

# Seven Steps to Indigenous Land-Based Sustainability Practices

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## **Step 1:** *Observations, Planning, and Community Engagement*



Indigenous civilizations on every habitable continent enculturated their societies extensively in the art of honoring all as relations. Learning was based on nurturing the wellbeing of each manipulated element to ensure the survival of the ecosystem. A habitable zone is essential for the longevity of any organism. Evidence of Indigenous societies shows a steady evolution within varying landscapes and climates. Rooted in honouring the interconnection of all life forms, evolution was shaped through carefully observing then deliberately manipulating the elements of fire, earth, water, and air. These manipulations are accented by an extraordinary value system based on love, respect, honesty, humility, bravery, wisdom, and truth (Benton-Benai, 1988).

Communal planning strategies considered long term sustainability and the wellbeing of seven future generations which aimed to empower societal thriving. To achieve thriving, communities enacted principle's of polyphasic consciousness. Community members trained to deliberately alter their environments and their consciousness utilizing all the best resources at their disposal (Lumpkin, 2001). The longevity of all local inhabitants, all relations, was considered when environmental alterations were deployed (Davidson-Hunt, 2003). Cumulatively, these actions, at least theoretically, ensured that all ascendants and a multitude of biologically diverse, yet interdependent species, flourish (Davis, 1996).

## **Step 2:** *Clearing the Land, Seed Saving and Initiating a Design*



Fully inhabitable forested or other sustainable landscape types did not develop by themselves in North America (Brubacher and McGregor, 1998; Davidson-Hunt, 2003; Davis, 1996; Lentz, 2000). Modifications by regional Indigenous populations took place over the course of many generations (Lentz, 2000). The diversity of Indigenous

languages matches the diversity of environments, supporting an argument shaped through my Mayan teachings that the environment shaped language. The Gitksan and Wet'suwet'en of Northwest British Columbia burned berry patches to clear opportunistic species inhibiting their growth. As a result, berry patches quickly recovered allowing abundant future harvests (Gottesfeld, 1994). Controlled burning appears to be a common practice amongst various Indigenous groups, which appears to have benefitted landscape sustainability practices (Davidson-Hunt, 2003). Seed saving, during clearing and harvesting phases of annuals, biennials, and perennials, was also essential for later re-planting, both near and far to inhabited lands. Planting distant locales primed these regions for inhabitability for future generations (Lentz, 2000). Selected flora determined the biodiversity of the region. As each plant was removed, burned, re-planted, or converted to compost/fertilizer soil composition was enhanced and an influx of variable species, including many types of bugs and birds, essential to the chosen lifestyles of the Indigenous group, began to populate the region. This multi-generational, pre-planned, action-oriented process made chosen habitable environments sustainable for multiple generations (Lentz, 2000).

### **Step 3: *Planting, Irrigating and Fertilizing***



A biologically diverse habitat ensures an organism's survival in a range of variable climates. Lentz (2000) notes, "...the population of 40-70 million inhabitants of the Americas was concentrated in pockets, and with that came a dispossession of the natural biota followed by a supplanting of organisms more useful to humans" (p. 7). While in

Quetzaltenango in 2013, the following teaching about sustainable planting practices was shared: "Five corn seeds are planted on the day Qanil [one of the twenty days in the Tzolkin calendar]. In the planting ceremony you offer one seed for the creator, one for the animals above ground, one for the animals underground, one for the thieves, and one for the family (Personal communication, Tata Albino).

In this way, planting, irrigating, and fertilizing is a project to support the entire biota, not just people or animals, leading to respectful interactions with all relations. Strategic planting practices, water irrigation, and fertilization are essential for long term habitability and sustainability for Indigenous peoples. Brutzer (1992) writes, "The semiarid climate [of the

cloud forest ecozone] and frost hazards of the plateau favoured a patchwork of rain-fed cultivation on slopes modified by rock-faced terraces or vegetative berms (metepantli), interspersed with irrigated tracts, fed by floodwaters, small dams, or canals” (p. 350). Jane Mt. Pleasant, professor of horticulture and director of the American Indian Program at Cornell University, Ithaca, N. Y., investigated and tested the sustainable agricultural practices of her Iroquoian ancestors. She repeatedly found their polyculture practices could produce higher yields, with less power output, than modern monoculture strategies used in farming practices relied on today (Mt. Pleasant & Burt, 2010). Two fertilization benefits of Haudenosaunee planting practices included: 1. Unharvested crop yields laid to fallow to naturally replenish soil composition, which allowed replanting of the same field with the same crop for 4 to 12 years; and, 2. Corn, beans, and squash, as well as other flowers, shrubs, and trees, are companion planted, allowing each to offer yield benefits to the others. The idea that Turtle Island was a pristine untouched wilderness or a Terra Nullius is simply false. In 2014, 800 year old squash seeds discovered in a clay vessel were unearthed in an archaeological dig near Winnipeg, MB. The seeds miraculously grew and produced a squash, once thought to be extinct, that was adapted to cooler climates. Since the popularity of sustainable agriculture and food sovereignty is on the rise in North America, it is becoming commonplace to seek wisdom from Indigenous peoples whose civilizations have lived sustainably for millennia (Grey & Patel, 2014).

