

COALITION FOR ENVIRONMENT AND DEVELOPMENT Sustainable Cultures – Cultures of Sustainability

BACKGROUND PAPER 22

by

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LEARNING FROM INDIA'S THAR*

Deserts are an ecological blessing. A desert is not only an experience in vast space and expanse; it is also a deep feeling for wilderness, silence and solitude. The desert is an experience without which life will be as poor as without hills or the sea. Thank God! We have a desert in India – The Thar.

The term desert evokes images of vast undulating stretches of endless yellowish sand-dunes criss-crossed by caravans of colourfully-robed nomads riding camels or camel-carts; romance and adventure amidst high velocity sand storms, and legends of chivalry and valour of medieval heroes. The vision perhaps includes a lonely plant breaking the otherwise bleak monotony, a shepherd with an exotic headgear leading a huge flock of sheep and goat in a barren landscape totally bereft of vegetation in search of pastures.

Perhaps the spectre also includes the images of few-and-far-between oases nourished by an artesian well or a natural springs' thin stream, shaded by a date- palm-grove. This is an imprint of the 'tell-a-tale about the Sahara and the Arabian deserts', and is certainly not too far from that reality. However, deserts are such unique eco-systems that they can be understood only by experience, because deserts are also deceptive. Mirages signify deserts – you see water where there is only sand.

India's Thar defies these 'typical' 'desertic' images and yet fits into the definitions of hot and arid, semi arid eco-systems. In fact the Great Indian Desert is unique human-eco-organism of hot aridity.

* This learning is an outcome of my journeys in the Thar that began with reporting of deaths during the drought of 1983, including a padyatra (March on foot) in 1986-87 of 18 months 6000 Km.

Marwar – The Great Thar Desert: Sustainability, Encounter with Disaster

The Thar desert, spread over 250,000 sq. kms, comprising western Rajasthan and the region of Kachchh in Gujarat, is a unique landmass. Like all deserts, the Indian Thar too, has extreme climates – very high (42^o C to 50^o C) and low (0^o C to - 3^o C) temperatures in summer and winter respectively; high velocity winds with scanty and erratic rainfall ranging from 50mm to 500mm. Sprawling, undulating sand dunes, vast lowly rocky hills almost bereft of vegetation, palish grass scrub lands and saline marshes complete the bleak desert landscape.

The Thar distinguishes itself amongst arid tracts of the world by its high density of human (84/km²) and livestock population (120/km²) as also by its fairly long history of human settlement, dating back to the middle Paleolithic age.

This makes Thar an appropriate model for learning the processes and the impact of “intense” human occupation (both traditional and modern) on a rather delicate/fragile eco-system, specially in view of our current global concern for a culturally rich and sustainable mode of life.

One consequence of the evolution of survival culture was that this hostile region became a chosen haven for different people from far and near since time immemorial. Today’s rural Marwar society comprises nearly a score of tribal communities, a dozen of untouchable caste groups, scores of semi-tribal peasant castes and an equally large number of non-tribal communities – all living together in a fully evolved federal community.

With some variation in the structure of legends of deified folk heroes and almost all local gods – like pir Pabu (a regional godhead or local incarnation also called bhomiya) – were commonly shared by different communities. But this harmony of several centuries is now cracking under the strain of modernity.

Tribal Identity

It is important to appreciate specifically in the Indian context, that such approximation of different peoples/communities did not threaten them with either total submergence or transformation into indistinguishable homogeneity. But proximate entities did not remain exactly as they were in the process of approximation.

The evolution of civilization in this region was greatly enriched and constituted by tribal cultures both in the modes of production, rather modes of livelihood and survival, and also in the notion and observation of ritual and worship.

Life in the arid Thar had to be nurtured in close proximity with nature. Any distancing from nature could not even be sought. On the contrary, proximation with nature was accepted as unavoidable for human existence by all who made the Thar their home. Hence to this day it is not possible to indicate anything like a clear divide between “tribal” and “non-tribal”.

