LIVELIHOOD SECURITY OF HOUSEHOLDS IN PAPUM PARE DISTRICT, ARUNACHAL PRADESH: ROLE OF NYISHI WOMEN

Bhaskar Majumder*

ABSTRACT

In the district Papum Pare in the State of Arunachal Pradesh in India, most of which are covered by forests on the hilly terrain of the Indian Himalayan Region, the women remained self-engaged, intra-household individually and outside house collectively. The Nyishi tribe being the major tribe by size of population (The total Nyishi population in the state in 2011 was 18.05 per cent of the state's total population. The total Nyishi population in Papum Pare district in 2011 as percentage of Nyishi total population in the State of Arunachal Pradesh was 29.97) in the selected district, we focused on the engagement of *Nyishi* women in ensuring livelihood security of the households. What we observed was the central role played by the Nyishi women by self-engagement in collection of resources from forests-hills that was beyond money-based estimation which ensured the livelihood security of the households in the state. We pleaded for least intervention by the government in the forest-based livelihood of the Nvishi tribe.

Keywords: Livelihood, Nyishi Women, Papum Pare

^{*} Faculty at G. B. Pant Social Science Institute, Allahabad (A Constituent Institute of the University of Allahabad) E-mail: majumderb@rediffmail.com

This paper is an offshoot of the research project 'Integration of Indigenous Knowledge for Sustainable Livelihood Support from Forests in the Himalayan Forest Belts' under Indo-Japan Research Programme sponsored by the ICSSR, GoI. The usual disclaimer applies.

The author thanks the anonymous reviewer for useful comments and queries on the first version that helped him revising the paper. The usual disclaimer applies.

1. Introduction

The geographic space carries meaning through human actions and perceptions. Nature is where human beings find a space to activate them. Man defines nature by his actions – transforms, identifies and calls it the domain of resources. The geographic space also becomes a socio-cultural-economic space. The Indian Himalayan Region (IHR) is such a space for people to make it their home over centuries. It is much more than a boundary between two big countries – China and India (Liechty, 2018:33). The people lived in the locality and moved around. They owned the hills-forests in their perception. This ownership was not in the economic-institutional frame. They owned for they were part of it since time immemorial.

Many of the Adivasis relocated themselves to the IHR some centuries back from regions like Tibet-Mongolia-China in the continent called Asia. The ethno-geographic map changed over time. The IHR includes the north and north-east states in India and the neighbouring countries, Nepal and Bhutan. The area identified as Nepal was myopically observed as suppliers of *Gurkhas* in the Army (of British India) – Nepal was always different because of being *Dev Bhumi* though geographically it stood between India and Tibet (China). In a narrow frame, space is activated by the state as supply zone of natural resources and labour.

In any society that is simple by material standard of living, whether or not it is a tribal society in India or elsewhere, nature and natural resources cannot be separated from the activities performed by women. Women and nature are disintegrable. As the major visible component of nature, forests accommodate women where women not only collect minor resources but also express their group behaviour and spend a major part of their time when they are outside house. The Kimberly women of West Australia 'work under compulsion, nor is their status thereby inferior. Work for them is likewise an admitted necessity, inseparable from lifeShe brings to her work qualities of patience, tenacity, adaptability, competence, trained powers of observation and an intimate knowledge of the country and its resources' (Gisbert, 1978:125). In simple societies women mostly determined the social outcome rather than being determined; women got self-engaged in collection of resources and sustaining livelihood of the households in societies that were yet to be transformed into a money-based economy. This self-engagement is different from self-employment that carries an expected price of labour and different from hired employment that carries a money wage rate. Self-engagement, thus, is beyond the boundary of pricing in the labour market understood as paid labour or unpaid labour.

The connotations of livelihood security have been elaborated elsewhere (Majumder and Patel, 2017: 66). Livelihood security "refers to the household's access to incomes and resources that meet the family's basic needs, including

community participation and social integration. Livelihood is based on one's ability to access assets and entitlements (both tangible and intangible) as well as opportunities for generating an income, including reserves and assets to offset risks, ease shocks, and meet contingencies". Livelihood is secure means the household is safe. "Employment is one way of making a livelihood, but the livelihood of a low-income household or individual is based on multiple activities and sources of food and income". Employment in the conventional sense as being hired wage labourers may not be a ground reality in societies that continue to practice collection from forests-hills as the major mode of living.

While the basic domains of livelihood security are private utilities, public utilities and institutional support in the case of living of the Adivasis, the distinction between the private and the public may often be blurred because of the nature of community ownership over resources. Often it is community ownership or collective/customary use right over generations. Also, the nature of the institutions by rules and laws may differ for the communities dependent on the hills-forests for livelihood from that of the households living on plain land.

