

**P. Vijaya Prakash**

## **MARITIME COMMON PROPERTY RESOURCES AND CULTURAL ASSETS IN APPROPRIATION: ARTISANAL FISHERS OF NORTH COASTAL ANDHRA PRADESH**

### ***Abstract***

*Indian studies on maritime anthropology or marine fishers are scarce and mostly limited to reports. Marine fishing of artisanal nature had been the main occupation of Jalari and Vadabalija communities of northern Andhra Pradesh, who inhabit and make use of the maritime landscape for varied socio-cultural and economic activities (fishing-vending). The beach and its varied topographical features of coastal landscape, which come under common property resources (CPRs) are meticulously used for habitation, and managed for varied fishing tasks like fabrication of boats, repair of nets/lines, drying of fish etc, fish landings, shore sheds, shrines and memorials through traditional technologies and leadership of village functionaries. The local make of boats, nets and lines coupled with traditional knowledge on sailing-harvesting and tenancy agreements of catch-sharing had been integral of artisanal fishing, which is labour intensive and low capital outlay. Since the artisanal marine fishing coupled with informal vending networks are critical in supply of protein rich marine food at affordable price among inland peasant and tribal populations, special attention may be paid to safeguard the artisanal fishing in terms of governance and advocacy.*

**Keywords:** *maritime anthropology, common property resource, maritime resource, culturesscape, village functionaries, open access*

### **Introduction**

The less productive sandy and rocky beaches of seacoasts of the oceanfront have been brought under human intervention for marine food resources was evidenced through kitchen middens of the Mesolithic period (about 10,000 BCE). Since then, such landscape had been transformed into a culturesscape represented by fishing cultures, an adaptation of maritime resources of land and water, a common property resource (CPR). Dependency on natural CPR led to the development of cultural asset, a paradigm of technological innovation, fabrication of boats on land to sail at sea

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(Nietschmann, 1973). The cultural systems, knowledge advancements and related socio-political institutions regulating culture and nature had been the core of fishing culture (Steward, 1955). The common property resources (CPRs) are such for which no individual has a right over but are critical for poorer sections of the societies. Best examples of CPRs are parts of pastures, forests, wastelands, watersheds, rivers and seas (Jodha, 1986). Among these, maritime resources are unique, contributed to socio-cultural and economic development of humankind. Complexity of global distribution of seas and oceans, continental mobility of biotic resources and open access to common pool resources (fishing grounds) had been fortune as well as threat to indigenous populations, who depended exclusively on maritime resources of land for habitation and fabrication/repair, while water for harvesting fish. Despite the significant contribution of marine resources to the economy, the maritime CPRs and fishing communities have seldom received enough attention of planners. Moreover, the role of artisanal fishers is disregarded in development initiatives in spite of harvest of nutrient energy from turbulent waters, and supply protein-enriched marine food among inland peasants on informal marketing networks.

### **Culturescape**

In social science research the environmental awareness brought the tremendous relationship between culture and nature. Wherever human beings live, take possession of nature, shape landscapes while they develop their own culture (Alvarez 2010). There are no landscapes without peoples' intervention, and as such any natural landscapes exist the culturescape persist. Landscapes are always to be understood as cultural structures exposed to economic dynamics and socio-cultural activity, shaping prime matter that serves as the foundation for any landscape, each with its particular design presents unique value (Seeland, 2008). Culturescape is described as the transformation of a part of nature carried out by man to shape, use, manage and enjoy it, according to the patterns emanated by his own culture. It is a configuration of human and natural resources. Therefore, the landscape is a society's cultural projection upon a given space.

