

FOURTH WORLD

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History sticks out its tongue at us as reports from around the world strikes major blow to our complacent world. Pollution levels rising five times above the safe amount, forest covers depleting at a blurring pace, and the gaping holes torn open in the ozone layer. Time is cyclical, says the Warlis, a tribe found in central India. Roughly translating, it just means that for all our conquests and triumphs, at the end we will all come back scourging for our origin. This article is homage to us, the human race, in its most primordial form, a celebration of they who hadn't yet learned the art of contempt and condescence. Warlis aren't particularly enthusiastic about forcing their children into the system of perfunctory rote learning; rather, they initiate them into a more profound system of time and experience weathered wisdom, of the spirit of co-operation, the ethics of equality or even the art of taking leisure and tricks to happiness. An *illiterate* Warli can identify over a hundred edible roots and tubers. Mine is an attempt, perhaps a feeble one, to undone the harms we have inflicted on them and which has boomeranged back on us through a process of the systematic marginalization of the indigenous communities across the world, because we were not mature enough to appreciate their true importance, by acknowledging them and more importantly, the role they can play in taking a u-turn from the impending doom we are headed towards. This article is divided into the following subparts: first, why it is important to acknowledge the role that indigenous practices play in sustainable management of resources like water and forest. The next section gives us a brief glimpse into various such practices from across the world, while the two that follow are on the area of my focus, forest and more importantly biodiversity as a resource and its management in tribal India, along with examples of their agricultural practices which is not contradictory to the resource but rather complimentary; the mechanisms, the underlying belief system and the ideological conflict between their and our version of progress (not development), especially in the context of agro forestry. The concluding part, in the spirit of the Warli belief of cyclic nature of time, returns once again to my earnest entreaty to stop denying the truth of our existence.

Jeffery D. Sachs once argued that there needn't really be a tradeoff between development and environment conservation. Because, a lot protecting the environment costs a lot less than remedying the damage inflicted by this tradeoff. And what better than roping in the traditional knowledge system for this purpose? To extract it from they who, culturally inherit a legacy of resource optimization and waste minimalisation? Knowledge is an outcome of model making on the functioning of the natural world, states Gadgil. A sustainable knowledge system, thus can best be devised in societies that are closely integrated into the nature. Because to establish a meaningful relationship with the natural resource base we need to think of human as a part of the environment that surrounds it and not superior to it and emphasize on an interaction based on reciprocal reverence. Self regulatory mechanisms evolve when confronted with resource scarcity and in the process, we realize the importance of the components of our surrounding landscape in it and thus the necessity to conserve them. This mostly is relevant for the semi-sedentary tribal folks from across the globe. But like, from them we learn the importance of preserving the relatively stable elements of air, soil and water, from the hunter gatherer aboriginal groups we learn the technicalities of fire. Above all, from them, we learn the art that's in vogue at the moment, the art of restraint.

The missionaries had brought mirrors to divorce the human from the nature, to make it recede into the background while you become the sole focus. They had denounced the forests as evil as they denounce the darkness. But you should never defy the shaman(the head of the clan council in certain tribes), as we saw in the Amazons, where for all the diktat of the missionaries, they just managed to silence them, drove some to suicide, but failed, in the process to suppress the truth or protect the legacies to be passed over. One immediate consequence of undermining the authority of the shaman and the local way of governing the land was the loss of wildlife around the missionary compound where without the laws and protection, the animals were overhunted to the point of scarcity. The pygmies of the Ituri forest, Congo sings accolades to the darkness of forests. The *sonadores* or dreamers are said to find wisdom in the viscous darkness of the Amazon's enigmatic trails, they say everything is initially nurtured by it, seeds, babies, starlight or love. The Amazonians have evolved a system of meaningful social interaction between them and their surrounding nature, characterized by reciprocity, restraint and respect. By incorporating into their folklores and chronicles the importance of the elements of the wilderness, they have managed to evolve(perhaps not always consciously) a robust culture of respecting, hence conserving these elements. While the ides of democracy were said to infect America first, instances prove that it had been practiced in the primitive societies for centuries, even extending and developing it into ecocracy. In many parts of India, the communities maintain scared groves, colloquially known as sharnas, originating from the word *Sharana* meaning asylum where both plants and animals are given absolute protection. We will look into their importance in the next section of the article. Sometimes these practices of conserving the environment are legitimized through religious believes. The Karens of Thailand tie the umbilical cord of a new born baby to a tree, harming which, is said to inflict harm upon the child. The Malos in Bangladesh marry the girl to a tree and the boy to a river before marrying them to each other. Even democratic practices are endorsed through these systems. Some Indian Communities believe that acquiring surpluses over others leads the Satan to harm the family hence they should distribute the additional resource throughout the village. Employment of religious symbolism and sanctions often ensures conformity through its psychological appeal. If used as a taboo or an omen, it induces the participants themselves to ensure that it is being followed by the members of the clan. For the Amazonians, acquiring of resources is considered to be an ethical affair which should be devoid of greed. The Warli clan laws forbids the more resourceful from building larger houses for an ostentatious display of their wealth. Most indigenous societies are dependent on a consumption base spanning a few hundred kilometers. Since the scope of transforming the resources available through manufacturing or supplementing them with imports was limited, if any, at all, they have a strong incentive to both conserve and enhance (by manipulating the landscape) the local biodiversity. Works on the Runa Indian's swidden in Amazon by Irvin shows examples of agro forestry rather than just slash and burn. Compared to unmanaged fallows, Irvin show how their method actually increased the species diversity in five year old fallows. He characterized it by low intensity succession management (which in this case was planting and conserving secondary species) which alters the core compositing of the forest in the long run. Research from New Papua Guiana(PNG) show how clans consider it to be their social obligation to preserve the biodiversity of the area that falls under the clan jurisdiction. The Zaukave practicing shifting cultivation rotate crops to maintain soil fertility. By burning dry vegetation they release the trapped nutrients, which is vital for the soil, which is rooted in age old understanding of nutrient recycling and regrowth control. This recycling process helps prevents the need to frequently clear new areas hence preserving the forest. Also they are able to consistently use previously fallowing land in a cyclic process, further preserving the biodiversity by leaving it untouched in most parts.