The rest of the paper is structured as follows. In Section 2, we briefly present review of literature. In Section 3, we mention the methodology, sample and study zone. In Section 4, we describe the general forest-based living of the Nyishi tribe in Arunachal Pradesh. In Section 5, we narrate the role of Nyishi women in livelihood security of the households. In Section 6, we sum up.

2. Review of Literature

In this section we present briefly the forest policies of the Government of India that includes British India and post-British independent India as well as Acts and Conventions related to forests announced by the Government of independent India.

Forest Policies and Acts of the Government of India

We present below the Forest Policies of the Government of India since 1855 declared through Charters and Acts (Table 1).

Table 1: Forest Acts and Policies in India, 1855-2006

Period	Year	Acts and Policies		
British India	1855	Lord Dalhousie's Forest Charter, 1855 meant regulation of wasteland and advocated scientific forestry.		
	1864	The Forest Act, 1864 strengthened the Imperial power to declare land as forest land.		
	1865	Indian Forest Act, 1865 imposed state monopoly on forest resources; it also advocated scientific forest management.		
	1878	Forest Act, 1878 classified forests as reserved, protected and village forests; local rights were refused.		
	1894	National Forest Policy, 1894 restricted the rights of the forest dwellers in collection of means of livelihood.		
	1894	The Land Acquisition Act, 1894 empowered the state to acquire any land for public purposes.		
	1927	The Indian Forest Act, 1927 alienated forest-based communities. Establishment of Forest Department at State level.		
	1930			
Independent India	1952	Forest Policy, 1952 classified forests as village forests and tree lands and aimed to have 33 per cent of total geographic area under forest cover.		
	1972	The Wildlife Protection Act, 1972 restricted the rights of the forest dwellers in wildlife sanctuaries and nation parks. The Forest Conservation Act, 1980 restricted the right of Adivasis to access forest resources. Amendments of Act, 1980 restricted the state government to convert forest land for non-forest purposes or leasing out of forest land to any private person/corporation agency/organization.		
	1980			
	1988			
	1990	Adopted Community-based forest management.		
	1996	The Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996 (PESA) made it mandatory for the State legislature to formulate laws in keeping with the customary law, social and religious practices and traditional practices of communities.		
	1999	The 1972 Act was amended in 1999 that reinforced the restrictions on the forest dwellers.		
	2002	The Adivasis as local users of biological resources were not mentioned in the Biological Diversity Act, 2002.		
	Affidavit, 2004	Through the Affidavit the Government of India acknowledged the historical injustice inflicted on the tribals and forest dwellers.		
	2006	The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act recognized the customary rights of the forest dwellers.		

Note: The 2006 Act was amended in 2012.

Source: Environment Reader, Centre for Science & Environment (n.d.), p. 186-187; and available literature

Post-Independence India

National Forest Policy, 1952: The Policy pledged to set up sanctuaries and national parks for preservation of wildlife. The Policy accepted the state as the authority at the cost of the forest-based communities that was legitimized by national interest (Jewitt, 2004:72). The post-colonial policies of the Government of India de facto followed the British India's colonial policies related to forests for the Government was concerned for national interest and not the unrecorded customary forest-rights of the local communities.

Forest Conservation Act, 1980: Based on the 1878 Forest Act, copying almost all the sections of the Act, India's forest policy was formulated and came as the draft Forest Act, 1980. The rights of the Adivasis over forests ceased to exist following this. The Adivasis became India's internal "Others".

The impact of India's Forest Conservation Policy, 1980 imposed a rival relationship between man and nature based on the perception that the forest dwellers were anti-preservation of forests and Himalayan bio-diversity. This posed a threat to the livelihood security of the forest dwellers in the Himalayan region. In the period prior to forest legislations, the idea of poverty and deprivation was an alien concept as tribes lived in harmony with nature sustaining their livelihood.

The Biological Diversity Act, 2002: This Act provided for 'conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto' (GoI, The Gazette of India Extraordinary, Part II, Section I). The Act acknowledged India's rich biological diversity and associated traditional and contemporary knowledge. India is a party to the United Nations Convention on Biological Diversity signed on June 5, 1992.

The tribes as users of biological resources were nowhere mentioned in these criteria.

Forest Rights Act, 2006: The Draft of the Act was proposed in the Parliament in 2005, finally passed in 2006 and came into effect on January 01, 2008. The Act recognized the customary rights of the households in forests and no proof was needed for cultivating land up to four hectares per household. Following this Act, the forest dwellers had the right to collect non-timber forest produce. The Act also empowered these dwellers to protect and conserve forests where they had been living.