Unity of Ritual, Culture and Economy

Worship of mother earth, service of the cow and various other creatures, and reverence for a variety of vegetation are symbolic of ancient tribal sensibilities of highly emotive relationship with nature. In evolved and refined texts of ancient Indian myths the cow has been described as a synonym of the earth. She is constantly sacrificing the self to preserve the cycle of nature specifically in relation to human beings, and much more so in the desert eco-system. In the Indian desert the cow has played a far more vital role than just being a foster mother. Besides providing for humans, she helped conserve and maintain the productivity of the desert soils most effectively. Cowdung acted as the medium of broadcasting seeds, duly fertilized and conserving them as well during long spells of dry years, of many a plant which man could not grow otherwise. Dried cowdung cakes supplemented the fuel needs as a primary source of energy.

The cow's male progeny alone provided the draught power, when the horse had not arrived on the scene of transport and the camel was still unknown on the Indian continent.

Moreover, a cow is a light grazer compared to all other livestock animals, who takes every delicate care to ensure that not a root is plucked. This aspect, cautious withdrawal from nature, has been of very special significance in conserving the desert soils' fertility.

In the arid ecology where agriculture could be practiced on a margin and primary dependence had to be on pastoral mode of production, the cow and its progeny constituted both the primary resource of livelihood and also the ideology of its conservation. Selection of the cow as primary source of livelihood was neither incidental nor accidental – it was a highly deliberated and cautious choice. Adept in raising of sheep and goat since pre-historic times and aware of their detrimental role in conservation of the arid eco-system, the people had evolved a culture of social taboos for raising non-cattle livestock.

On the other hand society assigned the highest status to anyone who laid down his life in the protection of the cow – deification was ensured for such martyrs.

Healing and Charisma

All night congregations are held in Pabu's memory at which his noble deeds are sung with great devotion, and a long cloth painting (phad), depicting valorous deeds of Pabu and his seven Bhil companions, is unfolded. The Bhil community of the desert region cherishes Pabu's memory as a comrade and practices such rituals which would bring them in direct communion with Pabu's deified soul enabling them to extend Pabu's beneficence to those in distress. Pabu's charisma still holds good and remains a major healing process to this day. Those who succeed in communicating Pabu's charismatic beneficence are known as *bhopa* (a general term for faith healers) and

they are highly revered in the community. Only a Bhil observing strict ritualistically pure life can become Pabu's bhopa.

Encounter with Modernity

All life – human, animal and vegetable – has survived, rather flourished, in this hostile region by evolving a delicate and precarious relationship with the fragile eco-system. However, this integrated mode of life in this region was destabilized in the early 19th Century when the colonial rulers of India initiated a reordering of the region into a commercial periphery of London and Liverpool. By the turn of the 19th century the region began to be ravaged by prolonged droughts, famine and mass hunger. Marwar became a synonym for the region of death.

Even though the people of Marwar had always perceived a direct relationship between close grazing by sheep and goat and the consequent desertification and increasing recurrence of drought and famine, they could not hold their ground once the region was linked with the London and Liverpool market and wool, mutton and hides became marketable commodities. The “cow protectors” soon transformed into “sheep breeders” without much cultural resistance.

Yet another blow to survival structures in the arid zone was dealt during the 1950s when land was privatized under the banner of “land reforms” after India's freedom from the British in 1947. The result was a basic restructuring, fraught with dangerous and unimagined consequences, of the arid zone's social and physical environment. Formerly life in the Thar was based primarily on a pastoral economy, supplemented by cottage crafts and marginal agriculture linked to a “community sense” with the natural endowments. Now agriculture appears to be the “primary source of sustenance”, and at the same time pressure on the pastoral sector has increased manifold.

It would be inappropriate to suggest that unmindful transformation from tradition to modernity brought only grief to the Thar society. Even though the manifest fact is that the contact with the world outside did harm to a society that had remained insulated not only from the larger world but even from its own urban centres, for much more than a millennium, modern development intentions in the region have brought about many a paradoxical transformations.