Marine fishing has been one of the most extreme adaptations achieved by man. The studies related to their socio-cultural and economic profile led to the emergence of maritime anthropology (Acheson, 1981). Anthropological studies agree that fishing communities adapted to maritime landscape and climate thereby can be differentiated in several ways from non-fishing communities. Dependency and managing common property resources (CPR) like beach, shores and seas of the oceanfront have been the factors differentiate from neighbourhood agro peasants. The fishers developed a set of norms and values guided by various socio-cultural networks and institutions, and adapted to hazardous tasks of sail at open sea and fish in marine waters (Poggie, 1980). Clear division of labour had been the characteristic of maritime feature, where

men are involved in fishing at sea while women vend the catch on land (Davis and Nadel, 1992). At present, artisanal marine fishers, both men and women are in a state of crisis due to the transformation of common property resources (CPRs) into common pool resources through open-access mechanisms. The paper investigates into the appropriation of maritime CPRs, which sustained artisanal fishers over millennia until the threat arisen out of open access of CPRs, due to technology-driven open sea and deep sea fishing.

### Study Area

About 974 km coastline (12° 45' to 19° 50' Northern Latitude and 76° 45' to 84° 45' Eastern Longitude) of the Bay of Bengal on east coast of India is the eastern seaboard maritime landscape of Andhra Pradesh. A couple of meters to about 2.5 km swath of the coastline have been the habitat of fishermen eking their livelihood at sea. The fishers' habitat consists of beaches, ridges and dunes, intermittently intercepted by intruding hills and river channels forming bays, mudflats and backwater pools. Fringes of these marine landforms have been used for habitation as well as economic and religious activities (Prakash, 2010). Several shore spots and bays adjacent to habitations and adjoining aquatic resources of the sea have been common property resource (CPR) being appropriated by fishers on traditional modes of harvest and sharing the catch. Six endogamous units (castes) such as *Jalari* and *Vadabalija* in northern, *Besta* and *Pattapu* in southern and in between *Agnikulakshatriya* and *Palliare* are distributed along the seacoast of Andhra Pradesh. About 1.63 lakh families accounting for 6.05 lakh persons distributed over 546 villages, of which 1.51 lakh families are active fishers at present (Marine Fisheries Census, 2010), while the remaining adopted different non-fishing modes of livelihoods.

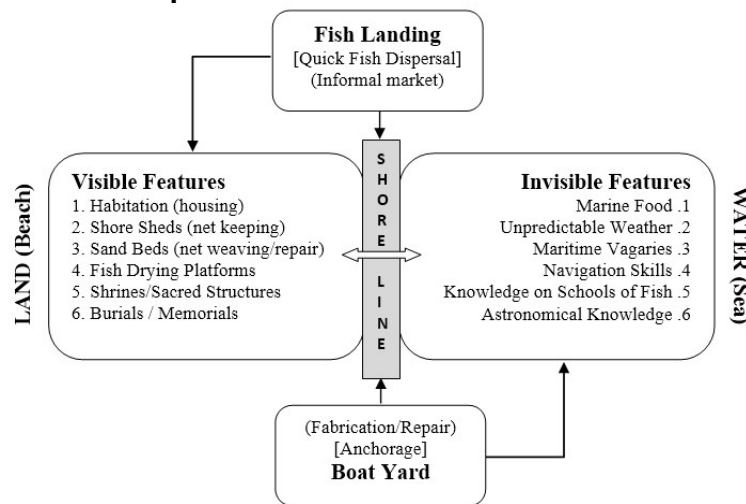
Scientific studies related to these communities of maritime culturescape are scanty and less in number, and are of fisheries reports than cultural adaptations (Salagrama, 2003). However, a few anthropological studies pertaining to *Jalari* and *Vadabalija* communities of north coastal Andhra Pradesh provide glimpses into maritime cultural profile. The present study reviews and presents the maritime context of *Jalari* and *Vadabalija* communities and analyses the CPR appropriation in sustaining artisanal fishing and in supply of marine food among the inland populations. The kinship analysis of *Jalari* fishing community of east coast provided not only the critical nature of kinship ties in sustaining fishing culture and economy but also provided database for understanding South Indian kinship usage (Kodanda Rao, 1981). Anthropological study of *Jalari* community and institutionalised role of '*marakatte*' (bulk buyer) and '*berakatte*' (retail buyer) indicating gender participation has been categorically brought out by Sridevi (1986 and 1989). Descriptive account of basic sociocultural features and material culture of fisherfolk of north east coastal Andhra Pradesh (Suryanarayana, 1977), village based note on *Vadabalija* fishers by Rajendra Prasad (2003) and traditional knowledge of *Jalari* delineated

