#### Sitaram K Toraskar and Gurudas Shete

# FIRE MANAGEMENT PRACTICES IN GOA STATE AND SINDHUDURG DISTRICT OF MAHARASHTRA

#### Abstract

Modern day state of Goa and parts of western Maharashtra (Sindhudurg district) are endowed with a rich and diverse cultural heritage. Among the many cultural traits, traditional practices related to fire management and its diverse use is an important and least studied cultural trait of this geographical zone. To study this intangible heritage, this paper tries to understand various methods of igniting fire, its diverse management techniques, its domestic and agricultural use as well as its relevance in local customs and beliefs. Use of fire in agriculture and the measures taken against forest fire at ground level are also taken into account in this study.

**Keywords:** Fire management, Domestic fire, Forest fire, rituals, beliefs

**Recived:** 27<sup>th</sup> Oct 2019 **Revised:** 12<sup>th</sup> Sep 2020 **Accepted:** 16<sup>th</sup> Sep 2020

# Introduction

Antiquity of fire on earth in general may be as old as earth (Palmer 2009, 12-19). However, J. Pausas and J Keeley (2009, 593) points out that fire did not exist before Palaeozoic era due to lack of sufficient oxygen. Initial practice to tame its flames is evident from lower Palaeolithic period (Fagan 1996; Pyne 2001) though equivocal (James 1989). The convincing record is available from middle Palaeolithic times with the find of hearth (Alperson-Afil 2012) at the sites like Zhoukoudian (Weiner et. al. 1998; Gao et. al. 2017), Kalambo falls, Schoningen, Beeches Pit (Roebroeks and Villa 2011, 5210), Gesher Benot Ya'aqov (Goren-Inbar et. al. 2004), Klasies River Mouth, Montagu Cave, St. Esteve-Janson, Terra Amata and Jinniushan (James 1989; Gowlett 2016). In Indian subcontinent, instances of controlled fire in lower Palaeolithic phase is uncertain (Chakrabarti 1999), albeit, definite evidence comes from middle Palaeolithic strata of Sanghao cave from the Pothohar plateau of Pakistan (Allchin and Allchin 1983; Singh 2008) and more precisely from upper

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Palaeolithic context of Muchchatle Chintamanu Gavi (Nambi and Murty 1983) in Kurnool district. Evidences of fire alter at the site of Kalibangan, lothal, Banawali, Amri, Nageshwar, Vagad, Rakhigarhi (Ghosh 1989; Singh 2008) and its depiction on seal (Dhavalikar and Atre 1989) helps to trace the worship of fire (Agrawal 2007) at least from Harappan Period. The ancient Vedic text gives lots of information about sacrifices (Ranade 2006), where sacred alter was an important component (Staal 1986; Dange 2000). It also highlights the importance of fire in the society by referencing Agni as prime deity (Bunce 2000). Its iconic depiction (Banerjea 1974) in subsequent phase and its prominence in Indian rituals and customs strengthen its significance in the contemporary Indian culture.

# Early Researches and Theoretical background

It is evident from the findings of fire in archaeological context world over, that fire has played a diverse and important role in the evolutionary process of genus homo (Wrangham 2009; Gowlett 2010, 2016). Also supplemented by pyro-geographical, anthropological, ethnographical and ethnohistorical studies which suggest fire is an important driving force behind social organisation, biological evolution, landscape management and technological advancement (Bird et. al. 2016; Gowlett 2010; Pausas and J Keeley 2009; Pyne 1997, 2001). However, how human interacted initially with fire and how they leant ignition is still a puzzle. Though the scholars tried to explain these processes of human interaction with fire with varied hypothesis. Chazan (2017) proposes three major stages of how early human interacted with fire. The first stage is dated back to 1 mya or before, wherein fire was just a seasonal resource and its maintenance was limited. However, the increase in fire maintenance practices are evident in the second stage with the increase in base camp sites. This stage can be placed between 0.4 mya to 0.2. mya. Third stage is marked by technique to create fire. The habitual use of fire and enclosure to the fire can be placed in this stage.

