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Yak Pastoralist (*Brokpa*) of Arunachal Pradesh: Mobility and Institutional Arrangement Regarding Regulation of Seasonal Use

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Abstract:

In Arunachal Pradesh, Yaks are being raised along with the border of West Kameng and Tawang districts mainly between elevations of 1981.2 m (6438.9 ft) to 4260.72 (1384.34 ft) m above sea level. Brokpa are the transhumance pastoralist of Monpa tribe, whose profession and livelihood is dependent on yak rearing and use resources like high mountain pastures characteristically by mobility patterns. Mobility is one of the main characteristics of the Brokpas, enabling them to move along with their herds at different points in time, exploring greener pastures at different ecological zones, efficiently utilizing available resources. Mobility is strictly followed with the arrangement of institutional regulation of seasonal use. It is one of the main strategies used by transhumant in mountain environments that have developed diverse strategies of natural resource use such as pasture and water. In this paper, an attempt has been made to study the Yak Pastoralist and their strategies for means of livelihood through their activities of transhumance. The research was conducted among the Brokpa (Yak Pastoralist) of Monpa tribe in West Kameng and Tawang districts of Arunachal Pradesh.

Keywords: Brokpa, Conservation, Livelihoods, Pastoralism, Resource management, Transhumance, Yak herding.

1. Introduction

The landscape is comparable wherever *Brokpas* are found. Furthermore the pastoral production practices are similar across the area. Almost all *Brokpas* have a base, usually in a traditional winter area, and make well-established moves with their livestock to seasonal pastures. All *Brokpas* have links with agricultural communities (*ungpa*) at lower elevations to provide them with grain in exchange for livestock products. And they all raise the same type of animals: yaks, yak-cattle hybrids and sheep. They also share a similar language which belongs to the Tibeto-Burman group of languages (Dhar 2009) and culture; across the region, they can usually communicate with each other in Tibetan, even though their local dialects differ. The *Brokpas* are all ardent believers of Buddhist practices and their religious and cultural practices are also similar.

“Pastoralism is a complex form of natural resource management, which requires maintaining an ecological balance between pastures, livestock and people, and is an adaptive strategy to a stressful environment” (cited by H. Krutzmann in Nori and Davies 2007:7). As such mobile livestock production and temporary resource utilization represent the most viable and effective production system for rangeland areas. Pastoral groups typically inhabit areas where scarce resources and extreme climatic conditions limit options for alternative land use and livelihood systems. Their livelihoods depend on their intimate knowledge of the surrounding ecosystem and on the well being of their livestock (Rota 2009). The types of livestock kept by pastoralists vary according to climate, environment, water and other natural resources, and geographical areas and have accomplished their adaptation to a difficult and unpromising landscape with considerable success. Transhumance is a mobility strategy. As Namegy (2013) observed that, “Mobility is key to transhumant pastoral systems, enabling herders to move their livestock at different points in time, exploring ecological niches provided by microclimates at different agro-ecological zones, efficiently utilizing available resources, averting risks and producing food from land with no opportunity costs” (Namegy 2013: 1). Therefore, seasonal movements are essential for pastoralists to tackle marked spatial and temporal variations in livestock grazing resources while enabling pasture restoration at certain times of the year. Regarding the adaptation in harsh climatic condition Antonio Rota (2009) has rightly observed that, “Within this unpredictable, vulnerable and dynamic environment, they have developed successful mechanisms of adaptation to maintain an ecological balance between themselves and the natural environment. Pastoralism is therefore an economic and social system well adapted to dryland conditions and characterized by a complex set of practices and knowledge that has permitted the maintenance of a sustainable equilibrium among pastures, livestock and people” (Rota 2009:1)

Therefore, this article is an examination of mobile pastoralism practiced in Tawang and West Kameng districts of Arunachal Pradesh in India who mostly follows transhumance activity, and it also tries to understand the various strategy for resource management and mobility strategy, helping in the evolution of their economic activities.

2. Study Area



Figure 1: Brokpa women seeling 'mar or mo' to local people who came for exchange in terms of cash. Photograph by Researcher.