National Environment Policy, 2006: The Policy suggested appropriate land use planning and cultivation of traditional varieties of crops and horticulture by promotion of organic farming. The Policy also suggested promotion of 'sustainable tourism....within the carrying capacity of the mountain ecology'.

Forests perceived in India's Plans (reviewed 11th Plan onward because prior to 2007 the Acts & Policies took care of the concerns)

The 11th Five Year Plan of the Government of India (GoI) linked forests to livelihood and focused on strengthening participatory processes. The National Afforestation, Eco-restoration, and Eco-development Board (NAEEB) was formed. It was argued that the Gram Sabhas and the traditional institutions in the North-East could act as community forestry institutions. Joint Forest Management (JFM) Committees were supposed to recognize the existing Van Panchayat and other community forestry institutions (GoI, Planning Commission, 2007, Vol. III, p. 66-67).

The 12th Five Year Plan of the Government of India stated, 'A proposed scheme on Satellite-based Forest Resource Assessment will put in place a system for technology-based collection of baseline data and evaluation of forestry schemes with Geographic Information System (GIS) mapping of areas under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (GoI, Planning Commission, 2013, Vol. 1: 215). The Planning Commission opined that, 'The National Forestry Information System should enable networking with States for tracking changes in forest development, harvesting, trade and utilization scenario with particular focus on issues of ownership and rights under Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act' (GoI, Planning Commission, 2013, Vol. 1: 218).

A Committee was constituted by the Government of India on June 10, 1994 that accepted the community, rather than an administrative unit like a village, as the basic unit of the system of self-governance in tribal areas. A habitation was the natural unit of the community. At the level of Gram Sabha, the traditional institution of the people, that is the community as a whole was recognized that would function based on consensus and without any formal structure at that level (Sharma, 1995: 22-23).

Forest Cover in India

Nature provides the space for self-engagement. We focus here only on forests. The forest cover as a percentage of total area in India was 15.7 which was marginally less than that of Asia as a continent and was far behind the world average. Per capita forest in India was far below not only the Asian average but more so below the world average (Table 2).

Countries/Regions	Forest Cover (% of land area), 1995	Per Capita Forests (ha)
India	15.7	0.06
Asia	16.4	0.1
World	26.6	0.64

Source: State of World Forest, FAO, 1999

India ranked 10th in forest area as percentage of global forest area, accounting for only 2.0 per cent; India's forest area as a percentage of country area fixed her rank at 9th at par with China in 2015. The top ten countries accounted for 67.0 per cent of global forest area in 2015 (Table 3).

Table 3: Forest Area for Top Ten Countries, 2015

Sl. No.	Country	% of Country Area	% of Global Forest Area
1	Russian Federation	48	20
2	Brazil	58	12
3	Canada	35	9
4	USA	32	8
5	China	22	5
6	Democratic Republic of the Congo	65	4
7	Australia	16	3
8	Indonesia	50	2
9	Peru	58	2
10	India	22	2
11	Total	48	67

Source: India State of Forest Report 2017, p. 15

The Indian Himalayan region (IHR) covers 16.2 per cent of India's geographic area; the forest cover in IHR represented twice its proportion in geographic share. There were, however, no changes in forest cover in IHR over 2007-2011 as percentage of India's geographic cover. In parallel, we present percentage share of the 12 states in total geographic area in IHR (Tables 4 and 5).

Table 4: Contribution of the IHR to the Total Forest Cover of India, 2007-2011

Region/Country	Geographic Area (%)	2007 (%)	2009 (%)	2011 (%)
IHR	16.2	32.3	32.04	33.5
India	100.0	21.0	21.0	21.2

Note: data beyond 2011 was not available.

Source: GoI, Planning Commission (for the year 2007); Forest Survey of India (for the years 2009, 2011); State of Forest Report, Dehradun

Table 5: Share of Geographic Area of States in Indian Himalayan Region, 2002

Sl.	State/Region	% Share of Geographic Area in the	
No.		IHR	
1	Jammu & Kashmir	41.65	
2	Arunachal Pradesh	15.69	
3	Himachal Pradesh	10.43	
4	Uttarakhand	10.02	
5	Meghalaya 4.20		
6	Manipur 4.18		
7	7 Mizoram 3.95		
8	8 Nagaland 3.11		
9	Assam Hills	2.87	
10	Tripura	1.97	
11	Sikkim	1.33	
12	West Bengal Hills	0.59	

Note: IHR: Indian Himalayan Region; We did not get data post-2002.

Source: Office of the Registrar General of India, Ministry of Home Affairs, GoI

The forest cover as per cent of geographic area of the state in the IHR varied over the 12 states. It was basically seven sisters of the north-east India that provided most of the forest cover as percentage of respective state geographic area. The state of Arunachal Pradesh showed forest cover as around 80.0 per cent of the state geographic area during 2005 to 2013 that declined in 2017 (Table 6).