One benefit of controlled firing is cooking. Fire immensely influenced human biology by providing high quality diet which supposed to enhanced their brain size from an average ca 600 to 1300 cc during the Pleistocene period (Gowlett 2016) The cooked food optimistically influenced human traits. It enhanced net energy gain and reduced metabolic work of humans while increasing digesting abilities (Wrangham and Carmody 2010: 188). It is also suggested that intake of cooked food has impacted human molars making it smaller as compared to other primates (Wrangham and Carmody 2010: 189).

Fire is describes as agent (Couglan 2015: 707) in human culture and society. Barham and Mitchell (2008: 141) states that "fire has significant social value as a focus of group interaction. Firelight effectively extends the daylight hours for making and maintaining tools, preparing food, and social bonding".

As stated fire increased waking hours for humans which led to effective defence of the group and wider scope for social interaction. It also enhanced lifespan as well as role of grandparents in the society (Gowlett 2010: 346). Further it necessitated division of labour among the group to carry out certain daily tasks. The evolution of the language is also said to be the outcome of the same. The enhanced social interaction advanced into agreed social arrangements, which latter resulted in the formation of rituals (Gowlett 2010: 358). This social phenomenon caused by anthropogenic fire is the basis for social brain hypothesis advocated by Robin Dunbar (1998) who argued that evolution of human brain is not the result of its efforts to tackle ecological problems but the outcome of complex social system. The quantitative relationship between measure of brain size and group size in the primates shown the increase in the volume of neocortex (Dunbar 2009: 563). Pausas and Keeley (2009: 598) classified socio-economic classes on the basis of ignition or fuel dependence criteria. According to him, hunter-gatherer society is ignition dependent, agro-pastoral society can be associated with limited fuel, while, industrialised societies are fuel driven. It is seen in the day schedule of huntergatherer society that they wake in the morning and revive fire. There is division among group members to carry out specific task; male member go for foraging, women and children either go for foraging or to collect firewood. From these some members from the group stay in the camp to maintain fire throughout the day (Gowlett 2010: 349). Also preparing gypsum for hafting microliths shows shared social setting for completing such complex task (Gowlett 2010: 343).

Humans opened new phase in ecosystem fire wherein they used fire to modify landscape to suit their lifestyle (Pausas and Keeley 2009: 593). The interaction of Human-fire-landscape seems to be co-evolutionary (Lewis 1972). It transforms vegetation and make habitat heterogeneous which is referred as pyrodiversity (Bowman et. al. 2016; Bird 2016). It is seen as a tool to fertilize soil; as it influence its properties through heating and combustion and also redistribute soil with post-fire erosion (Santin and Doerr 2016: 1). Fire stick farming as hypothesised by Rhys Jones (2012) was utilised by Australian aboriginals is visualised as resource management strategy, which strive to increase food supply. It is related to habitat heterogeneity at spatial level, increases foraging returns in limited time and space and also increases foragers efficiency (Bird et. al. 2008: 14796). The quantitative test of this hypothesis conducted by Bliege Bird et. al. (2008: 14799) presents anthropogenic fire increases foraging returns of low-density areas, however the returns declines as habitat diversity increases. Small scale hunters gain more from successional habitat mosaic in less time. The scholars (Bird et. al. 2008: 14800) concludes "daily small-game hunting results in a higher diversity of successional habitats, which, in turn, leads to higher overall foraging efficiency." Anthropogenic fire is considered as constructive force behind shaping plant community; it promotes reproductive rate of slow growing species and its diversity (Bird et. al. 2008: 14796). The intentional fire laid ground for the domestication of plants and animals (Lewis 1972).

