, and many more are acquiring additional and former Reservation lands to put into trust, adding to the Indian Reservation acreage total. Map of California Indian Reservations and public domain allotment under BIA Pacific Area jurisdiction https://www.indianaffairs.gov/sites/bia.gov/files/assets/bia/pacreg/california%20map%202018_large.pdf (last accessed June 10, 2019).

PROBLEMS WITH TEK AND REGENERATIVE AGRICULTURAL MODELS

It is often the case that Western disciplines such as ecological anthropology, ethnoecology, agroecology, resource management, and environmental sciences will conveniently conflate their models of land management with what is known as Traditional Ecological Knowledge (TEK). More recently regenerative agriculturalists have been attempting to apply their models and practices onto those of American Indian land management systems. The authors wish to dispel these attempts to frame American Indian stewardship systems using Western-derived models.

First, it is recognized that overlaps exist among the Western and Indigenous models. Both begin with an understanding that there are natural cycles of regeneration and Indigenous cursory knowledge of their local landscapes. Both have long-term outcomes in mind. For the tribal practitioner, the longevity of continued observations and timed interactions with the landscape of their ancestors is critical to honoring long-standing covenants and understanding the state of the world and how one individual contributes and functions to that long-standing cycle. Regenerative agriculturalists and those who base their models on TEK recognize that water is life. It is vital to the landscape. From the tops of the mountains to the mouth of the rivers, this circulatory system of our planet is fundamental. The soil, as it nourishes the earth, nurtures our young shoots and roots to provide our daily bread and is directly connected to our human health and biome. For the producer, the acknowledgment of knowing that their use of the land is doing no harm for future generations is tied to present-day practice. Both actors actively choose to prevent waste, avoid environmental damage, and care for and consider land and wildlife, and thereby, they are rewarded from the fruits of the land.

However, it is essential to understand that TEK and regenerative agriculture are products of Western packaging of Indigenous knowledges that does not represent Indigenous knowledge systems in their entirety and that is not wholly grounded in Indigenous philosophical and spiritual relationships with the Creator and the land.

For centuries American Indian communities have served as convenient and stereotypical stand-ins for Western-derived notions of wildness, and a Western playground where Native characters have been reduced to a powerfully simple, yet paradoxical, dichotomy of the innocent "noble savage" versus the brutality of the "bloodthirsty savage" or the "uneducated wildling." Academia is not immune from these romanticized notions of the American Indian and has even perpetuated them through peer-reviewed articles.[7] It is often the case that when Indigenous knowledge and practices are included in academic interpretations of inclusion of the knowledge and practices the process more often results in selections of parts of Indigenous knowledge that most conveniently fit into Western frameworks. The result is a decontextualization of the original Native knowledges and practices.

TEK, then, has been configured to fit within academia's culture, which has led to a generalization and misrepresentation of the knowledge of American Indians. A result is that TEK and movements such as regenerative agriculture are the offspring of Western academics and, therefore, really represent the needs, frames, and models of people from outside American Indian communities. For example, when regenerative agriculturalists talk about soil, a popular topic with advancing climate change, Indigenous people are talking about land. Both practitioners refer to the importance of the interplay of the earth with the ecological and biological communities that science is only now starting to acknowledge, yet American Indian models are much more than soil deep.

7 Eun-Ji Amy Kim, Anila Asghar & Steven Jordan (2017): A Critical Review of Traditional Ecological Knowledge (TEK) in *Science Education, Canadian Journal of Science, Mathematics and Technology Education, DOI*: 10.1080/14926156.2017.1380866

It is the stance of the authors of this paper that Indigenous knowledge and practices are deeply grounded in their local landscapes and, therefore, cannot be generalized outside of those landscapes and local systems. This is paired with the linguistic domains; The words, metaphors, and unique expressions of the Native peoples whose ancestors have kincentrically stewarded those local landscapes reflect their specific relationships with their homelands.

Indigenous epistemology requires the protection of the collective elements of life: water, land, air, fire, animals, and people. Indigenous farming practices such as intercropping help to maximize land use while reducing the risk of food shortages by one crop failing, improvement of the soil microbiome, beneficial insects, and more benefits that regenerative agriculture is seeking to attain.