Table 6: Forest Cover of States in Indian Himalayan Region
(As % of Sate Geographic Area)

State/Region	2005	2007	2011	2013	2017
Jammu & Kashmir	9.57	10.21	10.14	10.14	9.10
Arunachal Pradesh	80.93	80.43	80.50	80.39	61.39
Himachal Pradesh	25.81	26.35	26.37	26.37	66.52
Uttarakhand	45.70	45.80	45.80	45.82	71.05
Meghalaya	75.74	77.23	77.02	77.08	42.34
Manipur	76.53	77.40	76.54	76.10	78.01
Mizoram	88.63	91.27	90.68	90.38	26.26
Nagaland	82.75	81.21	80.33	78.68	52.01
Assam Hills	35.25	35.30	35.28	35.28	34.21
Tripura	77.77	76.99	76.07	75.01	60.02
Sikkim	45.97	47.31	47.34	47.32	82.31
West Bengal Hills	13.99	14.64	14.64	18.93	13.38

Source: Forest Survey of India, State of Forest Report, 2005, 2009, 2011, 2013, 2017, Dehradun

3. Methodology, Sample, Study Zone

We selected the State of Arunachal Pradesh based on its forest cover that was more that 80.0 per cent of the geographic area of the state till 2013; this percentage, however, showed a sharp decline to 61.39 per cent in 2017. Among all the 12 states on the Indian Himalayan Region (IHR), the State of Arunachal Pradesh was ahead of the other States by forest cover excepting two very small states, namely, Mizoram and Nagaland. This ranking was also up to 2013.

We selected one district, Papum Pare, of a total of 16 districts in Arunachal Pradesh inhabited mostly by tribes. The district ranks first by size of population by districts. The total population of the district Papum Pare was 12.76 per cent of total population in Arunachal Pradesh in 2011 that was a little higher than that of 2001. The total Nyishi population in the state in 2011 was 18.05 per cent of state total population that was much higher than that of 2001. The total Nyishi population in Papum Pare district in 2011 as percentage of Nyishi total population in the state of Arunachal Pradesh was 29.97 that showed a sharp decline from 46.40 in 2001 (Table 7 & Appendix Table 1).

Selected Indicators/Census Year	2011	2001
Total Population (AP)	1,383,727	1,097,968
Total Population of PP as % of AP	12.76	11.11
Nyishi Total population in AP as % of AP Total	18.05	7.98
Population		
Nyishi Total population of PP as % of Nyishi Total	29.97	46.40#
Population of AP		

Table 7: Selected Indicators of State of Arunachal Pradesh and District Papum Pare

by mother tongue; AP: Arunachal Pradesh, PP: Papum Pare

Source: Office of the Registrar General, India.

Of the total population in major Scheduled Tribes (STs) in Arunachal Pradesh, Nyishi tribe constituted 12.43 per cent in 2001. The other STs had varying percentages in major STs in the state (Table 8).

The Nyishi language belongs to the Sino-Tibetan family; however, the origin is disputed. Of the total Nyishi population in Arunachal Pradesh in 2001, Papum Pare district had 34.72 per cent classified by mother tongue. The non-Nyishi population in the state mostly included Nepali, Adi, Adi Gallong, Monpa, Bengali, Hindi speaking and Assamese; the rest of the population were few in number but multi-lingual (Appendix Table 2). *Nyi* refers to a human and *shi* refers to being. Thus, Nyishi means a human being. The tribe is spread over many districts in Arunachal Pradesh plus some districts in the bordering State of Assam.

Table 8: Population of Major STs in Arunachal Pradesh, Census 2001

Sl. No.	Name of Major STs	Population		
1	All STs	7,05,158 (100.0)		
2	Nyishi/Nissi	87,656 (12.43)		
3	Adi	32,582 (4.62)		
4	Adi Gallong	48,126 (6.82)		
5	Adi Minyong	33,984 (4.82)		
6	Adi Padam	11,625 (1.65)		
7	Dafla	45,276 (6.42)		
8	Monpa	41,983 (5.95)		
9	Tagin	39,091 (5.54)		
10	Wancho	47,788 (6.78)		
11	Galong	27,239 (3.86)		
12	Others	2,89,808 (41.09)		

Note: Data beyond Census 2001 was not available.

Source: Office of the Registrar General, India

The district Papum Pare has five development blocks. Because of time-cumbudget constraint, we covered only three blocks, namely, Sagali, Balijan and Kimin in the district dispersed by geography; because of the same constraint, we covered a total of only eight villages well distributed by blocks; we conversed with 104 households that constituted 32.5 per cent of all the households residing in the selected villages (Table 9).