Fire is seen as "first environment transformative technology" (Couglan 2015: 701) with varied implication as discussed above. Grahame Clark refuted deterministic hypothesis and argued prior to iron, fire was utilised in controlled manner to clear forest and modify areas for settlement (Clark 1947; Couglan 2015: 707). It prompted dispersal of humans into colder regions and preventing them from their predators (Pausas and Keeley 2009: 597). The pottery and metalworking are the product of fire and its technological management, which involves raising of temperature beyond the open fire (Gowlett 2016: 7).

#### **Previous work**

This article is an attempt to present traditional fire management practices present in the indigenous communities of the state of Goa and Sindhudurg district of Maharashtra, India. This study includes both previously published information and newly conducted ethnographic study in the study region. Previously, some efforts were made to study the folk tradition of pyrotechnology in the study area. A renowned Goan ethnographer Vinayak Khedekar (1993, 2004, 2010, 2012, 2013) tried to document some dying traditional practices related to fire management, its typo-technological perspective and utilitarian aspects.

Mohan Ransingh (2007) discusses various dimension of tribal life in Sindhudurg district, wherein he refers some practices related to fire. J. Abbot analyses folklore with ritualistic approach and reflects various facets of life. In his work *The Keys of Power: a study of Indian Ritual and Belief* (Abbot 1932) he documents many customs and rituals related to fire in Indian subcontinent. He also examines some traditions in present study area and adjoining geography. The observations made by these scholars have been included in further discussions. The observations have been divided into three different stages, according to use of fire in different socio-cultural and functional contexts.

The following discussion contains information of various techniques related to fire ignition, fire harnessing and its usage in daily life in the study area.

## Flame Ignition

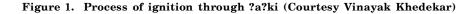
Technique of producing spark and harnessing it into flame is basic to any fire related activity and its utilization. Some traditional practices represent the techniques used since pre-modern times. Such extant techniques in the remote areas of Goa are recorded and discussed in the following section.

#### laEkî or Chakmak

Igniting spark from the friction of quartz stone and iron plate (Figure 1) was commonly practiced in southern and eastern periphery of Goa, before

the introduction of match-box. This technique is called  $maEk\hat{\imath}$ . The same technique among the Dhanagar¹ community is known as chakmak (Toraskar 2015). The spark created with above technique was used to lit the cotton, generally procured from a palm tree locally well known as  $Bill\hat{a}m\hat{a}$ 

(Caryotaurens). Even today elderly Ku7mî² folk prefer these tools instead of match box for lighting a traditional cigarette known as  $vi\hat{\imath}$ . According to Vinayak Khedekar (2013) the match stick contains capacity to burn dry mulch even after extinguishing, whereas the spark on the above mentioned cotton extinguishes in no time.





In some parts of the state of Maharashtra instead of using quartz stone and iron plate the use of two quartz stones was common.

## Aranî

Aranî is a practice of ritualistically procuring fire. The archaic evidence of this practice comes from vedic period (Goswami 2003). The installation of Arani is composed of a flat log featuring a hole in the centre is placed on the ground and a drill shaft, featuring round carved grooves is vertically placed into it. The log and shaft are procured from *Pipal (Ficus* religiosa L.) tree. The drill shaft is churned using rope twisted into the carved grooves of the shaft. In Goa thread procured from *Kevana (Helicteres* isora) tree is used for preparing rope that is fixed around shaft for drilling purpose. Two people from opposite direction support the log with their feet and churn the drill with rope. Another person holds the shaft stable and press it firmly in the hole. Constant churning creates friction causing development of heat in the hole eventually creating

smoke and then charred wood fibres (Figure 2). These charred wood fibres are taken on the dried coir of coconut. The fire thus procured is used for  $yaj\partial ya$  and then for cooking purpose but only after offering  $\hat{a}hut\hat{i}$  (offering) to God Agni.