The western region of the state of Arunachal Pradesh, bordering Bhutan and China (Tibet), consists of high sierra, and some of this remains under a continuous cover of snow. The particular area where there is perennial cover of snow is the habitats of a few number of transhumant communities, known as *Brokpa*¹, that primarily reliant their livelihood on rearing of herds and subsidized by indigenous trade with nearby villagers whose primary livelihood are depend upon agriculture and other activities.

The transhumant communities thus identified are found in West Kameng district and Tawang District of Arunacgah Pradesh. In West Kameng district, *Brokpas* are found in Lhagyala Gompa area, Nyukmadung, Mandalaphudung, Senge, Lubrang and Chandar and in Tawang district, they are found in few pockets of Zemithang sub-district, Jang sub-district², Thingbu, Mago, and Luguthang. After preliminary field investigation of different region of the two districts of the state, Nyukmadung, Mandalaphudung, Lhagyala Gompa area of West Kameng District, and Thingbu and Jang sub-districts of Tawang district, were finally selected in order to attain the overall feasibility of the proposed objectives.

Having outlined this basic information about *Brokpas*, I now introduce the study site. Arunachal Pradesh, as the name implies, is the land of rising sun. It is the largest state in the north eastern region of India, occupying an area of 83,700 square kilometers, which is about 2.55 per cent of India's land area, accommodating a very rich assembly of tribal cultures and communities. The state lies between altitude 26° 28' and 29° 30' N and between 91° 30' and 97° 30' E longitude. Elevation range from 300 meters on the edge of Assam to above 7, 000 meters on its northern borders. It is the largest state in terms of area among the states of the North East India, but it has the smallest population density not only in the region, but also in the context of the whole country (Dhar 2009). According to 2011 Census data, it is 17 persons per square kilometer. The state with multiethnic groups has 26 major tribal communities, each with its own distinctive dialect, lifestyle, faith, traditional practices and social mores. Arunachal has a 'highly precipitous and varied terrain' (cited by Arunachal Pradesh Human Development Report 2005 in Fleming 1995).

3. Methodology

The economy of Monpa is basically agrarian and rural based. They practice both permanent and shifting (*jhum*) type of cultivation. Maize, paddy, millets, buckwheat, wheat, barley, soybean, French bean, chilies, garlic, potato, cabbage, tomato, cauliflower, apple, etc. are some of the major crops grown by the Monpa tribe. Animal husbandry in which yak and sheep are major domesticated animals, play a pivotal role for food and livelihood security of Monpa tribe. *Brokpas* living in various ecosystem of region are

¹ The term *Brokpa* in Monpa dialect is "Brok- Pasture land and Pa- people or inhabitant". *Brokpa*, a pastoral community of Monpa tribe, is an occupational profession amongst the Monpas where the person dwells in the pasture land and rears the herds (Yaks). They live in houses built of stone and wood. Nevertheless, they primarily led a life of pastoral nomadism due to which they identified themselves as nomads or *Brokpa* and were recognized as such by others, which are found in high elevation pastures of Arunachal Pradesh in Tawang and West Kameng Districts. *Brokpa* who are primarily depend their livelihood on animal herding, have their own spoken dialect which is quite different from that of the Monpas, they however are well adjusted with Monpas living at lower elevations.

² In this two sub-district, which is mentioned above though I have not mentioned the name of the villages, only few members of that particular area practices as *Brokpa* occupation, and rest are mostly practices agricultural as their primary occupational for their livelihood.

experienced and well known for their traditional knowledge of resource utilization (Singh 2009). To have knowledge of such diverse relationship between *Brokpas* endurance and relationship with their ecological surroundings, the data for the present study was collected mainly based on three field visits between 2009 and 2010. From April to June 2009 researcher conducted field work at Lhagyal Gumpa area, Mandalaphudung and Nyukmadung, and in the month of mid October-November 2010 conducted field work at Thingbu, and in the month of May 2010 conducted field work at Jang, thus covering the one complete cycle of the *Brokpas* activities. As the secondary sources were very limited, the data for the present study was mainly collected from primary sources during movement of the researcher with the herders in the different pastoral lands distributed at different altitudinal levels. From each village 20 *Brokpa*, age of more than 40 years, having the diverse knowledge of their traditions, were selected from a list provided by the *Gaon Burah* (traditional village head). Besides, women and young generations were also randomly selected and interviewed. An in-depth interview with open-ended questions was applied to gather the comprehensive facts on mobility and resource management. The technique, which has been used in the process of collection of information during my fieldwork was participant observations, interview- individual and group discussions. Household surveys with structured schedule, took place with the family, the husbands and the wives answering most of the questions, sometimes supplemented by their adult children. During interview, the languages used were Hindi as well as local³ language because *Brokpa* are well versed in both the languages. The audio recordings of the interviews conducted in the local language were translated and transcribed into Word documents in English.