Perhaps the most significant divergence of a whole systems approach to food, nature, and community is the economic gains driver of modern dominant, resource-dependent food systems. Anecdotally, regenerative agriculturalists come to the table for a variety of reasons, including climate change, declining yields, wanting to improve upon current practices, biological systems decline, community health decline, economic decline, and inability to make a living in a conventional framework. Due to the economic gains driver, success in the field of regenerative agriculture is always valued based on profitability of the system, and return on investment can be three to five years out during the transition time. Putting biologically connected food systems on this scale to a measure of economic gains has been and continues to be a losing game. According to the 2017 USDA Ag Census, for example, 56% of farms and ranches across the U.S. had negative net farming income. Business as usual in agriculture and beyond is currently failing people, communities, and the environment.

Indigenous people encode soil health into some of the most basic stories of creation (and death). Meanwhile, regenerative agriculturalists study the microbiome that ensures a healthy growing and planting regimen and can be perceived as reductionist and linear. These practices encourage a transition from conventional to less conventional, but this spectrum remains varied and widespread across crops and production types.

Both systems should be acknowledged and can work together, but it is essential that their separateness are recognized as different ways of knowing and explaining the natural world. The food landscape, for example, is large and varied. While some tribal folks prefer to keep producing traditional foods, others have entered mainstream markets, and together these two groups shall coexist and work in collaboration for our collective food needs. In addition, food sovereignty is a central issue for contemporary American Indian communities. This is because it brings together logical issues and solutions such as food waste, hunger, and perhaps more importantly, an understanding of how to potentially overcome capitalist-based barriers and confront the current climate crisis.

Additionally, the approach to Indigenous land management and food systems starts from a different place and a different understanding that is separate from Western-derived ecological timelines. Therefore, the practices that result are also slightly different.

The loss of land, dramatic population decline, and change in access to fresh food broke the hearts and the institutions of Indigenous people. Indigenous food systems offer many lessons to the greater society of the balances required not only in a single ecosystem but also in the interplay of many ecosystems. Tribal lands are in many cases key parts in ecosystem management, some of the last places without development, major irrigation projects, paved roads, or pesticide use. Even in regions long considered nonagricultural, subsistence intensification is now known to have considerable time depth. The practices involved, such as burning, soil modification, coppicing, and transplanting, do not conform to concepts of food production based on domesticated plants and animals, but do play and integral role in kincentric approaches to land management and Native food systems.[8]

Tribal partnerships and collaborations transferring intergenerational knowledge is fundamental to our collective future. When one listens, observes, and takes time to understand the needs of the land and those dependent on it, positive outcomes can occur.

8 Gremillion, Kristen J. *Food Production in Native North America: An Archaeological Perspective*. The Society for American Archaeology, The SAA Press, Washington, DC, 2018 at vii.

KINCENTRIC ECOLOGY

Many American Indian creation stories suggest that the land, and beings of the land and sky, played a direct role in the emergence of the people. The Yokut of the Tulare Lake region of the California Central Valley believe that it was Eagle and Coyote, who together shaped the first people from clay and breathed life into them. That Native peoples feel an innate need to feel related to the natural world is a direct reflection of their story, song, and ceremony, all of which reflect a kincentric relationship to their landscapes. In other words, they feel directly related to the natural world. Therefore, they are intimate with their places such that the seasons and the personality of the land and all its inhabitants are as closely known to traditional practitioners as are their own human relatives. Kincentric ecology or kincentricity is the art of living as a part of a place where the land is a relative and remembers everything that the people have experienced on it. As a result, Indigenous morals sit on the landscape and the land in turn reminds people of proper behavior.

Kincentric ecological thinking affects Indigenous practices and actions on the landscape that impact ecosystems. Some of these practices include seed saving, low-impact irrigation, soil maintenance through periodic burning, selective pruning, and coppicing. All these practices encourage species diversity and the creation of micro-habitats to bring greater abundance for all.

American Indian geomythical landscapes are imbued with stories and events that explain how the land got to how it exists today and the role the mythic beings, as well as Indigenous ancestors, played in the shaping of the land. The land and events that happened on it have the power to influence people's ideas about themselves and their relationship to place. These stories and their teachings handed down through the generations through the maintenance of oral literature play a direct role in shaping sustainable decision making and practices. The land then is a source of moral behavior that models how to live with the land responsibly. Because of this deep and direct connection to place many Native peoples feel that to lose the land is to lose one's flesh – to lose one's well-being.