Modernity has been successful in implanting a sense of political power which consequentially instills a hope for attaining social dignity and individual creativity as well as belief in the efficacy of larger and larger institutions of federal power. The remotest of Marwaris are happy to be members of an Indian nation that was born after freedom from British colonialism.

Sadly, one visible result is that human beings – mostly women – instead of bullocks must now be employed for drawing water from 100 metre deep wells and pulling the plough. Roads were meant to bring rural Marwar closer to the metropolises. Exactly the contrary has been the result. The misery and sadness of the rural countryside has moved farther away from the minds of the ruling elites. But modern roads and speedier transport has only made it easier for the elites to exploit and plunder the

people's resources. Usury links which were too thin to be explorative are now firmly established to drain the resources of the tribal and rural communities. Filigreed rohira wood furnitures, colourful wall hangings, camel wool rugs for doormats are now common decorations in the drawing rooms of the world's most parasitic elite. Indigenous people and rural communities must now pay for essential commodities and modern industrial and cultural goods by transferring raw wool, unprocessed hides and skins, carcasses, rare wood for furniture and fuel and even parts of their buildings and monuments all raised, developed or produced at a substantial social and environmental cost. The 'resource' drain from a fragile eco-system, is large and massive beyond comprehension.

The India-Pakistan wars of 1965, 1971 and 2002 delivered yet another blow to the life support structures in the Thar. Besides shrinking of the pastures, a massive presence of troops, border police, periodic mock war exercises, keep the entire region constantly destabilized and also heavily encroach upon the very thin resource base of water and good quality land.

The sheer physical survival of the people of Marwar is in question today. The age old links between physical and cultural institutions have been snapped. The life style of frugal habits has been long forgotten. Over-cultivation, unmindful grazing, irrational felling of green woods and picking of cow dung from grass lands for domestic fuel needs are examples of fatal blows to the eco-cultural institutions of survival in the arid zone.

The horrifying process of large scale starvation deaths in this region continues irrespective of good or bad monsoon. It is hardly realized that the survival options available until recently, are no longer there. The *ad nauseum* debate in the press and assemblies is content to grapple with establishing or denying whether a person before death was denied food for a prolonged period. Even after news reports year after year of large scale famine deaths, no attempt is ever made either by the governmental or voluntary research agencies to find out what happened in actual life. What has happened is far more sordid and painful. Surveys in the famine stricken areas make clear that prolonged hunger has reduced most people to a sub human level and they linger on the brink of death for months and years. The human body has adjusted to such an unimaginably low level of consumption that even a situation of total lack of food for a couple of days does not aggravate the symptoms produced by third degree malnutrition.

Development planning and public policies made in Delhi or even in Jaipur (the Provincial capital) reflect little appreciation of either the potential or the problems of the desert eco-system. There is no attempt to discover and utilize the pre-existing ecology specific and socially adapted bio-technological wisdom of the people.

Traditional Water Management

Water is the principal limiting factor for all human activity in the desert. The main reason is poor and erratic rainfall – 50mm to 500mm with 60% to 70% variability coefficient; high evaporation, percolation and evapotranspiration losses. Nearly two-thirds of the region suffers from ground water salinity.

Over centuries and millennia, the Thar dwellers have learnt to live and prosper within the acute constraints of water availability. It was only natural that water management became a highly developed skill, rather a science, in the Indian desert. There exists, for example, a complete time-honoured technology for the collection and preservation of every available drop of surface water as is evident from the visible planning and organization of (1) **khadins** – a series of two, three, four or more mud masonry embankments (duly stabilized with vegetation, and clay and cow dung treatment of the catchment area) intended to store monsoon water for agriculture and livestock purposes and reap a wheat harvest in the available moisture by dry farming technology; (2) the village **nadis** with **khejri** (*prosopis cineraria*) and grass specifically useful for cattle; and (3) **tankas** – household underground water tanks for which the house-top surfaces constituted the catchment area; Besides, **suchita** (hygiene) rules to preserve the purity of water were so strictly an elaborately applied that every kind of pollution was taken care of. Bathing, washing clothes, or using the catchment area for defecation was unthinkable. Even the hierarchy of use, purpose and mode of drawing water were prescribed.