4. Cycle of Annual Migration and Resource Management

The pattern of annual movement of herds and herders back and forth between a winter tent encampment and summer pastures (Thargyal 2007) is similar in all the study area and such movement where the oscillation between the permanent villages and temporary settlements with the herds and cattle is known as transhumance (Dhar 2009).

Transhumance is a highly developed form of pastoralism and is practiced widely in the Himalayas. The seasonal cyclic movements and utilization of resources in a rotational manner has placed transhumant people in a situation where they are nomadic on the one hand and transitionally or marginally sedentary on the other. This movement is seasonal in nature. In the summer they move from drier and warmer regions to wet and cooler mountains. This movement is reversed in the winter months. These seasonal, cyclical movements allow the regeneration of resources, especially grass as fodder and water (Chakrabarti, 2011:3).

The *Brokpas* are following an annual transhumance system of management of yak and for this knowledge of pasture, vegetation, carrying capacity, plays a key role in pasturing. Therefore, as Gimenez & Febre (2006) puts it, "by moving, pastoralists are able to access new pasture as forage quantity and quality change with use, season, climate and spatial variability" (2006, p. 343). One important aspect observed among the *Brokpas* of Tawang⁴ and West Kameng District is that they do not move on any direction at their will but always follow a certain prescribed route and reach certain points in a stage by stage journey to the summer pasture, and will do the same when they return to their permanent settlement at lower altitudes. This arrangement is made based on two reasons; first the availability of new vegetation in pastures for livestock during summer grazing at higher altitudes and secondly the community has to cultivate fodder and to preserve⁵ for winter grazing at lower altitudes for their herds



Figure 2: women busy in collecting and preserving fodder for their herds.

³ As mentioned earlier, the language of the *Brokpas* are quite different from that of *Monpas*. Having their own spoken dialect which is quite different from that of the *Monpas*, they however are well adjusted with *Monpas* dialects as well as Hindi language..

⁴ Similar observation was also made by Bibhash Dhar in his chapter entitled Anthropology and Transhumance in Human Ecology Special Issue No. 10: 151-156 (2001).

⁵ Due to harsh climatic condition, the agriculture production is very less compare to the production of fodder for their herds. If they need any agricultural products they get from their nearby village. During my field work they informed that, 'Brokpas hardly need any kind of agriculture product because if they need any food items they get very easily whereas sometimes the villagers don't have like the *Brokpas*. Before they move to the next grazing areas the villagers who are settled agriculturist, they know the departure time of *Brokpas*, they come with every food items that the *Brokpas* need and in exchange they get the ghee and churpi. Due to this reason the *Brokpas* hardly practices agriculture activities.

4.1. Cyclic movement

In the winter season from the middle of October to March, *Brokpa* people stay in their permanent village at the altitude of 9750 ft m, engaging trading. The permanent village consists of 10 to 20 houses, where small children or the elderly who can't bear the hard work at the high altitude land stay all the year round. As the temperature increases in April or May, they start to move to grazing lands at the higher altitude with carrying the stuff on the back of *Dzo* (the male cross-breeding of Yak and cow) (Tsering et al. 2010). On an average, summer pastures (*Yarsa or Jarsa or Jar Brok*) are utilized for 4-5 months and the winter pastures (*Gunsa or Gun Brok*) for 5-6 months, and the transit duration from winter pastures to summer pastures and the reverse usually takes 10-15 days for each side (Bora et al. 2012).

For example, *Brokpa* of Chander village have four places for seasonal grazing (Fig. No. 1), such as the land at 10400 ft from April to May and from September to October, at 11375 ft from May to June and from August to September, and at 13000 ft from July to August. During the move in summer season, they stay in the temporary tent made of bamboo or stone or wooden house (subject to the availability), engaging in milking and producing cheese and butter. Yak and its crossbreeding play an essential role in *Brokpa's* livelihood not only as the food source but also as the material for cloth or religious tool, and bride-price. The "Yak Dance," indicating the legend of introducing Yak into this region long time ago, and performed at "Lossar Festival (Monpa's New Year Festival)" in February, is also reflecting such an importance of Yak and its crossbreeding (Tsering et al. 2010).

