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Assessing Viability and Sustainability among the Tribes in Nagaland: A Study On Capital Based Perspectives

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Abstract
The satisfaction of human needs and aspirations is one of the main objectives for introduction of development strategies in less developed countries. A world in which poverty and inequality are endemic will always be prone to ecological and economic crises. Economic development is multidimensional concept which involving mainly the improvement of the human well-being while sustainable development is integration of conservation and development to ensure and secure the well-being of human as well as planet. The present study made an attempt to analyse the respondents' perception on capital based approaches of sustainable development among the tribal communities in Nagaland. Primary data has been collected using convenience sampling method from 200 individual household respondents covered eight major tribes in Nagaland. Six components from each capital have worked out and weighted average score has been calculated by scoring indicators on a five-point ordinal scale ranging from 1 to 5 measuring sustainable development index. Evidences shows that in all selected communities, the SDI levels are moderate or in other terms sustainable in danger and the capital stocks had failed to support desirable well-being of the people in the state. Though the productive base of natural and social capitals registered better desirable than economic and human capitals but overall well-beings among the tribal communities falls under sustainability in danger which needs to stimulate the productive base deliberations and preventing the depletion of existing stocks at most crucial in the state.

Keywords: *Sustainable Development, Household Behaviour, Welfare and Well-Being.*
JEL: *Q56, R2, I3*

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I. Introduction

Development is concern with the enhancement of living condition and sustainability is the quality of being able to continue over a period of time (Contreras, 2011). The phrase '*Sustainable Development'* has its origin in the International Union for the Conservation of Nature and Natural Resources in 1980 when it was presented the World Conservation Strategy with an overall aim to help the achievement of SD through the conservation of living resources. It has been used in various different milieus and subsequently has come to represent many ideas but the exact meaning was remains unclear. The general and common Brundland definition (1987) of SD that ''development that meets the needs of the present without compromising the ability of future generations to meet their own needs' has encompassing current concerns and policy requirements pertaining to improve the livelihoods(Ekins, Dresner, & Dahlstrom,2008). It is a development strategy to ensure a non-declining stock of productive capacity in terms of socio-economic, natural and human capitals ensures per capital well beings of present as well as future generations (Lele, 1991). However, one of the biggest issues facing the promotion of sustainable development in recent years was the disconnection between the environmentalists, and economists to strike a balance between the economic development and environment protection (Nadkarni, 1993).

The concept of development is prevalent today as continuous improvement of welfare of the society and it is associated with a better future and improving the living conditions of a given population (Bebartha, 2004). It is also considered as an enhancement of quality of life or maximising aggregate human welfare (Gallopin, 2003). Since the concept implies the protection or assurance of the means of livelihood for the masses not only at the present time but also in the future, it reflects equally the concern for both the inter-generational and the intra-generational equity (Glotzbach and Baumgärtner 2012). Discussions on sustainable development in terms of balancing the socio-economic-human-environmental objectives at the macro level do not sufficiently address how these could be achieved at the micro level. This can become meaningless at the macro level because of enormous difficulties involved to operationalise SD because un-sustainability. Concerns are experienced at the local level instantly and therefore, meaningful strategies towards SD can be visualized at

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grass root level. While keeping in view a broad framework of development strategies, the present study is an attempt to analyse the respondents' perception on capital based approaches of SD among the tribal communities in Nagaland.

Understanding the current socio-economic conditions of Nagaland is characterized by low level of living standards, weak infrastructure and economic inequalities and other social and cultural taboos which hamper to attain sustainable development in the State. The main objective of the present study was to assess the viability of socio, economic, human and environmental effectiveness among the tribal communities in Nagaland.

II. Methodology

The primary data was collected by author with the help of post graduate students through using convenience sampling method. Comprehensive interview schedule designed by the author applied four-stage probability/non-probability sampling methods with districts as primary unit, blocks as secondary unit, village as territory unit and the member households as the ultimate sampling unit. A total 200 households covering 25 households from each village have been interviewed. The data obtained was analysed using discriminate analysis through SPSS. The study relates to years of 2017-18 and data was collected from December 2018 to February 2019. The data was analysed using appropriate statistical tools and technique, such as ratios, percentages, proportions. In addition to the above usual statistical measures sustainable development index was estimated which will indicate the household status of sustainability as to whether they are under low or medium or high levels of sustainable conditions?