The common dugwells, 250 to 300 feet deep in sandy soils with stone walls and massive step-wells (**baories**) with their breath-taking geometrical symmetry are a testimony to the engineering skills developed by the people of Thar centuries, rather millenniums ago. These efforts were matched by unique social organization ensuring proper maintenance of these structures.

Hundreds of thousands of such water conserving structures – **Khadins, nadis, talabs, johads, kohars, baories, jahalaras, beris** etc. are in use even today. The Geological Society of India has reported that these traditional water conservation structures store almost 99% of all the surface stored water in the Thar districts.

The effectiveness and continuing need of the people's own technology can be gauged from the fact that despite the much tom-tommed achievements of modern scientific intervention nearly 60% of the region's potable water requirement for both man and animal is still met by the traditional management of surface water.

But a blinkered modernization process in the form of roads, piped water, mines, urban expansion is rapidly destroying the catchments and distribution systems of these traditional water structures. Kayalana water works which had a catchment of more than 100 square kilometers and supplied water to the city of Jodhpur for more than 300 years has been completely destroyed in the last four decades. The famous Lonela khadin in Jaisalmer which was designed nearly ten millenniums ago and is reported to have produced nearly 2000 tons of wheat regularly until 1950s, is now so truncated by roads and colonies that even a 100 ton harvest is rare.

Ground water resources in the region are being over-exploited. The spread of intensive cultivation of high water consuming crops like red chillies and rapid urbanization has begun to deplete the ground water resources. The Rampur-Mathania basin just outside of Jodhpur is a massive fresh water aquifer. But chilly cultivation which needs more than 100% irrigation and the unquenchable needs of Jodhpur town – where all locally managed water systems have been systematically rendered

unserviceable – has led to a withdrawal from this aquifer which is three times more than the rate of recharge. The State's Groundwater Board has estimated that the entire aquifer will be depleted in less than 40 years at the current rate of use. Of course few, care that the desert's aquifers were created over thousands and millions of years when wetter climate or different geological conditions prevailed here. Industrial pollution of many kinds is the latest menace for the desert's ground water resources.

Any attempt to reverse the deterioration of the Thar water resources will have to be developed in accordance to traditional wisdom. It will require concern for maximum conservation of rainwater both above and below the ground, protection and rejuvenation of the catchments, renewal of communities and social customs that prevented pollution and other abuses of water, reduction of cultivation pressures by promoting pastures and horticulture, simple measures of soil moisture conservation and so on. An additional challenge is to do so while retaining the possibility of social dignity and creativity unleashed by the vote – raj (adult franchise). Unfortunately none of these find a place in the modern system of water management.

Conclusion

We had arrived in the Thar in 1983 when large scale deaths and horrifying scarcities were reported in the wake of persistent drought from the western Thar. The above note is a brief, rather sketchy summary of our comprehensive action research and anthropological studies in the region for nearly a decade. The ecological crises and consequent misery persists unabated till date.

However, the 'bleak landscape' of our earlier encounters in the 1980s has drastically changed, transforming into an apparent scene of prosperity with a significant consumption of modern goods. Roads criss-crossing the desert districts are now heavily punctuated with road side marts with shops laden with large varieties of goods and articles, which are described as definite indicators of developments and new found prosperity. Motor bus junctions which used to buzz with life only two to three times a day, i.e. on arrival and departures of different buses, are now highly developed shopping centres where Coca Cola to cosmetics and women's hosiery (lingerie) and many other utilities are available in abundance. If shopping spree and automobiles of all types for human and goods transport is any indicator, it cannot be denied that some new found prosperity has arrived in India's long impoverished Thar desert. The linkages with the Global Economy since 1990s surely needs to be enquired into in detail to appreciate the enigmatic phenomena, as well as mechanisms of 'globalisation and liberalisation' under the scheme of the new world economy, necessary to sustain the imperial masters.