5. Institutional Arrangement For Movement

5.1. Decision for Movement

The decision for movement is decided by the village leader with the support of community members, play an important role in the regulation of the seasonal use of pastures. The decision for movement is either decided by village head (*Gaon Burah*) in case of Jang *Brokpa*⁶ because in Jang only fifteen percent of villagers are practicing pastoralism and remaining depended on their agricultural products because the land is suitable for crop cultivation, so instead of selecting head among them, they prefer to accept the decision made by the village head. Secretary⁷, in case of Thingbu *Brokpa* of their community because in Thingbu the cultivation of crop is not suitable, due to this reason they have taken pastoralism as their livelihood activities. Though, pastoralism livelihood, from the outset, seems very simple economic activities, the hard work, knowledge of weather, environment, milking process etc. required very strong dedication and skill. All such skill is developed among them when they practice more and more activities of the pastoralism, which is passed on from generation to generation. The person who acquired such characteristics is being nominated and elected by them. The person could be a young or old, he perform his sincere duties until he have his capacities to perform. He should be well known to the Bhoti script because any rituals which are to be performed are written in Bhoti language. He plays many important role in decision making, distribution of grazing land, solving disputes, etc. They (*Brokpa Zomu*) have a meeting at an appointed place and discuss about distribution of grazing grounds for that year and to fix the date for movement to the respective grazing grounds. Grazing grounds are mostly allotted on rotation basis but in certain areas, lotteries method is also used. Once the appointment of grazing grounds is done, the herders prepare themselves to move towards their allotted grazing grounds. No one can move before the date fixed in the meeting. The shifting up of the grazing areas is done on auspicious days like 5th, 10th, 15th and 30th day based on the lunar calendar⁸. Each grazing areas are demarcated, as explained earlier, so that it could stop the entry of the yak of other *Brokpas*. This is basically done to stop the extra grazing so that the pasture deficient should be avoided and also to avoid disputes.

5.2. Regulation of uses of Rangeland Resources

To survive up with such harsh climatic condition, *Brokpas* indigenously apply pastoral management strategies to help them maintain the productivity of their rangeland resources at a level adequate to meet their long-term needs. The basic strategies used by them are summer-winter grazing, substantiate by their customary laws regarding the pasture management, also plays a major role in resource management. Traditional utilization of the grassland mainly depends upon traditional production system; the main character is pasturage. The traditional yak rearing merely relies on extensive grassland and natural reproduction. For production system, they mostly depend on some livestock, of which yaks are the most important because of their special adaptability to adverse climatic conditions. Due to their eco-friendly relationship with nature, their productions activities have obvious naturalness and viability for long times. This kind of resource management and production system which is depend on nature, has natural limitations of high altitude, cold weather and short growth time for grass. All these adverse conditions bring about seasonal production characteristics and cause the yak to be sturdy in summer, fat in autumn, and thin in winter.

Well organised local institutional arrangements and efficient traditional right and tenure systems have evolved that result in the sustainable use of rangeland resources. The pastures are either owned by private or community basis. Following are the local institutional arrangements regarding the uses of rangeland resources.

⁶ Jang is the name of the administrative circle of Tawang District. Those *Brokpa* who practices pastoralism nearby this area is being referred here as Jang *Brokpa*.

⁷ Head of the *Brokpa*.

⁸ It is believed that, if an auspicious day like 5th, 10th, 15th and 30th day is observed, it would bring prosperity to their life and their herds.