Table 9: Households selected from District, Blocks and Villages in Arunachal Pradesh

State	State District Block Village		Total Households	Households covered		
				Householus	Number	%
	Papum	Sagalee	Sangri	28	14	50.0
	Pare		Lang Dang	35	12	34.3
			Rachi	28	11	39.3
A11		Balijan	Rakap	40	16	40.0
Arunachal Pradesh			Jote	44	09	36.4
			Puma	55	16	29.1
		Kimin	Lower	20	10	
			Jumi			50.0
			Kakoi 2	70	16	22.9
Total Number	01	03	08	320	104	32.5

Note: We could not cover all the five blocks for time-cum-budget constraint. We could not cover CD Block Doimukh and Mengio. The number of villages from three Blocks were 302 i.e. Sagalee (162 Villages), Kimin (35 Villages), and Balijan (105 Villages).

Source: Field Survey, November-December 2018

The selection of villages was based on the inhabitations of the Nyishi tribe distanced reasonably from concrete roads. There was no a priori decision to cover only 8 villages – what we could cover was a total of 8 villages in 15 days of field visits. Similarly, there was no a priori decision to cover only 104 households – what we tried was to converse with reasonable number of members from households.

We did not take data on the number of households from Census; personally the author had been in all the villages as mentioned and was informed by the local aged person or *Gaon Buda*. In Rachi, for example, that was the one end of the district, the visible houses were reported as 28 (end-2018) though those were cluster of houses with members of families entering into any house any time.

We did not administer any structured schedule on the sample households. We conducted Group Discussions in the houses of the households including those of *Gaon Buda* who was the local Councillor selected by the community and acknowledged by the state. The number and location of Group Discussions (GDs) were not pre-fixed – those evolved because of curiosity among the respondents who assembled to share their episodes. Both male and female members of the households participated in the conversations. Thus, the conversations included personal interviews and group discussions. We also had conversations with women of different ages carrying bundles of grass-leaves on their head on the boundary of the forests adjoining public roads as well as entry point of their houses. This was in addition to the households that we covered. We took help of local facilitators in our primary survey to overcome linguistic gaps and in approaching areas that often seemed inaccessible.

4. Forest-based Living of Nyishi Tribe

The Nyishi tribe was forest-dependent to meet basic needs. For this tribe, hills-forests-habitats-houses were inseparable. Unlike wet cultivation, the tribe practiced Jhum (shifting cultivation) inside forests after cleaning the demarcated area to cultivate paddy. The technique of production was delinked from the indicators of modern farming based on tractors, chemical fertilizers, and assured irrigation facilities. They protected the forests independent of any knowledge about state laws. The hunting in forests was done by a group – there was no prefixing of number of persons that would go for hunting. This meant that they had to keep forests intact for at least the time of next hunting. The members of the Nyishi households kept bows and arrows, with provision of poisoned arrows, and other hunting equipments to hunt animals for meat. As example of valour or for decoration, they often displayed animal skin, horns, beak, and bones on the walls of their houses. They used to hunt wild boar, monkeys, mice, goat, and deer in the forests. Wild animals like tigers, elephants, wild boar roamed within forests and did not invade residential areas implying continuing carrying capacity of the forests.

Bamboo-dependent Living

Bamboo as a grass grew naturally in abundance in the forests; it was a major component of forests in the selected district. The unnumbered pieces of bamboos on the hills of the district could be easily replenished by natural growth even after some were chopped off by the households of the adjoining areas. Bamboo had twin purposes: consumption and construction. In construction works, bamboo was used to make floor and walls of the house, boundary walls outside house to mark the private space. In consumption, bamboo shoot was preserved as soft cake and dried particles; soft cake was used in cooking and dried particles taken anytime for chewing. The dried particles of bamboo shoots tasted like dried ginger. Bamboo as soft cake preserved in water in a bottle with cap closed had an acid effect that was understood as soon as the bottle was uncapped.

It was a delicious food in a number of forms like (i) shoot pulp kept in quarter-filled water in an air tight jar, (ii) dried shoot in very tiny pieces, and many other forms. The Nyishi tribe regularly consumed bamboo shoots preserved in different forms prepared as vegetables.

In livestock most of the households had chicken. The Nyishi tribe prepared 'bamboo shoot-chicken' as a delicacy served on leaf plates for occasional consumption. They prepare and relish it during festivals and occasionally with guests. The bamboo shoot in chicken soup looked like potato finger chips. The food was prepared boiling chicken-bamboo in water-salt-chilli. The households did not store chicken-meat. They collected bamboo shoots from forests.