Figure 2. Arani (Courtesy Vinayak Khedekar)



## **Domestic fire**

## Cûla (Hearth)

The  $c\hat{u}la$  (hearth) is prepared with mud and coated with  $v\hat{a}7\hat{u}$  (regosol) paste are commonly used for cooking purpose. Sometimes, stone bed is also prepared beneath it.  $C\hat{u}la$ 's are prepared in 'C' and 'E' shaped plan, the protruding parallel sides are to hold utensil and the place in-between is for inserting fuel in the hearth.

Some  $c\hat{u}la$ 's feature an additional attachment of rectangular platform at its backside locally referred as  $bh\hat{a}nos$  (Figure 3). It is used for keeping prepared food hot. The  $bh\hat{a}nos$  usually remain warm throughout the day and night because of the charcoal in the hearth. Another similar feature is of  $v\hat{a}yn$  (Figure 4), which is hollow hole connected to the main hearth. The flames from main hearth pass through this passage. This opening is used for mild cooking such as for boiling milk. In many places especially in South Goa it is also known as  $v\hat{a}yl$ . If the  $v\hat{a}yn/v\hat{a}yl$ , is not being used then it is sealed with a proper round stone to avoid wastage of heat.

Figure 3. Traditional hearth with bhanos



Figure 4. Traditional hearth with vayn vayl (Courtesy Vinayak Khedekar)



Traditionally cimmo (tong) and  $na7\hat{\imath}$  (hollow pipe) (Figure 5) are used to maintain fire in the  $c\hat{u}la$ . Cimmo is used for managing embers in the  $c\hat{u}la$  and  $na7\hat{\imath}$  is used for blowing air and to produce high flames or to transform burning embers into flames.

Another additional component of  $c\hat{u}la$  is a shallow pit, which is maintained on floor surface inside the  $c\hat{u}la$ . This pit is used for creating and maintaining charge for the next day. At the end of the day, the  $c\hat{u}la$  is cleaned by removing entire ember and ash from it. Then the pit is filled with fresh cow dung and is covered with some ember and ash. Overnight it helps to dry and charge the fresh cow dung placed in the pit. Thus the new charge is created for next day firing of  $c\hat{u}la$  (khedekar 2004, 2013).

Figure 5. Cimto and nali



The area of the  $c\hat{u}la$  is kept open and clean and generally placed facing east. Every time when a new  $c\hat{u}la$  is prepared, a  $p\hat{u}j\hat{a}$  (ritual ceremony) is held and fire is placed from homkuE (see discussion on pallo/parso/kuE). It is also observed that after the death of a person in the family, for thirteen days no food is cooked in the family and hearth is extinguished. After thirteenth day, the  $c\hat{u}la$  is purified and by observing some rituals fire is placed in it from the homkuE

# Pallo/Parso/KuE

*Pallo/Parso* is a tradition of conserving fire throughout the year. In the southern Goa, this tradition is called *pallo*, while in north Goa and

Sindhudurg district it is known as parso. It can also be related with aekom (Bonfire). It is simply piling up of a few wooden logs or single thick wood loghaving capacity of burning forlonger periodof time and set it on fire. Smoky wood is not used for this. Wood of trees like  $K\hat{a}jro$  (Nux Vomica), Huro (unidentified),  $K\hat{a}mel$  (unidentified),  $J\hat{a}bu7$  (Syzgium cumini L.),  $M\hat{a}m\hat{i}$  (Terminalia crenulata Roth), Sinan (Terminalia paniculata Roth), Saylo (Tectona paniculata paniculata

In the life of rural communities like Ku7mî or semi nomadic communities like Dhanagar, pallo/parso is an important component. The pallo or parso occupies utu or utov over it, attached to the roof of the house/hut. It is made up of Bamboo, arranged crisscross on each other in linear pattern or some time even single bamboo is placed or hanged to the roof above pallo/parso. This arrangement is specifically to hang clothes during the rainy season, as it helps  $dryk\hat{a}mba7$  and other clothes faster.  $K\hat{a}mba7$  is a traditional Blanket used to cover body during rain as it acts like water-resistant and protects against cold.