The moral places mentioned here awaken in the Indigenous mind cognitive journeys of interior and exterior harmony with the landscape. This is understandable when one realizes that they come from their land and share in its creation. As a result, one's consciousness remains within the land and plays a central role in Native narratives that encode knowledge and thoughts of place, grounded in the spoken metaphors in the land.

These kincentric emotions are often translated into performance art or ceremony and ritual that are understood by the performers to be contributors to a healthy landscape and human population. Many ceremonial songs recognize the links to nature and in their performance acknowledge the people's responsibility in its sustenance. An example is the Salt

Song Trail rituals performed every year by Cahuilla, Chemehuevi, and Southern Paiute at certain locations in the Mojave Desert. The songs are performed to ensure to the land that the people still care for it and share in its ongoing re-creation.

Kincentric Ecology & Food Systems

Indigenous communities are directly tied to their food sources. This is because Indigenous societies are organized around natural cycles of growing and cultivation of crops, and harvest and hunting seasons through social food institutions. Clans, families, and entire communities are organized in ways to optimize access and regulate food to ensure the land, plants, animals, fish, and water are harvested in balance for continued growth of the community.[9] This means that food is an integral Indigenous societal "sensor," in that food is closely tied to basic functioning of Indigenous community's societal institutions and the health and wellbeing of people and ecosystems.

Because American Indians feel that they come from the place and share in its creation, that the land cares for the people and protects them and models responsible behavior, it is not surprising to understand that Native peoples feel deeply that "We are the land. We are our foodscapes." Indigenous cultural long-term memory is embodied in the land, their communities, and their foodways.

Eating and cooking are very deliberate acts for the love and care of place. Food is a direct indicator of kincentric thinking. In a very real sense, Native peoples ate and cooked their landscapes. Although there was and continues to be elaborate trade networks that include foods, the majority of Indigenous foods were a direct result of people's relationship to and exploitation of what their landscapes offered. However, food gathering is reflective of Native kincentric thinking where culturally sanctioned harvests ensured that food and other natural materials would remain available for future generations. These food choices support processes such as acorn gathering where only what is needed is taken and where the collection is done in such a way to ensure future harvests. On the many California rivers, for example, fishing for salmon was performed at only specific locations and by particular families or clans in order to perpetuate the future generations of young salmon.

Through these kinds of practices, choosing to eat traditionally re-affirms identity. Ancestral foods reflect Native relationship to their lands which are essential toward maintaining these lands and food knowledge.

Where these American Indian locations of kincentric ecological practices are performed have become sources of ecological refugia and diversity. In addition, the practitioners of kincentric practices are examples of cultural capital. Without these individuals, the practices and therefore the very lands and species where they perform them wither away. Unfortunately, we have seen this happening throughout California.

In California the cultural capital are the basketmakers and the traditional fishermen, who continue to gather and keep alive, acorns, species of salmon, Indian hemp, and nahavita, a starchy, protein-rich underground corm. It is also the Native hunters who carefully managed herds of deer and elk in their habitats. It is the Native youth and the knowledgeable elders who are developing reorganized organizations and creating new methods that can be used to revitalize and keep alive traditional land management in the region. These are kincentric ecological social legacies that must be supported.

In Indigenous economic institutions, food is a valued product that could be traded internally within the community and externally outside of the community. In the past extensive trade routes allowed intra-tribal and inter-tribal trade to thrive (Swentzell 2016, p 6-7). These trade routes were largely based on food items. In spiritual institutions, Indigenous communities tie many of their first foods to creation stories. Many ceremonial cycles are correlated with planting, growing, harvesting of foods, and with hunting or gathering foods[10]. In political institutions, food is often managed by clan or familial systems so that there is some accountability of consumption and redistribution[11]. Political appointments often tied some form of food system management. In educational institutions, some of the first lessons young Indigenous children are taught are based on food, whether it be through the recital of creation stories that often included important

9 Cajete, G. 1999. *The People's Ecology: Explorations in Sustainable Living.* Santa Fe, New Mexico. Clear light Publishers. p 89-92.

10 *Ibid*., p 10-12; Kimmer, R.W. (2013). *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants.* Canada. Milkweed Editions. p 6-7; Swentzell, R. & Perera, P. (2016). *The Pueblo Food Experience Cookbook: Whole Food of Our Ancestors.* Santa Fe, New Mexico. Museum of New Mexico Press. p 6.