III. Results And Discussions

Demographic characteristics: Nagaland has a population of 1,980,602 as per the 2011 census with the population density of 119 person per sq. km. Nagaland has an area of 16579 sq. km. Literacy rate in the State has seen upward trend and is 79.55% as per the 2011 census of which male literacy stands at 82.75% while female literacy is at 76.11%. Among the village wise distribution is shown in table 1, Mongsenyimti is a large village located in langpangkong range of Mokokchung district with total of 547 families residing. The village has a population of 2867 of which 1486 male and 1381 are females of which 92% of male and 90% of females are literates. About 99 percent of villagers are belongs to Ao community. Similarly, Khonoma village is an Angami Naga village under Western Angami division and it was to as Khwunoria by its dwellers is estimated to be 500 years old. The village has 424 households and 1943 population of which 919 males and 1024 females with sex ratio of 1114 as per 2011census. In the same way, Thetsumi is a Chakhasang village located in Chizami circle of Phek district has 639 households and 2840 population of which 1461 males and 1379 females with 944 sex ratio. On the other hand, Akuk village is a large village located in Aitepyong circle of Wokha district with total household of 842 families and 4213 population consists of 50.60% of males and 49.40% of females with 976 sex ratio.

Table. 1. Demographical Characteristics of selected Villages

	Mongsenyimti	Khonomo	Thetsumi	Akuk	Kashanyishin	Chare	Khukiye	Iponger
No. of HH	547	424	639	842	105	340	133	80
Population	2867	1943	2840	4213	428	2257	614	471
Male	1486 (51.83)	919 (47.3)	1461 (51.4)	2132 (50.6)	193 (45.1)	1120 (49.6)	301 (49.0)	256 (54.3)
Female	1381 (48.17)	1024 (52.7)	1379 (48.6)	2081 (49.4)	235 (54.9)	1137 (50.4)	313 (51.0)	215 (45.7)
Sex ratio	929	1114	944	976	1218	1015	1040	840
Literates	90.85	75.75	77.5	87.45	96.5	84.11	81.07	72.30
Male (%)	91.9	84.4	82.9	89.88	97.06	86.46	85.17	76.56
Female (%)	89.8	67.1	72.1	84.98	96.68	81.76	76.98	68.05
Tot.workers	1781	1227	1384	1930	233	1403	375	284
Main.worker	1449	880	987	1853	277	873	121	160
Marg.worker	332	347	397	77	06	530	254	124

Field Survey2018-19& Census Reports, 2011

Kashanyishin is a medium size village located in Tseminyu circle of Kohima district, with total 105 families residing and the village has population of 428 of which 193 are males while 235 are females and the average sex ratio of this village is 1217. On the other hand, Iponger village is a small village the home of Yimchunger Tribe located in Pungro Sub-Division of Kiphire district. The total population as per 2011 census was 471 of which 256 males and 215 females and sex ratio was 840 females per 1000 males. Literacy rate in all the selected villages were more than 70 percent in which AOs and Rengma were predominant with more than 90

per cent followed by Lotha and Sangtam. On contrary to that Yimchunger registered lowest literacy rate compare to their counterpart villages during the study period. Among the workforce distribution, main workers predominates in all villages than marginal workers and major source of livelihood was agriculture.

Assessment of Sustainable Development

By assessing the productive base of different tribal communities in Nagaland, this study analyse the dynamics of present and future well-being and explores to what extent one can understand the sustainability of particular communities in practice. In addition, it can draw lesson on how development should be conceived for tribal communities by ensuring protection mechanism against vulnerable conditions prevailing among the tribes in the State. Four capital based approaches and six components from each capital perspective have worked out such as Economic Capital (EC), Social Capital (SC), Human Capital (HC) and Natural Capital (NC). Weighted average score has been calculated by scoring indicators on a five-point ordinal scale ranging from 1 to 5 measuring Sustainable Development Index (SDI) and an index provides information about all dimensions through a single number.

Economic capital: stands for both physical as well as financial assets. Physical assets like infrastructure, buildings, roads, machinery and transportation etc. whereas, financial assets which include cash in the hands, savings, debts and other valuable ornaments and durables commodities in which directly or indirectly facilitate the well-being the community (OECD, 2001).