Extinguishing pallo is considered as an ill omen. In the Ku7mî community if the pallo somehow extinguishes then it is expected to borrow fire from the house of buvaEt (chief of village).

Khedekar (2004) also mentions about annual celebration among Ku7mî community, which would commence on the full moon day of  ${}^{1}\!c\hat{a}$  (June-July) Month and terminate on  $Pouca~porGim\hat{a}$  (Full moon day of December-January). This celebration is conducted in the night around  $\alpha ekom\hat{\imath}/pallo$ , in which traditional songs known as  $gud\hat{u}li\hat{a}g\hat{a}G\hat{\imath}$  are sung. Women are tabooed from coming close to the pallo. They had to conduct ceremony near hearth.

Among Kâtkarî/ Vânarmârî³community also the tradition of maintaining fire for entire year is observed. The fire is harnessed in a pit called kuE (Toraskar 2015).

## Cûa

Another peculiar use of fire is as a torch. Konkan is thickly forested as a result reptiles and wild animals are common. Travelling in such condition in the night without torch for even short distance could lead to grave consequences. Therefore, use of light was necessary. There is evidence for the use of

indigenous knowledge system, for the selection of specific kind of plants having specific thermal properties, by the Pre-modern societies of the region. Dhanagar community uses the stick of  $k\hat{a}rv\hat{\imath}$  (Strobilanthes callosus) plant as torch. One end of the  $k\hat{a}rv\hat{\imath}$  stick was wrapped with cotton of Palm tree known as  $Bill\hat{a}m\hat{a}$  (Caryotaurens) and was lighted with fire from pallo/parso. This stick of one and a half meter has capacity to burn for three to four hours. The fired stick was used according to necessity. When more light was required it was hold in little slanting position and in need of dim light it was hold vertically. Also care was taken that flames not fall in the forest.

For short distance, Areca nut rachis were used in the region near  $Ku7\hat{a}gara$  (horticultural plantation), whereas for long distant rachis of coconut leaf were used (Khedekar 2012).

In Kâtkarî/ Vânarmârî community the fruit of AraGa/eraE ( $Ricinus\ communis\ L.$ ) plant are taken and placed on the coconut or other plant leaf stalk and lighted with fire. This fruit according to local knowledge said to have thermal properties and it burns with blaze for much longer time. They use this traditional instrument as torch.

## Management of Forest fire

It is presumed that about Eight billion tones of vegetation is burned each year by wild- fire, which occurs not only in temperate forest zones but also in the tropics and even in peat-forming wet- lands (Scott, Moore, and Brayshay 2000, vii). This not only affects vegetation but also animals and humans. In some cases it positively affects plant community. However, the adverse effects are much severe. Some fires are deliberate (anthropogenic), to yield good floral growth, enhancing biodiversity among plant community by altering their evolutionary traits, as palaeoecological records suggest (Bird et al. 2008) and secondly to avoid sudden fire incidents.

The presence of thick forest in the Konkan region and excessive dry mulch in the summer causes constant risk of forest fire, harming orchards, crops, cattle pen and forest dwellers. Therefore, precautionary measures are utmost important.

According to myth prevailing among Dhanagar community, forest fire takes place when Meru or deer are on fight. The friction created in the antlers generates sparks and lights the forest into flames. As a result some precautionary measures are followed by these forest dwellers. A gap is created by removing or setting controlled fire to the grass in the running grassland all around the settlement known as  $\hat{a}grec\hat{a}/agnirec\hat{a}$ , which can be translated as fire line. The gap maintained is at least a meter wide. This line is renewed after every three months for effective use. The line checks the fire flames running into the settlement. Water is used for extinguishing the flames in the emergency conditions when flames cross the line. This happens rarely but

mainly due to heavy wind or inefficiently managed fire line.