11 Cajete, G. 2000. *Native Science Natural Laws of Interdependence.* Santa Fe, New Mexico. Clear Light Publishers. p 90-93.

foods or whether it be environmental understanding through food gathering, hunting, or harvesting as a tool.[12] Lastly, social values are taught through food, whether it be the understanding of certain foods to be used for specific occasions, sharing, cooking, or as a social behavior reinforcement.

Indigenous people are intimate with the growth cycles of food. Knowledge associated with these cycles are stored and reproduced through oral traditions making them collective and intergenerational resources. The entire community then exists in kincentric relationship to water, the land, human and animal interactions, the sky, and their physical ability to cultivate and maintain the health of the whole natural community. The elements belong to no one – they produce food, a basic necessity of existence. For example, corn cannot grow without human or animal interaction, sunlight, water, and earth. These environmental and external sources are the "basic elements" of creation that are viewed as shared resources and are available for everyone to utilize in order to grow the corn. Because of the recognition of collective resources, community and individual interactions become pivotal in a well-functioning society. Cultural norms, social norms, and basic understandings of community are centered on communication, skills that are often encoded to ceremony, relationships, and community gatherings. Presence and participation are of utmost importance to understanding and purposely managing collective resources.[13] If the societal institutions are functioning properly and collective resources are available and managed properly, ideally, the members of the community would have access to food. In short, community participation and interaction are the adhesives of an Indigenous food system.

An economy from a foundation of kincentricity is a society's system of resource management. For a well-functioning Indigenous food economy, there are major concepts and practices needed from both an Indigenous food and economic lens.

1) First Feed Your Family and the Broader Community (Internal Exchange)

Native communities wait for the first harvest to pay thanks for the abundance, and once the first foods are respected and honored, invite visitors to come and feast. This is true today as Native communities share during events and abundance such as the Kashia Pomo Strawberry Festival in April, Summer Pomo Seaweed Harvests, Yurok Salmon Festival in August, Miwok Fall Acorn Festivals, and many other ceremonial harvests in rural and isolated communities.

Moreover, the idea of "feeding family and the broader community" incorporates two very important relationship functions. It assures that there is a personal interest and inter-dependency on the food and the land from which it comes while creating and developing relationships outside of blood and clan lineage. Relationships are often built on shared practices.

2) Whatever is Left, That is For Trade Outside of Community

What surplus is left after the consumption and use from the local community can then be shared with other communities through trade. Extensive networks of trade routes have existed throughout the Americas. Red Abalone has made its way from the California coast inland to the Southwest. Parrot feathers have traveled from South America to the Dakota plains. Buffalo meat and hides have crossed all the Americas.

The commercial market is now diversified to share not just outside the tribal community, but also urban centers like the San Francisco Bay Area and beyond where people are rediscovering foods that have nourished generations. The inter-tribal trade network works as it has endured for millennia and continues to evolve and move through modern-day trade routes and technological developments.

12 Cajete, G. 2000. *Native Science Natural Laws of Interdependence.* Santa Fe, New Mexico. Clear Light Publishers. p 74.80.

13 *Ibid*. p 98-99.

HOW CALIFORNIA INDIGENOUS NATIONS APPROACH LAND MANAGEMENT

Contemporary Indigenous land management is largely dependent on whether a Native nation is federally recognized. If a nation is federally recognized, they may or may not have been deeded land through the BIA. Additionally, many Native nations that had been granted land experienced the U.S. government taking back the deeded lands or having their holdings greatly reduced in size. Nations that have managed to hold on to their ancestral lands are but a handful in California and include the Yurok, Karuk, Pomo, Chumash, Paiutes, Kumeyaay, and many others. While some California Indigenous nations have managed to regain land ownership and title, many have to buy back their ancestral lands.

Although many Native California nations were terminated, descendants of those who survived carefully manage their historic lands. Many have retained hunting, fishing, and cultivation rights that provide an immediate and ongoing connection with stewardship of these lands. Contemporary land management techniques still honor these specific landscapes through a variety of different ways, mostly depending on the tribe's historic role in a particular landscape.

Indigenous conservation practices have always required intensive interaction with their local landscapes in order to ensure that beneficial resources are curated. This requires intimate knowledge of the land and its resources, behaviors, and tendencies that can only be learned through intergenerational interactions.