by Ravi and Ramana (2016) add to maritime cultural practices of north coastal Andhra Pradesh. Fisheries of coastal Andhra in terms of capital investment, earning and expenditure of marine fishers brought out by Subba Rao (1988) provides basic tenets of collective efforts of fishing economy. An impact assessment study on 'mechanization of a traditional economic activity delineated two important factors (i) breakdown of social solidarity and economic cooperation due to mechanization and (ii) hub of socio-cultural networks have become economic clustered isolates (Prasada Rao and Yathiraj Kumar, 1984). Imposition of food taboos of fishermen of Visakhapatnam coast have been attributed to resources depletion and ecological crisis (Rajesh Patnaik, 2007). In contextualising social disruptions Charles Nuckolls (1997) and Dalibandhu and Sharma (2020a) interpreted the divination of *chupurayi* (seeing stone) performed by the traditional priestess, while *kaniki* (the practitioner) from outside activity, as 'primary' and secondary spirit attacks among Jalari community, points out the root causes for disruptions of social relations among Jalari. Similar study conducted by Dalibandhu and Sharma (2018) indicating increased risk, morbidity and mortality due to increased occupational hazards and uncertainty in economic activity overtime. These studies indicate disruption in maritime socio-cultural milieu due to various extraneous factors of technology and access of CPR. The Vadabalija community had not been drawn much attention for investigations in spite of their inseparable nature with the sea and Jalari community.

Traditional habitations/village of fishers composed of thatched huts of conical shape and cellular shrines are located on beach contiguous to shoreline. Other notable structures are government sponsored personalised concrete houses and public utilitarian schools, offices and cyclone relief centres. These habitations denote homogenous as they are exclusively inhabited by fishing communities with an exception of a few households of petty traders, toddy tapers and shepherds. Fishermen habitations are sandwiched between encroaching sea on one side and private properties on the other leading to sever congestion. Adjoining beach and its shore inherently been used as common property resources (CPRs) for various socio-cultural and economic ends. The beachscape consists of shoreline and rolling sands. The former is used for fish-landing and boatyard, while the latter used for varying common utilitarian purposes such as rest sheds, net yards, fish drying yards, shrines, memorials, burial ground etc. The habitation together with beachscape forms the cultrescape of the fishers (Prakash, 2017). The data collected during 2019 and 2020 (ICSSR fellowship period) is coupled with the survey conducted during 2010-12 (UGC Report, 2010-12) to analyse common property resources management of fishers found along the 362 kms coastline of northern Andhra Pradesh, consisting of Srikakulam (182 kms.), Vizianagaram (25 kms.) and Visakhapatnam (155 kms.) districts. Data related to maritime resources and their management had been collected through schedules separately designed for village and households, focusing on village centric CPRs and peoples roles

on managing the resources. Anthropological field techniques such as personal interviews, focus group discussions, and case study methods are used to collect both qualitative and empirical data. Purposive sample method is followed to consult the fishermen and women vendors while at their respective works. A few selective case studies are made on various managerial aspects of fishing economy and culture. The observational and analysed factors of maritime landscape are schematically presented to represent the fishers' culturescape.

### Fishers Culturescape



### Social Assets of the Culturescape

The maritime culturescape consists of twofold geophysical resources, land for habitation and fabrication of boats and nets, while the biotic resources of the sea to harvest for fishing economy. These twin factors were put in operation by making use of common property resources, evidenced through visible manifestations of material assets on land while invisible knowledge systems at sea to harvest marine nutrient food resources. Each of these was the outcome of resources management as means of adaptation to land and water of CPR envisaged from the data, presented in Table- I and II. The fishers' habitations are invariably located at beaches proximate to tidal margin, a few close to stream mouths or hillocks. The skill of boat fabrication and navigation, the knowledge of locating the schools of fish and harvesting are learned by experience and success stories of the elders (Srinivasu, 2017; Vasanthi, 2017; Dalibandhu and Rama Mohan Rao, 2021). In spite of inherent factors like uncertainty of success, hazardous nature of the sea, vulnerability of life, the Jalari and Vadabaliya fisher communities of north coastal Andhra Pradesh were practicing marine fishing successfully by organize themselves into castes, which are interdependent and cooperative in several socio-cultural and economic