#### **Step 4: Maintenance**



Controlled burns, intermingling wild and cultivated plots, transplanting, coppicing, selective harvesting, creating micro environments at various elevations, cross breeding for particular characteristics, soil fertilization, and selective seed dispersal are specialized techniques in the maintenance of sustainable environments. These techniques are often the responsibility of women in Indigenous societies (Grey & Patel, 2014).

These variable maintenance techniques depend highly on types of harvest, region, climate, and the selected lifestyle of regional peoples. For example, it was up to youth in woodland communities to hunt squirrels using slingshots to keep them out of sap collecting containers during maple sap harvests and also to provide a source of protein for the community. Mitigating threats to harvests, such as pest infestations, animal predation, overgrowth of

opportunistic species, and various types of blight, were a matter of survival and had to be monitored carefully. All maintenance practices were aimed at ensuring successful harvests, sustainability, preservation of the life way, and honoring the wellbeing of all relations of flora and fauna.

### **Step 5: *Harvesting***



Harvest times varied widely depending on climate, crop, and community size. Peters (2000) identifies that in polycyclic fallow systems, “Fruits, fibres and medicinal plants are periodically harvested as the forest develops, but there is never a final harvest cut or felling to clear the plot as with monocyclic systems” (In Lentz, 2000, p. 209). One example is the wild ricing regions of the Great Lakes, where

seeds are dispersed during harvests (Grey & Patel, 2014). Sacred agreements between humans, animals, plants, and minerals formed a basis of awareness that ensured only what is needed is harvested. Sustainability was a practice, not a story, and grandmothers monitored community member skill developments carefully. Successful harvests may have also included ritual in which the following took place: 1. The best parts of a harvest are offered to land, fire, water, or aging community members or those in need; 2. The strongest and most resilient plants were identified and saved for seed (when applicable), for future plantings; and, 3. The locations of important medicines were safeguarded for their continual regeneration and use when needed. Whether it be honey, corn, wild rice, berries, fish, wild game, seagull eggs, or pine cones harvesting techniques were aimed at achieving adequate yields for consumption, trade, communal vitality, and long-term sustainability. In this way, future and current generations of all relations were nourished.

### **Step 6: *Preparing, preserving, and Storing***



Preparing, preserving, and storing a harvest depends on the type and amount of harvest, types of materials available in the local environment, inclement weather, and community need. Outcomes of a successful harvest for Anishinaabeg people meant preparing to feast and celebrate. In late winter, as the snow melted, large communal gatherings took place at

strategic locations after the maple sap was harvested and fish began to migrate. Maple sap was boiled down extensively into granulated sugar and stored in birch bark containers, called makak, for ease of transportation. When Trout began spawning, disparate communities re-united and spring preparations and ceremonies were initiated. These included trade, intermarriages, games (often meant to train the young for the arduous tasks ahead), strengthening alliances, exchanging gifts, identifying and naming leaders and new community members, and even gambling. In Dene communities in Northern Saskatchewan, moose, deer, and fish were dried throughout the summer using varying techniques which done correctly could preserve for one to five years. Clay or stone containers were filled with seeds buried in marked locations and recovered when the need for planting or consumption arose. Preparing, preserving, and storing techniques varied widely amongst Indigenous peoples but facilitated thriving in their selected environments.

## **Step 7: *Sharing and Trading***



Sharing and trading depends on the type and amount of harvest available and internal and external community needs. Indigenous peoples on Turtle Island had vast established trade networks. These co-constructed networks enabled a diverse and wholesome diet in many regions. In reference to Odawa trade patterns, McDonnell (2015) writes, "In 1819 alone,

they [Waganawkezee Odawa] sent a thousand bushels of corn to the island [Manitoulin Island]; often they had three thousand or more" (p. 322). Strong internal and external communal networks, strengthened through trade, were essential to the long-term survivability of many peoples. Fritz comments on the Hopewellian system of trade and high value of storable

grains by writing, "Community leaders wishing to impress trade partners and other visitors would need surplus food for feasts. Trading parties would benefit from portable rations" (In Lentz, 2000, p. 232). Transportation of goods took place through vast river and lake networks interspersed with pathways, and traders and their families were often multi-linguists, trained diplomats, and fluent in the respectful protocols of their neighbors. The extraordinary physical and intellectual condition of traders was essential for success.

Images:  
seedsavers.org  
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