Mean while, we wish to reinstate, rather reformulate our perspectives about the Thar people, society and economy. In our earnest view, the story of the Thar has acquired a greater relevance in the context of extensive search for alternatives or 'another world', which is little less oppressive and has greater resilience for survival and continues longer than what is imagined today.

In this brief essay, we wish to highlight only two elementary morals from a long, complex and adorable legend of the Tharis:

1. Communities with distinct and well defined ethno-identities can approximate and federate into an eco-specific organically evolving social alliance and yet not lose their distinctiveness, irrespective of very low proportional numbers. Immigrant Rajputs, Sindhi and Pathan Musalmans are as indigenous as the Nats, Bheels and Bhambhis-the three of many tribal inhabitants of Thar.

In the first place contrasting comparisons might be drawn with the examples of Americas where the white Europeans have decimated an entire indigenous people and established the most oppressive social hegemony based on racial and ethnic discrimination.

Studies in the Thar's anthropomorphology will have typologies and illustrations for resolving a large variety of social strife the world over.

Lessons could be drawn for designing developmental models which aim at ensuring social security for all rather than policies that result in disintegration by encouraging separatist tendencies.

India's Thar offers an exemplar where an entire people can be viewed as a marginalized indigenous community. Hence an integrated program for development of all and resolution of numerous inequities can be informed by traditional wisdom rather than the modernist schemes of preferential opportunities for the deprived and the handicapped classes.

2. The second lesson is a natural corollary of the first. It is intended to emphasise the latent and manifest habit of frugality and sharing on the basis of common ownership, a sense of piety for entire nature-treating the earth as a spiritual endowment which constitutes the normative behaviour of an entire people, based on long experience of preparing for unforeseen calamitous scarcities and other natural disasters.

The entire world will be able to draw from their experience and innovations. Urgent experimentation is needed by granting Tharis regional and local autonomy in the following sectors:

1. Protecting the traditional modes of life and living without short-circuiting the newly acquired political equality.
2. Health and Healing Programmes.
3. Education for cultural survival and development.
4. Resource allocation and management in land and animal husbandry with special reference to augmenting water resources and moisture regimes
5. Restoration and development of cottage craft and artisan skills.
6. Development of communication skills, capacities and institutions.

There is only one pre-condition about the success of our proposal – seal the usury links to prevent the snatching of local and regional resources for a minimum period of 10 years.

It is a bad comment on our times and civilization that the indigenous populations find themselves in the position of the conquered, the subjugated or the annihilated every

where in the world. They survive as the poorest of the poor, let us not forget that they hold the key to the future survival of the humanity.

Survival is not simple, According to tribal sensibility, in India and also elsewhere in the world, every new generation has a sacred responsibility to ensure that the seventh future generation will inherit the earth, as it was seven generations ago. This tribal /sacred indebtedness to the seven generations of the past and seven generations of the future is the basis of human existence and survival. Hence all tribal / indigenous people believe in ancestor worship – which essentially manifests the sacredness of future times, and the sense of piety in continuity. The essence of all human civilization and culture is in continuity. It is, therefore, absolutely necessary that we allow some space for those who believe in continuity rather than change. Let change occur as a natural process in time and space.

To conclude, we must assume that the Tharis are still capable of innovation and evolution to adjust in the new world order and also help them sustain and survive. Given half an opportunity, they will easily demonstrate to the world that they can contribute handsomely to 'the making of a new world order' with their food, fashion, music, breath -holding circus, and a philosophy of science capable of innovating future technologies ensuring wholesome survival.

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