Subsistence hunting, fishing and gathering is very often still done with respect for historically open and closed traditionally enforced seasons. Hunter families and clans monitor the health of the stock, forage, and weather that might impact wild herds and flocks. In addition to these practices, basketmaker families travel to certain riparian meadows, hamlets, and springs throughout the year to prune and tend to the willow, sedge, grass, or other material that they use. Fisher families go to fishing places and clear debris, monitor water temperatures, and investigate the adjacent environment for dangerous conditions and sedimentation that is disadvantageous to watersheds. Families that are gatherers of acorns, bulbs, and more check on the health of these food sources, grounds, and access points. Gatherers whose homelands are near the ocean monitor the health of that ecosystem.

California Native customs and laws are designed to ensure the survival of people and the landscapes that ensure that survival. For example, culturally sanctioned burning is decided and planned for by the families and clans that have been successfully managing their resources. Many tribal people manage lands that may only offer benefit to future generations (and not demonstrate direct benefits in the present). These kincentric practices and intergenerational covenants are still strong in that knowing another will benefit from their actions is thanks enough.

In California, some nations are asserting governmental authority over tribally controlled lands and implementing programs. Others have entered into agreements with private and municipal landholders to create cultural easements allowing tribal people access to ancestral collecting, fishing, gathering, and hunting areas. This can be seen with the relationship that the Yocha Dehe Wintun have established in Yolo country. Other tribes are partners in collaboration with several federal agencies and bureaus such as the Yurok (see case study on page 14 for more information).[14] These programs strive

14 Department of Commerce National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS); Department of the Interior Bureau of Indian Affairs (BIA), Bureau of Indian Education (BIE), Bureau of Land Management (BLM), Fish and Wildlife Service (FWS), National Park Service (NPS), United States Geological Survey (USGS); United States Department of Agriculture Forest Service and Natural Resource Conservation Service (NRCS) are the primary Federal Agencies and Bureaus that manage lands adjacent to tribal lands, but this is not an exclusive list, and it could include other offices depending on jurisdiction and location.

to help tribes with self-determination, practice of ancestral knowledge, and relationships to land and are providing leadership and much needed support in improving the forests and ecosystems across California during this time of climate change and increasing disastrous events related to a lack of kincentric ecological practice.

Another sector of contemporary land management that warrants mention is the expansive land trust network. According to the California Council of Land Trusts, California has over 150 land trusts that have "protected more than 2.5 million acres." Many of these land trusts are gifted land or raise public funds for the placement of conservation easements on these lands. There is a great opportunity to engage local tribes in the management of, and transfer of title to, these lands as a strategy for ongoing stewardship and regenerative management of our landscapes. It is not enough to simply conserve the land as we increasingly need our lands to help mitigate climate change. To this end, active land management is necessary for healthy ecosystems and people.

It is important to recognize that Native peoples, especially those Native to California, continue to steward their landscapes and gathering areas not only for their own ancestral and traditional purposes, but also for their renewal ceremonies and sustainable management practices for that larger community. It is a community that includes non-native people, plants, animals, and the land itself, as well as elements of the natural world. It is a recognition that we all exist in a concentrically related landscape.

CASE STUDIES OF INDIGENOUS LAND STEWARDSHIP AND KINCENTRICITY IN PRACTICE

Yurok Ancestral Guard, Environmental Stewardship

The Yurok Tribe has 5,816.61 acres in trust, and has collaborated with federal, state, and private partners to co-manage 1.5 million acres of aboriginal lands spanning from the ocean, lagoons, redwood forests, 45 miles of the lower Klamath River, and the majestic sacred high country. There is currently a bill in Congress to transfer 1,229 acres of the Forest Service Yurok Experimental Forest to the Yurok Tribe.[15]

The Yurok people are known as the "downriver" people, most visible at the mouth of the Klamath River estuary at Requa. The Native youth-led Yurok Ancestral Guard is a non-profit dedicated to environmental stewardship, teaching Native and non-native youth traditional skills[16] and the importance of the landscape. The Ancestral Guard works both on the Yurok Reservation and with off-Reservation Yurok, Karuk, Hupa, and Tolowa youth in learning about subsistence activities, community gardens, canoe making, working with foster children, environmental advocacy, and food sovereignty.