5.2.1. Regulations

- a. Pastures are either owned by individually (inherited to their offspring) or even by village communities. The grazing land are generally allotted to one or more families, the limits of the pasture area available being well defined, in all cases. The boundaries are well determined through natural features such as streams, ridges, or through marking using stones or trees.
- b. If the owner of the pasture area has already allotted his meadows to graze other herders, he has no rights to graze his cattle. If owner graze his cattle, instead of collecting tax he have to pay the tax to that particular allotted families as a fine.
- c. The owner of the meadows is entitled to graze his cattle and can take grasses or whatever he likes, only in case the meadows are not being grazed by other herders.
- d. The owner of the meadows has right to punish others herders who trespass in their territory and the fine imposed may be in the form of cash or kind.
- e. When there is intrusion into the boundary areas, such as areas where stream flow, the dispute is determined in favour of owner of the pasture land that anything and everything passing through the water belongs to the owner of the land.
- f. If the herders graze his herds in the community meadows, then he have to pay a tax in the form of byproduct of herds or by cash in the village monastery.



Figure 3: After distribution of grazing area the place are demarcated and fenced so that entries of others yak could be checked. Though it is not possible to fence all the area, so the main established route through which all the Brokpas follows are fenced

5.2.2. Taxes (Khrei)

1. When the grazing area is large, comprising several pastures, the taxes are collected on the basis of the number of herds and tents put up by the herdsman. If herders graze their cattle in the individual owned meadows, then the tax is to be paid to the owner of the meadows and in case village communities, the tax have to paid in the village monasteries.
2. *Tserin* (Pasture tax): *Tserin* is the tax paid by the herders for grazing their livestock in the pasture which is given to the owner of the pasture land (in case the pasture is owned by individual), and in case of villages or communities owned pasture land, the tax is paid to the village monasteries.
3. *Lamrin* (Route tax): *Lamrin* is the route tax collected if the herders transit from one place to another
4. *Purin*: *Purin* is also a kind of tax paid in the form of an animal products- hair, tail, hides, etc.

5.3. Preparation of Grazing Land

Brokpas have developed diverse strategies of natural resource use associated with water and land limitations. In case, if the natural grazing ground is not sufficient within their jurisdiction for their herds, then, based on my fieldwork, it is being observed that *Brokpas* after examining the suitable area, clear the jungle⁹ by setting fire on the selected area near the stream and the pasture available nearby. After selecting grazing ground, to limit or to control the fire, all the boundary of that particular area clears up to one or two meters distance, so that while setting up of fire it would not go beyond that boundaries. After one year they again clear the area, this time by manually and without setting of fire, make the tent for herders and make the area use for grazing ground. Such kind of activities is mostly taken up during the winter season. If the grazing ground is established in the warmer area then yak preferred to stay at higher altitude because it cannot bear the warmer climatic condition (Fig No. 2). Taking the example from the Tawang area, the movement of herd from a higher altitude region (Sela Top) to a lower altitude (Jang) is observed Among the herd, the yaks move down up to a certain altitude level (Ara-3), but other breeds come down to lower region (Jang). This is because, the yak has many characteristics and attributes. They are well adapted to extreme cold, high altitude, low oxygen content in the air, higher solar radiation, difficult and

⁹ Clearance of jungle is basically done in the winter grazing area or near by the villages, where all the communities or selected people are requested for help and they willingly participate in the activities. In case if the villagers are busy in some other activities, then they higher some people from neighbouring villages. They are being paid in the form of cash or their local products.

often treacherous terrain, cyclical nutrition with short seasons for the herbage on which the yak graze, and the need for yaks to cope with different kinds of herbage (Cited by Bhaattacharya in Cai Li and Wiener, 1995).

6. Conclusion

From the above, it can be concluded that, yak keeping is closely bound up with the social and cultural life of the people of the Monpa community in general and of course *Brokpa* in particular. In such high altitude area with harsh climatic condition, yaks are the main source of livelihood where agricultural practices are unsustainable. To meet the challenges of a harsh and often unfriendly environment, the *Brokpas* have developed a complex system of management and land use pattern involving the sharing of grazing lands and their use and maintain the cycle of annual migration which is main strategies of the *Brokpas*. Much of these traditional knowledge which has been passed on from generation to generation, have been developed through agreements between families and within villages. Existence of informal rural social institution (Singh 2009) plays a major role in such organization.

Traditionally, *Brokpas* livelihoods are relied on yak primarily for subsistence, but status was also conferred by possessing large numbers of yak. With the more recent moves towards a market-oriented economy, changes have been imposed or at least suggested that affect both the traditional patterns of yak keeping and the purpose of keeping the animals (Wiener, G. et al. 2003).

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