pursuits. The fishermen habitats are unique, secluded from rest of 'composite communities of village India' (Beteille, 2002). The socio-political leaderships are traditionally organized by the community and village functionaries such as the *kulapedda* (community head), *pillagadu* (lineage head) and *dasudu* (priest) and *bhaktudu* (lineage priest). The fishermen households can be divided into two categories, the group having boats and fishing paraphernalia while the other do not own any of these but had the knowledge of sailing and fishing, thereby the 'owner-tenant' interdependent system is integral of artisanal fishing economy. The tenancy agreements are oral, bounded by customary law and principles at community level, being managed and regulated by the cooperative attitude of community and village functionaries, which have been sustaining fishing economy of the region under study. Both Jalari and Vadabaliya communities are at subsistence level. Out of 59,149 fishermen families, 58,547 accounting 98.98 percent are below poverty line (BPL), while the remaining 602 (1.02%) families are marginally above BPL. Elite among fishers inhabiting the urban fringes are having ownership or partnership of mechanized boats, which operate from three fishing harbours/jetties of the study area (Visakhapatnam, Bhimunipatnam and Bhavanapadu).

### 1. Boat for Navigation

Traditional boats (tied and stitched boats) are fabricated by few fishermen specialized in boat fabrication. They use simple carpenter tools like adze, chisel, saw and driller, and the knowledge of design and size is based on arm lengths, no measuring instruments are used as most of the fabricators are either illiterates or elementary school dropouts. Supply of boat fabrication is based on order with oral specifications of type and size with or without the provision for sail and motorization, no brand specification, but only model. Agreement of raw materials to be used (wood), price, time and delivery are on conventional mode, any breach or dispute comes under village caste panchayat, both by the elected and traditional leadership, resolves at local levels. Entire process of fabrication takes place at beach under the shade of groves, a CPR. The role of caste panchayat system has been integral of artisanal fabrication for offshore and nearshore peasant fishing. However, motorization of sailboats has been increasing for far sea harvest through nylon net fishing. About 31,318 fishing vessels are in operation in Andhra Pradesh, out of which 47.25% are traditional boats, 46.77% are motorized (fibre boats) while the remaining 5.98% (trawlers) are mechanized (Marine Fisheries Census 2010).

Sailing at open sea on country boats (unbranded local make) is risky and challenging, but the knowledge gained by peasant fishers over maritime vagaries and variations of atmosphere is remarkable. The gained knowledge of weather conditions, water colour, sea currents, seabed, schools of fish, and such marine related aquatic character, and the dynamic characters of celestial bodies at sky are being orally transacted over generations to sustain artisanal

fishing. The gained invisible knowledge had generic relationship with the visible sailing to harvest invisible fish. However, the inherent knowledge is now subjected to erosion due to contemporary invasive forces of technology and marketing (Dalibandhu and Sharma, 2020).

## **2. Nets, Hooks and Lines for Harvest**

Open sea fishing is a group activity and a variety of nets such as trawl, drift, gill, disco, and varied sizes of hooks and lines are used. Fishing expedition group varies from a minimum of two to eight persons of varied skills of sailing, laying nets and lines in accordance with type of boat, nets and expected schools of fish (squids, prawn, crabs, fish etc). Combination of expertise is critical in success of catch. On social front, the group consists of owners of the boats, nets and tenants. The tenants could be kin members and also other fishing caste persons. Principle of sharing catch on equal ratios of participating assets (boat and net shares) and men has been sustaining the competitive success over vast waters of the ocean. Tenancy agreement among owners of vessels, nets and persons, their participation in voyages, continuity, absence, abstain and such related intricate issues are honoured at reciprocal understandings. The agreements on word of mouth come under the traditional jurisdiction and the domain of traditional village councils of fishermen communities (Jalari and Vadabalija).