The construction practices of the Kinene, PNG, shows methods that strongly advocate against wastage of resources as well as production of durable artifacts to prevent over harvesting of the resources. This is implemented by a tacit code of conduct amongst artisans that encourage minimal resource use.

Diversification of the resources used is an important tool for both reduction of the amount employed of each resource as well as for their sustainable management in the long run. Both these practices are in response to the local conditions of their area of habitat and since their ways of extracting and managing resource, are in sync with the surrounding environment they ensure sustainability. Certain aquacultures, like the once practiced by communities in Indonesia and China also have contributed towards not only preservation but also of augmentation of the ecosystem through practices of enhancement and controlled use of the existing resource. Studies from Sierra Leone shows how innovations rooted in indigenous knowledge comes to the aid of small scale farmers in resource scant regions to improve production. Polyculture (the practice of producing multiple crops), traditionally promoted for diet diversity, risk reduction, maximizing production under low level of technology and optimum utilization of labor, et al has slowly started catch the attention of the modern day agronomists as well, given its multiple benefits, relevant not only in tiny parochial clusters but also in the macro level.

Often we perceive development to be a land quarantined by social myths and self conjured prejudices. An ostracization that makes no sense. In the process, we end up stigmatizing things that tend to ensure sustainable management of the core values that build the foundation of any society, only because we deem them to be unfit to co-exist with our version of progress. Maybe, sometimes, we are not strong enough to admit to the importance of certain things, like co-existence. Just like the patriarchy we live in, our inner self gradually moulds itself around a system of hierarchy and not diversity. The tribals believe in co-evolving with the nature, modifying it but also actively maintaining it in a diverse and productive state. Enshrined in their practices are human experiences spanning millenias and incorporating myriad cultures. Sometimes, its faith they employ. Not always is it opium, sometimes it inspires clarity. Maybe, like a psychedelic the immediate future looks a little, but more importantly, unlike it, these religious believes lay road to a distant future that doesn't look bleak, contrary to the way it does within our 'transience of time' framework. For instances, in parts of southern India, sacred groves couldn't be touched by axes under religious sanction unless it for the purpose of building sacred buildings. Sometimes these holistic approaches of cosmocentrism are manifested through lifestyle and mythologies as is seen by the Warli's use of marginal land or traditions of co-operation. In Sarguja district of Chhattisgarh, every village has a grove of about 20 hectares in which no animal can be hunted or tree cut down. The Bishnois of Rajasthan never uproot any Khejadi tree. The Warlis locate underground water by observing the small mounds made by the land crabs. Larger the number of the crab holes, more is the availability of water. Mostly, the traditional knowledge system works through rule of thumbs, simple and enriched by years of experiences. Often, the loss of commons and free food for the indigenous communities is a loss on much more fundamental level than the freedom of choice gained through diverse consumer products imported from the inlands. Our 'progress' is depriving them of food, of a complete diet along with impoverishing our resource base in the long run. Anyways, without indulging in further unstructured meandering, let's gather up my argument through some examples from the Southern parts of India as to why we shall be allowing the employment of community based traditional knowledge and methods of governance in our endeavor to unmaking of a botched up history. It has been found that the *gurjan* tree has its northern limit in a couple of sacred groves in the Western Ghats. Similarly, several rare

and threatened species of floras have their limits in various such groves. A sacred grove near Katlekan, Uttar Kannada, has been observed to be the home to endangered primates like lion-tailed macaques.