Bamboos were of different diameters, from very narrow (non-hollow type) to as cylindrical as seven-inch in diameter. The thickest bamboos were made in parts, each part around 20 inches in length with bottom-end closed to carry water collected from far off places. Bamboo tubes were used to collect and carry water, cook food in bamboo vessels, bamboo mugs used to drink water, bamboo container to store goods. Apart from these, bamboos were used to make arrows, room floor, musical instruments, agricultural tools, and baskets.

5. Nyishi Women: Role in Livelihood Security

The reason we narrated forest-based resources was because women were central to collect most of those resources to use directly or to transform to manufacture baskets, cook as food, animal feed etc. Women and forest were observed as disintegrable. It will not be an exaggeration to opine that the relationship between women and forests were symbiotic. Daytime was when women in group entered into forests, collected non-timber forest produce and came back after hours spent. It was silent work by self-engagement. Nobody hired them on wage basis. Women had natural freedom, as different from empowerment by others, to move out to extract vegetables and roots and fruits from forests and bring wood-leaves-grasses for fuel and housing materials. Women generally got self-engaged in groups for collection from nature. Freedom of women ensured food security at home, caring for children and gave men enough space for hunting-cultivation-fishing.

All women remained engaged in collection and extraction throughout the year; many times it was time-utilizing like in animal grazing and livestock caring; they did not express strain in voluntary group works that they considered time-engaging.

Some of the women members of the households knitted/weaved clothes and made potteries, clothes from berks of trees. They coloured clothes black in stripe from one type of berks of hilly banana tree. They made round-shape carrier from dried pumpkin of different sizes to keep vegetables. The women members of the households used to crush paddy manually in a wooden bowl —

top-open in a cylindrical shape. Meat was dried and preserved by women. They practiced these based on inherited knowledge. There was no gender-specificity in works. However, the women decided what activities they would be engaged in (Box 1).

Box 1: Self-engaged Activities of Nyishi Women

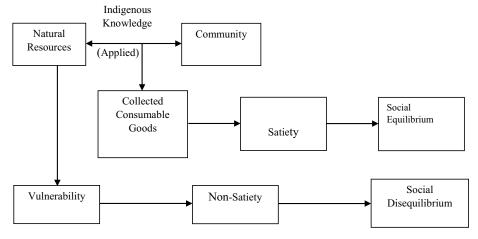
Women	Activities
Social	Collecting water, fodder, cooking and related works, serving food at
	home, looking after children, keeping animal shed, meat drying and
	preservation
Economic	Animal husbandry, stitching and tailoring at home, basket making, occasional sale of fruits and vegetables, support in cultivation and collection of roots and fruits.

Source: Field Survey, November-December 2018

Livelihood of Nyishi Tribe

The Nyishi tribe sustained their livelihood in satiety-based social equilibrium. Vulnerability was not in the psyche of the tribe; they mostly lived in non-material mode distanced from non-satiety based individual utility maximization. It was community living where indigenous knowledge worked in their symbiotic relationship with nature (Flow Chart).

Flow Chart: Social Equilibrium of Nyishi Tribe in Arunachal Pradesh



Their living, thus, was not consumption-led, and remotely in a comparative frame; they consumed mostly from collection – it was need-based. Labour was self-engagement, mostly in groups, in activities like hunting, sowing, harvesting, digging soil, fishing and all that. Nyishi life was collective and not in a comparative mode. The practice of storage was absent except paddy and dried meat. All were non-vegetarians though they used to eat vegetables and roots

(collected/cultivated) adequately. The major food were rice, meat, vegetables (different leaves, roots, pumpkin), grasses (bamboos of different varieties). The households had their self-decided requirements in a non-comparative frame. Famine was never heard of in Nyishi's life in the not-too-remote past. In the absence of paddy, they discovered roots of different types to extract and consume. As conveyed by each member of the households, they were not poor for they could satisfy their needs from nature (Box 2).

Box 2: Livelihood Support of Nyishi Households

Livelihood	Items	Provided by	Time/
Support			Sustainability
Private Utilities	Food, housing materials	Self-labour,	Both short-term
	livestock	collective labour	& long-term
Public Utilities	Hills-Forests-Rivers	Nature	Eternal

Note: Migration was almost absent.

Source: Field Survey, November-December 2018

Once we try to estimate income of the household of the Nyishi tribe, problems emerged for most of the livelihood support was from self-engagement of women, a major component of which were from collection from Common Pool Resources CPRs, and the other from keeping livestock. CPRs and livestock were also intertwined. Forests provided space for animal grazing mostly guided by women and forests provided animal feed at home also. Thus, women, CPRs and livestock were inseparable. Food security had two main components, one Jhum cultivation where rice was grown after cleaning land inside forests mostly by men while the complementary food like vegetables were collected/extracted by women. Hunting was male group behaviour that provided meat. Meat was dried and preserved at home by women. The dried meat was preserved for the year.