## **3. Fish Landings and Market**

When catch arrives at fish landings the activity of fisher women commences. Woman financier-cum-wholesale dealer (*marakatte*) and women retail buyer-cum-vendor (*berakatte*) nexus (Sridevi, 1989; Venkatalakshmi, 2018) immediately activates for quick disposal of catch as the white meat is perishable. No units of measurements but graded lots of fish are subjected to auction/sale. *Marakatte* directly buys bulk from catchers, while *berakatte* buy portions of lots of fish from *marakatte*. Entire transaction process lasts in less than an hour duration. Marketing processes like pricing, bargaining and buying of catch solely depends on customary understandings of harvesters and marketers. The financier obligations, kindred preferences and trade principle of supply-demand nexus play a critical role in quick dispersal at fish landing on very informal way. Entire process is undisputedly regulated by invisible customary principles of trade under traditional vigilance of community functionaries. Bulk of motorized and mechanized catch lands at jetties and fishing harbours is subjected to urban marketing and export, while artisanal peasant fishing has been critical in supply of protein requirements for local populations.

These three main sets of socio-economic and cultural manifestations are further complimented by another three sets of secondary material manifestations, which include shore sheds, sand beds and shrines. The first two are directly related to sailing-harvest, while shrines are associated with

eneration towards rescue and success of fishing expeditions. Each one of these material assets of common property shows complexity of organization and evolution. Absence of documentary evidences of these cultural forms has resulted in resorting to collection of information from community elders through case study method, indicating the tangible assets are encompassed by intangible sets of socio-political regulations and knowledge, which were inherited over the generations through oral transactions.

### **i. Shore Sheds**

Shore sheds are temporary thatched shelters overlooking the sea erected with the help of palm tree logs or casuarina posts to provide shade to nets. A unit of shed generally measures 15x20 feet, and such are added to a maximum of five in number, which depends on availability of sandy terrain and size of habitation. Though the sheds are basically built for keeping nets they are being used as transit halts before and after fishing expeditions and also as rest-shelters. Fishers spend leisure time under the shade, share experiences at sea, such as knowledge on water currents, schools of fish, tricks of trade, and such fishing related besides family chores. In the absence of sheds, grooves are used as transit shelters. Playing cards is common at several of these sheds. The invisible asset of knowledge gained over several fishing expeditions has been an immense knowledge shared among fellowmen signifies importance of shore shed. Realizing its socialization context fisheries department had been geared up to build permanent shore sheds at a few select beaches.

### **ii. Sand Beds for Fishing Tasks**

The beachscape consists of sands in the form of ridges which supports maritime flora and fauna. The sand dunes often change surfacial features due to wind currents and tidal waves. Sand beds spread along shores have been used for pre and post-harvest fishing activities, such as net weaving, drying, repair, and also drying the fish. Since the sand beds are common property resource the spatial management is the task of village functionaries, mostly managed on clan and kin obligations, either in succession or on rotation with mutual consent among users. The extent of sand beaches at several places is shrinking due to encroaching sea causing hardships for pre and post fishing activities.

### **iii. Shrines and Memorials**

A part of the common property resource adjacent to beach sands, river mouths and headlands is devoted for sacred and profane activities, which are in the form of cellular shrines of deities (Mother Goddesses) and memorials (*Veerudubabu* and *perantallu*) are community assets, and the propriety vested by village heads and priests. Plurality of shrines of different deities and



memorials are significant at clan and lineage levels and they are the assets of the community. These sacred assets are common property resources of the community, management through different functionaries such as lineage heads, priests, *kulapedda*, *pillagadu* and *dasudu*, and their veneration is renewed by organizing seasonal, annual and periodic festivals and cults (Prakash, in press).