The Ancestral Guard works to implement culturally-based restoration of natural resource management systems. The Tribe also utilizes Natural Resource Conservation Service (NRCS) federal funds to restore forested lands, leveraging a Traditional Landscape Management Plan. This plan uses traditional land management principles, stewardship, feedback from elders, inclusion of youth, and collected data on forest health, and links human and ecological systems. The Ancestral Guard strives to promote positive role modeling, recreating intergenerational knowledge transfer for youth in elementary school, to providing healthy traditional foods to tribal elders and community members who previously suffered from food insecurity. Members of the Ancestral Guard are vetted through a process where they need to show commitment, cultural competency, willingness to learn and be corrected, and the desire and commitment to teach others.

15 H.R. 1312 - Yurok Lands Act of 2019.

16 http://www.karuk.us/index.php/departments/natural-resources/eco-cultural-revitalization/pikyav-field-institute (last accessed September 29, 2019).

Today the Yurok Tribe is the largest tribe in California with diverse tribal-led and individual tribal member-led businesses that blend traditions with modern management principles. Yurok ethno biological knowledge included habitat modification to enhance salmon habitats in prehistoric times.[17] Although the importance of salmon to the Yurok people should not be understated, salmon harvesting needs to be understood in the context of other resources, not in isolation. Overall diet breadth and generalized subsistence afforded people considerable flexibility and the capacity to respond to environmental fluctuations, contributing to resilience.

Pauma, Organic Farming

Pauma Band of Luiseño Indians has 5,906.57 acres in trust, and the tribe has 60 acres of hass avocados, Valencia oranges and lemons. In 2007, the Tribe acquired the Tierra Miguel 84.91 certified organic farm in the Pauma Valley and plans to grow 5,300 olive trees on the property.

The Luiseño territory included most of the drainage of the San Luis Rey River and covered every ecological zone from the ocean, sandy beaches, marshes, coastal chaparral, interior grassy valleys, oak groves, pines, and cedars to the top of Mount Palomar. The Pauma Reservation is located in the Pauma Valley, and historically each village contained many named places associated with food products,[18] raw materials and sacred beings.

The recent venture into farming olives is aligned with tribal core values of encouraging people to have a healthy lifestyle and live in harmony with nature. The Pauma are fortunate to have a fertile valley to call home, and the Pauma Valley is known regionally for great fresh produce. The Tribe is flourishing despite early farm practices that left little room for tribal people to participate in the economy, other than as laborers.

Pauma is a success story despite harsh circumstances and realities for Luiseño Indian people. The Luiseño people are resilient despite large-scale dispossession of historic lands, co-opting tribal culture by mainstream society. Their Southern California homelands are beautiful with the soil profile to carry a large population and grow an incredible amount of food. The Pauma Valley is a well-known agricultural area that historically has ignored tribal agency.[19] With the help of tribal veterans, tribal entrepreneurs, and tribal enterprises, influential and connected growers could no longer ignore tribal businesses. The Pauma Band of Luiseño Indians are now one of the largest employers in this valley that they have called home in perpetuity.

Pauma is able to work with other Luiseño and Southern California neighbors to promote tribal land values into daily living and its enterprises. The love for the land is evident as tribal people bring tribal youth to tribal farms. Teaching the next generation how to feed themselves is one of the most selfless acts a community can promote.

17 Campbell, Sarah K. and Virginia L. Butler. *Archaeological Evidence for Resilience of Pacific Northwest Salmon Populations and the Socio Ecological System over the last ~7,500 years.* Ecology and Society, Vol. 15, No. 1 (March 2010).

18 Bean, Lowell John and Florence C. Shipek in *Handbook of North American Indians, Volume 8: California.* Smithsonian Institution, Washington, DC, 1978 at 551.

19 Firkus, Angela. *The Agricultural Extension Service and Non-Whites in California, 1910-1932.* Agricultural History, Vol 84, No. 4 (Fall 2010) at 508.

CONCLUSION

In 1968, Senegalese forestry engineer, Baba Dioum, stated, "In the end we will conserve only what we love, we will love only what we understand, and we will understand only what we are taught." His statement was a call to action. It was important in 1968 and is equally important now for regional, national, and international organizations to support Indigenous peoples in their efforts to advance the rights and opportunities of the stewards of biocultural diversity and sustainable land management practices. This will happen only when we begin to know, support, respect, and love the practices that value relationship-based kincentric stewardship as practiced by people for over a millennium. This can start today by acknowledging this deep knowledge, uplifting and advancing this work, supporting Native-led organizations and leaders, and ultimately, re-instating stewardship and ownership of California's lands to Indigenous peoples.