Of late, state-administered labour market got formed through works under MNREGA implemented in some of the villages that were known locally as '100 days work' for the members of the households engaged. The workers, both male and female, engaged in construction/repair of roads could not report how many days they had been working and what wages they received. Because of very recent introduction of the work programme in the areas that we covered, we presumed wage-income from MNREGA did not support their livelihood much. The youth started migrating mainly for education and opportunity to get jobs in the services sector within the state; migration-related income was marginal (Box 3).

Box 3: Income by Types and Sources for Nyishi Households

Activities	Income
Private/Collective	
Self-Engagement of women	Cent per cent in kind
Cultivation (Jhum) by men	In kind (Jhum)
Hunting (Occasional) by men	In kind
Collection from CPRs by women	Cent per cent in kind
Livestock rearing mostly by women	Mostly in kind
Petty Business	Not much reported\$
Migration (Job search)	Marginal
State-Administered	
MNREGA	Wage-income (Supplementary)#
PDS	Real income enhancing

- # In some difficult regions the sample households were represented by FGDs. Hence, the data are approximations.
- \$ The Tamin Block in the selected district has a double boundary with Lakhimpur district of Assam where Nyishi people used to go to sell fruits and vegetables. The Tamin Block had also a large tea estate that produced for sale high flavour tea in the market.

Source: Field Survey, November-December, 2018

The domains of self-engagement of Nyishi households were forests-mountains apart from own home (Box 4).

Box 4: Domains of Self-Engagement by Nyishi Women

Components	Items	Sources/Location	
Collection	Vegetables-roots-fruits, grasses-leaves-	Forests, Mountains	
	NTFPs, water		
Cooking	Food	Home	
Storage	Water, fuel-wood, animal-feed	Home and adjoining	
		space	
Animal	Feeding animals, grazing	Animal shed at home,	
Rearing		forests	
Child Caring	Food, clothing, sleeping	Home	

Note: It was not possible to calculate individual time spent by components for some activities were person- specific and some collective. It was also not possible to calculate intrahousehold time in components and time engaged outside house.

Source: Field Survey, November-December, 2018

Nyishi women got self-engaged at home and outside implying time-engagement (Table 10).

Age (yrs.)	Activity	Time/Tenure per day
Below 15	Schooling, home-assistance	Morning
15-45	Home-maker, Collection from	5 a.m. to 8 a.m.; 9 a.m. to 12
	CPRs	noon#
Above 45	Home-maker	5 a.m. to 10 p.m.*

Table 10: Time Engagement per Day of Nyishi Women

Note: We did not ask women their age, so it was a guess. We could not also link age with marriage.

- * We did not question about the leisure time of women.
- # Flexible time engaged in caring for children and domestic animals, cleaning animal shed, arranging collected forest resources.

Source: Field Survey, November-December, 2018

The Nyishi women were self-engaged in collection from CPRs where most of the collected materials served multi-purposes. For example, (i) water collected served drinking by household members and domestic animals, cooking food, cleaning utensils and clothes, (ii) leaves collected helped as housing material as well as animal feed, (iii) fuel-wood collected was for daily cooking as well as meat drying infrequently and arranging fire outside house for all as a climatic-cultural practice (Box 5).

Box 5: Collection from CPRs by Nyishi Women

Collection	Source	
Water	Shrot (Mountain)	
Leaves	Forests	
Fuel-wood	Forests	
Animal-feed	Forests	
Grasses	Forests	
Roots, bamboo shoot, vegetables (food)	Forest-land	

Shrot: Natural flow of water in mountain

Source: Field Survey, November-December, 2018

Household Income in Cash and Kind of Nyishi Households: Contribution of Women

Conventionally, livelihood security is based on economic well-being that, in turn, rests on income to be spent per period. Income is not only in money (cash) but also in kind. In the case of Nyishi tribe it was mostly in kind for two major reasons: (i) it was because of the self-engagement of women and (ii) income in cash was transitory. The following may elaborate our argument.

Household Income = Income in Cash + Income in Kind

Income in Cash = Income from sale of goods collected/produced + Income from MNREGA works

Income in Kind = Income from self-engagement + Income from CPRs + Income from Livestock

We derived the following (Field Survey, November-December 2018):

- Income from MNREGA was marginal and supplementary in nature.
- Migration-related remittances were marginal.
- Income in cash was transitory and hence could not project income per month or per year.
- PDS enhanced real income if there were Fair Price Shops and households had access to it and had money to buy items distributed through Fair Price Shops.
- Income in kind mostly ensured the livelihood security of the Nyishi households. It will be premature to cardinally calculate the components of income in cash and income in kind.