The dwellers also use bushes that are locally termed as  $jhu\ p\hat{a}E$  to prevent wild fire. The bushes are used to forcefully swept fire in opposite direction of the wind in order to discontinue flames. Bushes of KaliEga (Unidentified) plant are used prominently for the purpose. However, plants like  $J\hat{a}mbu7$  ( $Syzgium\ cumini\ L.$ ),  $Kumyo\ (Careya\ arborea\ Roxb.$ ), etc. are also utilised and the bushes of PiEjar (Unidentified),  $LokaE\hat{\imath}$  ( $Ixora\ nigricans\ R.$  Br. Ex Wight and Arn),  $Gel\hat{\imath}$  ( $Catunaregam\ spinosa$  (Thunb) Thirven) plants are also used occasionally.

The  $\hat{a}grec\hat{a}$  is also maintained in the hilly part of Maharashtra. During medieval period, the same was practiced around hill forts (locally known as ga) of western Maharashtra and is still persisting. The process starts in February/March when fire line (more than a meter wide) is drawn by some trained people breaking vast tracks of land into small plots to avoid big disaster. The fire is set at the foot of the hill, which is directed by people carrying moist bushes till the tip of the hill. This is done to curb unintentional fire spread.

## Other Fire management activity

There are various other aspects which must be considered while understanding fire management techniques. These are strategies for procurement and processing of fuel, placement of hearth within a hut, and the role of fire in agriculture.

## Collection and storage of fuel for domestic fire

The wood, cow dung cake, coconut shell and coir are used as fuel in the hearth. The family members especially women go in search of wood in the forest. The wood which is mostly dried and can be preserved for a longer period is selected. The wet wood is spread in sunlight to dry. Similarly during summers, women dry cattle dung to make dung cakes. Thus, we find that a lot of energy and time is invested in collection and preparation of fuel in rural economy.

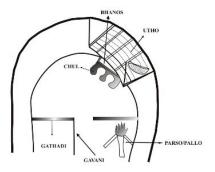
A simple hut built with wooden posts having thatched roof known as  $l\hat{a}k~ac\hat{\imath}~khop$  is used for storing dried fuel. This fuel storing hut is renovated every summer. All the fuel material is packed in before the rain. According to a local custom in the month of  $Vai\hat{u}\hat{a}k$  (April-May),collection of wood is banned for five days.

# The plan of the hut and other structure

In response to deal with malevolent nature of fire special care is taken in the construction and plan of the huts. The small congested huts made with perishable material are more likely to succumb to the fire. In recent times

many tribal and semi-nomadic communities have began to build major part of their residential structures in imperishable material. But, there are still some communities or some population of different communities which follows age old plans of huts built in perishable material. Among these the houses of Dhanagar community are peculiar, which provides interesting information regarding the plan of huts to avoid any kind of grave incidence from fire. The hut of Dhanagar's (Figure 6) comprises inner and outer space formed by constructing  $ag\hat{a}t\hat{a}\hat{i}$ , a dividing wall made up of bamboo or  $K\hat{a}rv\hat{i}$  logs, in the hut. The inner space comprises hearth and is also used as living room, while the outer space is divided by  $g\hat{a}van\hat{i}$  made up of same above mentioned material comprises livestock to the left, mostly buffaloes, and Pallo/Parso to the right. The drunken person is not allowed to cross  $g\hat{a}t\hat{a}\hat{i}$ .

Figure 6. General hut plan of Dhangar community and placement of Fire



Kumerî cultivation and fire <u>Kumerî</u> cutivation is a local term for shifting cultivation. This type of cultivation takes place in hilly or plateau area. As a result, it is also termed as  $doEgar~\acute{u}et\^{i}$  (hill cultivation). In this cultivation, forest area is selected collectively by villagers and is distributed subsequently. The forest is slashed in the month of February/March and left for drying. The big logs produced are taken home. A month later the dried forest is set on fire ritualistically, by marking the area and maintaining gap between slashed and other part of the forest. The precautions for avoiding wild spread are considered seriously. The cleared forest is then sown basically with seeds like  $R\^{a}g\^{i}/N\^{a}cG\^{i}$  (Eleusine coracana (L.),  $Var\^{i}$  (Panicum miliaceum L.), etc. The tilling activity in this type of agriculture is almost absent due to high fertility of land.