### Discussion

The Jalari and Vadabaliya are two important maritime fishing communities mutually making use of common property resources (CPRs) in north coastal Andhra Pradesh. Their habitations are exclusively inhabited by either of the two or shared by both. In several socio-cultural and economic aspects they show similarity but practice endogamy, which is strictly adhered. Anthropological literature though meagre, broadly indicates that Jalari are traditional fishers while Vadabaliya are seafarers. It is imperative that shallow and backwaters of the sea had been the CPR of Jalari, who had the knowledge of weaving cast nets, lines to tie hooks and traps to catch fish. As per the Jalari narrations, they used tied boats (tied logs/catamaran) to harvest offshore fish, while Vadabaliya informants claim domain knowledge of sailboat fabrication and navigation across seas and oceans, who assisted as mariners for commercial maritime trade. It is plausible that the mechanized sailing, of late, displaced the sailboat, thereby the Vadabaliya are rather forced to expatriate either as individual inhabitants or neighbourhood of Jalari on beachscape. The articulation of offshore artisanal fishing knowledge of Jalari and Vadabaliya knowledge of seafaring at open sea might have contextualised the skill gap between offshore and open sea access. The sharing of technology knowhow of sailing at open sea and fishing knowledge of marine resource between two communities had been mutually benefitting, while the common property of resources (CPR) of maritime environment are being managed by mutual consent for coexistence.

Unlike other CPRs like pastures, forests, rivers, the beachscape resources of maritime landscape demand different modes of adaptations, which are manifested through material assets and socio-political institutional arrangements, specifically of village councils composed of *kulapedda*, *pillagadu* and *dasudu* besides elected representatives of panchayat system of governance with ascribed functions. The main economic resource (fish/biotic) is invisible, mobile, seasonal, and under open access, the institutionalization of extraction is inherently unique, which signifies maritime culture. The three sets of techno-cultural assets of boat fabrication yards at seafront, space for net weaving, and shore space for fish landing had dual functions, testified by visible material assets at beachscape and an aura of invisible happenings at sea. Each of these assets is institutionalised in the fold of community councils to thrive on hazardous economy and to sustain cultural cohesiveness. The fishermen habitations are congested as they are sandwiched by the adjoining private

properties and the encroaching sea are left with the maritime CPR, which are meticulously managed by apportioning for various pre and post fishing activities managed through traditional village functionaries. As such, very negligible cases were referred to local police in managing CPRs. The traditional artisanal fishing is critical in supply of protein at informal price by fisherwomen through local vending booths (street hawking, street side vending and fish markets) among nearby populations. The unsold and bulk catch is dried and marketed through daily and weekly markets of the region, which assures supply of fish among inland peasants and tribal populations. The study indicates that the artisanal fishing demands low investment as the fishing paraphernalia are self and local make, the price of the fish is regulated by informal means, which depends on the catch. Since the artisanal fishing coupled with informal marketing networks are integral of supplying protein rich marine food among inland peasants and tribals special attention may be paid to safeguard the artisanal fishing in terms of governance and advocacy.

**Table-I: Database on Maritime Common Property Resources and Assets**

District	Coast length (in kms.)	No of Villages	No of villages per km	Fish drying platforms	Net Yards	Country boat fabrication Yards	Fibre boat moulding Yards	Cyclone Relief Centres
Srikakulam	182	106 (7)*	1.84	52	48	36	10	54
Vizianagaram	25	20	1.25	13	20	0	0	6
Visakhapatnam	155	65	2.38	17	16	10	5	40
<b>Total</b>	<b>362</b>	<b>191 (7)</b>	<b>1.96</b>	<b>82</b>	<b>84</b>	<b>46</b>	<b>15</b>	<b>100</b>

\*Villages given up fishing

**Table-II: Database on Fish Landings and Villages**

District	No of villages sharing fish landings								Total Fish Landings/Villages
	1	2	3	4	5	6	7	>8	
Srikakulam	34	20	2	2	1	1	0	0	60/99
Vizianagaram	4	1	1	0	1	1	0	0	8/20
Visakhapatnam	12	8	4	0	1	0	1	1	27/65
<b>Total</b>	<b>50</b>	<b>29</b>	<b>7</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>95*</b>

\*A total of 184 fishing villages have only 95 fish landings, which include Jetties at Bhavanapadu and Bhimunipatnam and Visakhapatnam fishing harbour

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