We focused on women as the key actors in livelihood security of households, for, in our observations, self-engagement of women, collection from CPRs and livestock looked after mainly by women were the main pillars of livelihood. The intra-household self-engagement of women being voluntary labour, the income earned on this account was hypothetical. The self-engagement of women in collection of water from *shrot* (natural flow of water from mountains) for multi-purposes like drinking, cooking, animal feeding was unaccounted income. Actually, it was real income of the household; hence, what percentage of household income Nyishi women contributed was a non-question. It was not possible to readily convert the non-money income of the household into money income. The derivative questions like living below poverty line or economic vulnerability or marginalization of the Nyishi households seem irrelevant.

6. Summing Up

In forest-based living of the Nyishi tribe, women played the central role by being self-engaged. The natural growth of grasses, including bamboo, provided elastic space for the women to enter into forests to collect daily needs. In a general social set up of complementary relation between men and women in Nyishi households, we found women in the central role for it encompassed also all works intra-household and outside house that maintained the micro social equilibrium.

Homogeneity of the Nyishi tribe in Arunachal Pradesh was natural-cultural. We observed the following:

- Nature provided the pedestal of living for the Nyishi tribe through collection.
- Inherited skill helped the households to prepare goods for domestic use, mostly bamboo-made.
- Living was based on minimum basic needs.
- Collective living got manifested in forests and on hills through collection, cultivation and hunting.
- Women played a major role in ensuring livelihood security of the households.
- Living of the Nyishi tribe was in the real economy and not in the monetized economy.
- Intra-Nyishi tribe conflicts in access to and uses of forest resources were absent.
- The Nyishi tribe felt uncomfortable to live outside the hills-forests and distanced themselves from sound and demonstration in city-based living.

The 'Inner Line Permit' was introduced during British India for Arunachal Pradesh to allow people of the plain land to enter the state that continues at present. It was a judicious decision of the state of India to allow the tribes live undisturbed on the hills-forests. It was a one-way restriction. The inhabitants of the hills were allowed to move in either direction with no requirement of such permit (Furer-Haimendorf, 1982: 288).

In view of the above, we plead for least intervention by the government in the forest-based living of the Nyishi tribe. This is because the tribe did not seek government intervention. The livelihood of Nyishi tribe was far from the moneycentric livelihood. They had stable livelihood centred on self-engagement of women based on collection from forests-hills. India's cultural pluralism is best served if the Nyishi tribe is allowed self-determination for livelihood rather than dragged into the mainstream that it keeps distance from.

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Appendix

Table 1: Selected Indicators of State of Arunachal Pradesh and District Papum Pare

Selected Indicators/Census Year	2011	2001
Total Population (AP)	1,383,727	1,097,968
Total Population of PP as % of AP	12.76	11.11
Population Growth (AP) in Decadal %	26.03	26.21
Population Growth (PP) in Decadal %	44.73	67.56
Nyishi Total population (AP)	2,49,824	87,656
Nyishi Total population in AP as % of AP Total	18.05	7.98
Population		
Nyishi Total population (PP)	74,885	40,676#
Nyishi Total population of PP as % of Nyishi Total	29.97	46.40
Population of AP		

by mother tongue

Source: Office of the Registrar General, India

Table 2: Population by Mother Tongues in Arunachal Pradesh and Papum Pare District, 2001

Sl.	Mother Tongues	Number of persons by Mother Tongues		
No.		Arunachal Pradesh	Papum Pare	
1	Nissi	1,17,124	40,676	
2	Bengali	54,521	17,605	
3	Assamese	51,422	9,100	
4	Nepali	94,895	7,425	
5	Hindi	53,663	7,219	
6	Apatani	27,792	6,492	
7	Adi	93,517	3,548	
8	Bhojpuri	19,526	3,150	
9	Adi Gallong	61,674	3,016	
10	Miri/Mishmi	33,393	1,864	
11	Chakma	39,953	1,562	
12	Malayalam	5,537	1,556	
13	Tagin	38,158	1,285	
14	Bodo/Boro	4,000	1,251	
15	Karbi	1,246	1,156	
16	Adi Miniyong	17,232	687	
17	Oriya	7,770	681	
18	Monpa	50,660	595	
19	Manipuri	2,065	510	
20	Maithili	2,836	483	
21	Nocte	27,400	370	
22	Other languages	2,93,584	1,22,003	

Note: Figures in parentheses are percentages of PP district of state respective category total.

Other languages included Apatani, Bhojpuri, Miri/Mishmi, Chakma, Malayalam, Tagin, Bodo/Boro, Karbi, Adi Miniyong, Oriya, Manipuri, Maithili, Nocte.

Source: Census, 2001