## **Discussion**

Taming fire was a paramount achievement of mankind as it altered cultural-technological foundation, increased adaptability, transformed dietary habits and encouraged healthy human survival and expansion of human settlements in colder and inhospitable regions.

The present study highlights the concept of fire management and its socio-cultural importance in the study area that is highlighted by studying fire ignition with friction of quartz stones or quartz stone and iron plate and handling flames on locally available cotton like material which had ubiquitous usage among all semi-nomadic as well as agricultural societies. Aranî is another age old technique for generating fire that existed almost all over the world. **Preservation of flames** by placing fresh cow-dung in the shallow pit of the cleaned hearth covered with earlier ember and ashes for the overnight or maintaining fire in pallo/parso/kuE implies traditional methods for harnessing fire and immediately make it available at domestic level. Safeguarding forest from fire with anthropogenic fire under the guidance of elderly or trained community members and maintaining fire line is best preventive method pursued by pre-modern societies and even by the forest department. Anthropogenic fire also creates space for new agricultural land. In the region like Konkan with prolonged rainfall collection, preparation and storage of **fuel** is planned much in advance to avoid scarcity of dry fuel in wet season. Part of the study also highlights process of energy management by supplementing same fuel for maximum usage with bhânos and vâyn/vâyl. The applicability of bhânos to overcome cool and highly moist conditions of the rainy season as mentioned above is one of the important measures appears to have emerged as adaptation to local climatic condition. Placement of fire away from human intervention, avoiding people who are not in their own senses and cleaning fireplaces and surrounding regularly or on daily basis implies the kind of care taken from any serious casualties. The use of rachis and leaf stalk of areca nut or coconut tree for torch implies another example of the knowledge of the combustion quality of the locally available flora.

The tradition of maintaining fire continuously in *parso/pallo* had multiple advantages. It provided light in the night, kept wild animals away, drived away mosquitoes and other flies, helped in drying clothes and kâmba7 as well as to maintain body heat of both humans and animals during the rainy season.

Thus we find fire was an adaptive measure for acquiring light and energy. To cast off possibility of uncertain nature of fire various methods of control and maintenance of fire were invented. Summing up, the fire management in Goa state and Sindhudurg district of Maharashtra is an aggregate of Local availability, wisdom of combustion properties of wood and management techniques accelerated by pre-industrial life with climatic adaptability.

### Acknowledgment

Present work is part of S.T's M.A Dissertation entitled "Ethnographic

study of Fire Management in Goa State and Sindhudurg District of Maharashtra submitted to Deccan College, Pune. We owe our thanks to Rajendra Kerkar and Vinayak Khedekar for guidance on the topic and Dr. Satish Naik for botanical analysis. Our heartfelt thanks to Dr. Riza Abbas, Suken Shah, Shyam Borkar, Vinit Gaware, Sourab Mukhopadhyay and Chandrakant Kalvankar.

#### Notes

- Nomadic tribe found in Maharashtra, Karnataka and Goa. The basic difference seen between the tribe in the study area and other region is that former domesticate goat and buffalo, while, latter are shepherds (Gomes 2003). They are engaged in shifting cultivation and dairy products.
- 2. Tribal community who lives in hilly tracks and considered aborigines of Goa.
- 3. The term Kâtkarî derived from kât (Acacia catechu) and Kari (to make) referring to the professional class of catechu cake makers (Enthoven 1990). They also referred as Vânarmârî (slayer of monkeys) in Sindhudurg and Ratnagiri Districts of Maharashtra and are nomads even today.

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