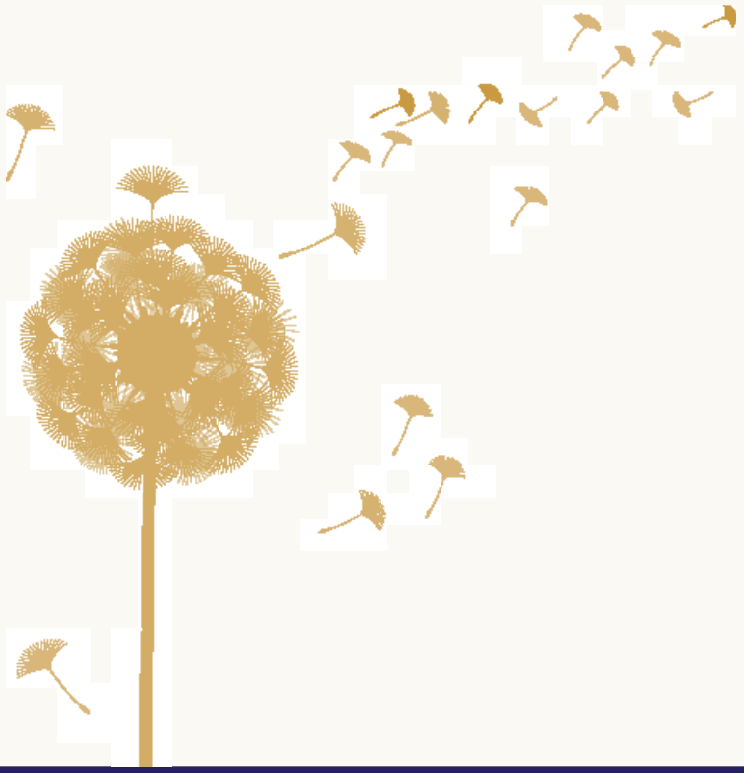
Through greater understanding the intricate role California's Indigenous people continue to uphold in the stewardship of land and food systems, philanthropies may re-think and re-value where resources are deployed in order to ensure a more resilient future for all. With greater understanding, foundations have the resources to empower tribal agency by encouraging food producers and other interested members of the public to interact with tribal experts, producers, and landowners. By raising awareness of the diversity of the food landscape and encouraging collaborations and partnerships where best suited, the possibilities are unlimited.

Tribes inhabit every kind of microclimate and geographic locale, are spread throughout every region, and are solutionaries to help re-create conditions conducive to life as they have since time immemorial. This is the kincentric ecological practice that is needed now more than ever.

RESOURCES

For philanthropists wanting to support tribes and their kincentric ecological practices, here are a few suggestions:

- Support Native-led funds directed by people rooted in communities that know the needs on the ground (see below for fund examples in California).
- Research the history of tribes in the area that you are wishing to partner with and reach out to learn more about their efforts.
- Ask what tribal communities need and are working to accomplish. Ask what they are needing in terms of support.
- Build in enough time for relationship building and visitation to establish rapport.
- Listen to the needs of the community and seek to not fit them inside philanthropic priority buckets.
- Embrace kincentric ecology as a legitimate and fundable pathway toward healthier food systems and resilient land stewardship practices. This might entail supporting language, basketry, arts, land purchase assistance, and more.
- Read the following publications by First Nations Development Institute:
    - Food Sovereignty: California – Policy Considerations for California Native Communities in 2019
    - Leveraging Native Lands, Sovereignty and Traditions: Models and Resources for Tribal Ecological Stewardship
    - Increasing Ecological Stewardship of Tribal Lands, Natural Resources and Historical Sites
    - We Need to Change How We Think: Perspectives on Philanthropy's Underfunding of Native Communities and Causes



CALIFORNIA TRIBAL-LED ORGANIZATIONS

The following Tribal-led, California organizations are actively engaged in kincentric ecological practice and preservation. Descriptions were copied from organizations' websites that are linked to below.

California Indian Basketweavers' Association

https://ciba.org/

CIBA's vision is to preserve, promote and perpetuate California Indian basketweaving traditions while providing a healthy physical, social, spiritual and economic environment for basketweavers.