An UNDP project from Jharkhand and Chhattisgarh talks of strengthening of decentralized people's institutions for sustainable management of natural resources and documentation of traditional knowledge about biological resources as their achievements, before enlisting instances of how this project has benefitted people from remote red infested belts like Khunti, Jharkhand. For the agriculture practicing tribes of Jharkhand, like the *Mundas*, *Oraons* and *Santhals*, the most important heirloom that they pass on to their posterity is the knowledge and management skills for resource conserving practices of agriculture, which testifies the continuing resilience of the agro-ecosystems, in the face of ever transient environmental and climate conditions and keeps providing them with food security. Low cost structures like grassed waterways are constructed to prevent soil and water erosion. Parsimony is a virtue, especially in the face of the fast depleting resources. An unique characteristic of plant utilization amongst the tribes of Southern India is that they use each plant for only a specific purpose, though its other parts might have other uses. It is also unique in its diverse choices, while normally we depend on at most 100-150 plants, they seem to rely on 1000-1500 plants. These approaches of diversification prevent the over utilization of any particular plant. They show prudence and ecological wisdom not only in utilizing the resource but also in its distribution, which is done to maximize the utility of both the community and its individual. Digressing a little from the topic, there's once instance of prudential distribution that I can't help but invoke, that of management of irrigation facilities in water scarce Ladakh, where villages assign water officers whose main purpose is to ensure that all the fields, till the brink of the territorial demarcation of the village get irrigated. A practice employed by the Kadars of Tamil Nadu to prevent wastage is to use a stone to hit the trunk of the tree while edible fruits. The weight of the stone is such that only the ripe fall down. This also ensures seed viability and further regeneration of the species. Indigenous practices of seed preservation, like in cloth covered earthen pots and traditional bamboo granaries has helped maintain, preserve and conserve genetic strains of various cereals from extinction. The Convention for the Safeguarding of the Intangible Cultural Heritage, adopted by the 32nd session of the General Conference of UNESCO in September 2003, had asked for the safeguarding of various such skills and knowledge, practiced by traditional communities and form a part of their cultural heritage. In India, the Biological Diversity Act contains a framework provision for the protection of these rare knowledge of indigenous communities, though they are hardly implemented in reality. Another example of the importance of this knowledge can be that of the village of Mendha in Gadchiroli, Maharashtra when they decided to revert back to their ancient techniques of biodiversity conservation by deciding on preventing commercialization of forests, collecting only non timber forest produce and also by regulating the amount of such resources to extracted as well as undertaking measures to soil erosion. This however didn't mean that they turned their back on the rest of the world, rather sought to harmonize the world of theirs and ours. But by giving cognition to their right to manage their own resources, it became easier for them to enforce the rules they created for the purpose, as even a tacit agreement of legitimizing them can make them in effect more easily employable. Conflict sometimes arise when the government tries to implement their policies without consulting the traditional communities whose lives are dependent on these resources. Social fencing, a practice of attaching socially sanctioned significance to a particular thing, is an important way to conserve biodiversity. In the Zimithang area of Arunachal Pradesh, where the ethnic groups of the Monpas and Shirdukpens live, the whole mountain area is considered sacred, hence extraction of any plant from them is

prevented. Social taboos attached to various faunas, such as the tiger amongst the Monpas, help protect these species. Thus when, a tiger is even mistakenly killed by a Monpa, the whole village has to go through a series of restricts and perform compensatory rituals. These sort of disincentives are highly effective in the face of the fact that in a society that is so close knit and almost insulated to the outer world, implications of violating the norm and thus attracting punishments imposable on the entire village can be felt rather strongly. This leads to a system of 'quasi-voluntary compliance' (Margaret Levi, 1983) ensured by the participants themselves. The Sherdukpen village councils allow a family to harvest bamboo after intervals of 4-5 years. These councils exercise considerable influence over the village community and are considered to be prime custodian of the inherited knowledge. This, somewhat like what Ostrom had said, creates a '*congruence between appropriation and provision rules and local conditions*', this helps preserve the resource and since it is enforced through an influential authority that can't be defied through both religious and social edict, it is made somewhat sacrosanct. Thus when they are defied, as we saw in the case of the Amazonian shamans, the results can be cataclysmic. Ignoring the conservation of cultural diversity and the associated traditional ecological knowledge is detrimental for the cause of conservation of biodiversity on which the entire world depends for its survival.

In conclusion, it's about time we do away with disregard and look to grow resources instead of mining them; conserving the little that we are left with. Because, if time indeed is linear, we can't keep freely floating in this leaden dimension for long, we progress and progress perhaps is not always about looking forward. Sometimes we need to look over our shoulders too. Not a quick glance. We need to gloat. Because *walking* forward doesn't always mean severing ties with our origin, sustainably, it means embracing it.