Californian Indian Environmental Alliance

https://www.ciea-health.org

CIEA's core programs are the Mercury Tribal Health Program, Tribal Self-Advocacy Program and the Native Youth Environmental Leadership Program. A fourth program, the Global Mercury Program, links California Tribes with the Minamata Global Mercury Treaty. Together these programs empower California Indian communities to practice subsistence fishing cultures, avoid mercury and PCBs in fish, self-advocate for cleanup of California lands and waterways, and train the future generation to be environmental stewards.

California Indian Museum & Cultural Center

https://cimcc.org/

The purpose of the California Indian Museum and Cultural Center is to culturally enrich and benefit the people of California and the general public. The goals of the Museum and Cultural Center are to educate the public about California Indian history and cultures, to showcase California Indian cultures, to enhance and facilitate these cultures and traditions through educational and cultural activities, to preserve and protect California Indian cultural and intellectual properties, and to develop relationships with other Indigenous groups.

First Nations Development Institute

https://www.firstnations.org/

First Nations Development Institute's mission is to strengthen American Indian economies to support healthy Native communities. We invest in and create innovative institutions and models that strengthen asset control and support economic development for American Indian people and their communities.

With the support of individuals, foundations, corporate and tribal donors, First Nations Development Institute improves economic conditions for Native Americans through technical assistance and training, advocacy and policy, and direct financial grants in five key areas:

- Achieving Native Financial Empowerment
- Investing in Native Youth
- Strengthening Tribal & Community Institutions
- Advancing Household & Community Asset-Building Strategies
- Nourishing Native Foods & Health

Pauma Band of Luiseño Indians

https://www.paumatribe.com

The Pauma Band of Luiseño Indians and our ancestors have lived in the Pauma Valley and surrounding area since time immemorial. Our ancestors are buried here, we raise our children here, and this is where our future generations will continue to live and prosper.

Officially established in 1893, today our nearly 6000-acre reservation encompasses only a small portion of our peoples' traditional territory, which expands into Northern San Diego, Riverside and Orange Counties.

Píkyav Field Institute
https://www.karuk.us/index.php

Identified in the Karuk Tribe's Department of Natural Resources 5-year Strategic Plan, the overarching goal of the Píkyav Field Institute (Píkyav) is to expand Tribal capacity within the department and build upon our partnerships with collaborating academic institutions to address identified program needs for a dedicated environmental education program, supporting traditional and Western scientific knowledge to inform and augment long-term co-management within Karuk ancestral homelands; build upon and formalize our current pilot programs to educate tribal and non-tribal Youth in cultural relevant and academically and vocationally challenging programs; and address high rates of unemployment and poverty among the tribal membership. The Karuk word píkyav means "fix it" and refers to the Tribe's continuing ceremonial and diurnal efforts to restore the earth and its creatures to harmonious balance.

Sogorea Te' Land Trust
https://sogoreate-landtrust.com/

The Sogorea Te' Land Trust is an urban Indigenous women-led community organization that facilitates the return of Chochenyo and Karkin Ohlone lands in the San Francisco Bay Area to Indigenous stewardship. Sogorea Te creates opportunities for all people living in Ohlone territory to work together to re-envision the Bay Area community and what it means to live on Ohlone land. Guided by the belief that land is the foundation that can bring us together, Sogorea Te' calls on us all to heal from the legacies of colonialism and genocide, to remember different ways of living, and to do the work that our ancestors and future generations are calling us to do.

Tribal Historic Preservation Officers of California
https://ohp.parks.ca.gov/?page_id=29380

Tribal Historic Preservation Officers (THPOs) are officially designated by a federally-recognized Indian tribe to direct a program approved by the National Park Service and the THPO must have assumed some or all of the functions of State Historic Preservation Officers on Tribal lands.

Yocha Dehe Wintun Nation
https://www.yochadehe.org

Yocha Dehe Wintun Nation is an independent, self-governed nation that supports our people and the Capay Valley community by strengthening our culture, stewarding our land and creating economic independence for future generations.

Yurok Ancestral Guard
https://naturerightscouncil.org/ancestral-guard

The Ancestral Guard is an indigenous organizing network. Our programs combine Traditional ecological knowledge, science and values of world renewal.

For anyone interested in engaging in and supporting local tribes in California it is recommended to see if there is a THPO in the area you are wishing to engage with. If there is, it is recommended that you reach out to learn more from them as a first step toward engagement.

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