Economic Capital (EC) $E_k = \frac{1}{n}\sum_{k=1}^{n}\left(E_1 + E_2 + E_3 + ... + E_6\right)$

E1= $\frac{1}{n}\sum_{m=1}^{n} x_n$ and E2= $\frac{1}{n}\sum_{m=1}^{n} x_n$ and so on

Where x= Households, $\mathcal{M}$=1 to 1000

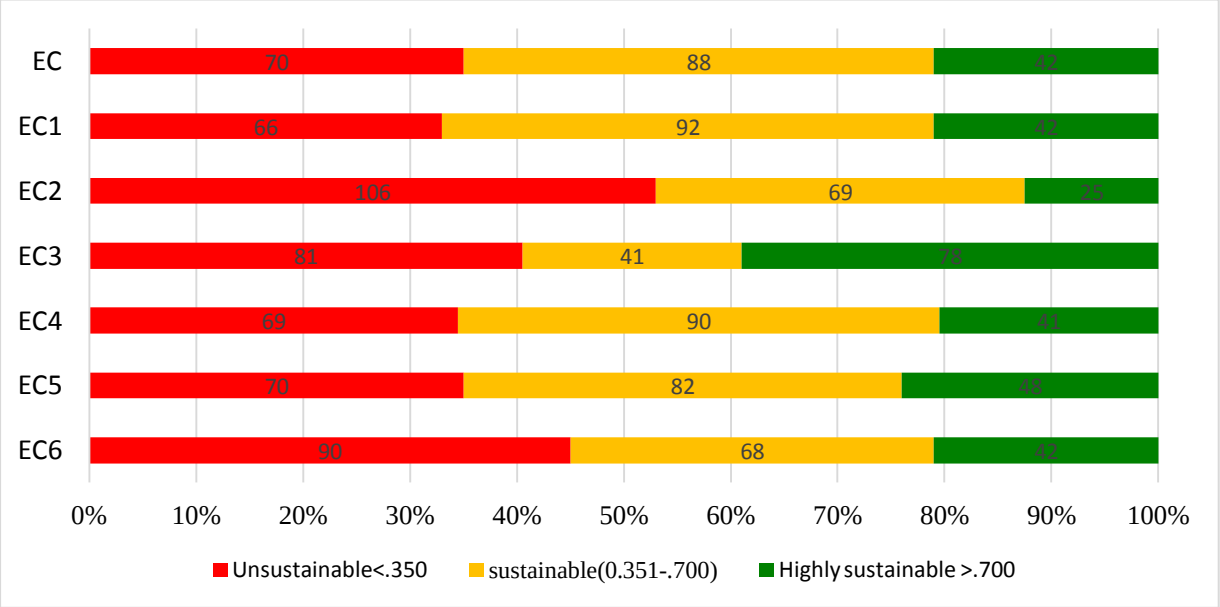
Table 2. Distribution of Economic Capital (EC) Index among the Tribes

Village Name (Tribal Community)	**Low <0.350**	**Medium 0.351-0.70**	**High >0.701)**	**All**	**Mean Score**
Mongsenyimti **[Ao]**	7 (28.0)	12 (48.0)	6 (24.0)	25 (100)	0.573
Khonoma **[Anghami]**	11 (44.0)	5 (20.0)	9 (36.0)	25 (100)	0.450
Thetsumi **[Chakhasang]**	9 (36.0)	10 (40.0)	6 (24.0)	25 (100)	0.506
Akuk **[Lotha]**	3 (12.0)	19 (76.0)	3 (12.0)	25 (100)	0.506
Kashanyishi **[Rengma]**	11 (44.0)	10 (40.0)	4 (16.0)	25 (100)	0.447
Chare **[Sangtam]**	10 (40.0)	12 (48.0)	3 (12.0)	25 (100)	0.449
Khukiye **[Seema]**	5 (20.0)	12 (48.00	8 (32.0)	25 (100)	0.541
Iponger **[Yimchunger]**	14 (56.0)	8 (32.0)	3 (12.0)	25 (100)	0.433
All	70 (35.0)	88 (44.0)	42 (21.0)	200 (100)	0.488

Source: Authors calculation from the primary data
Note: Figures in parenthesis are percentages

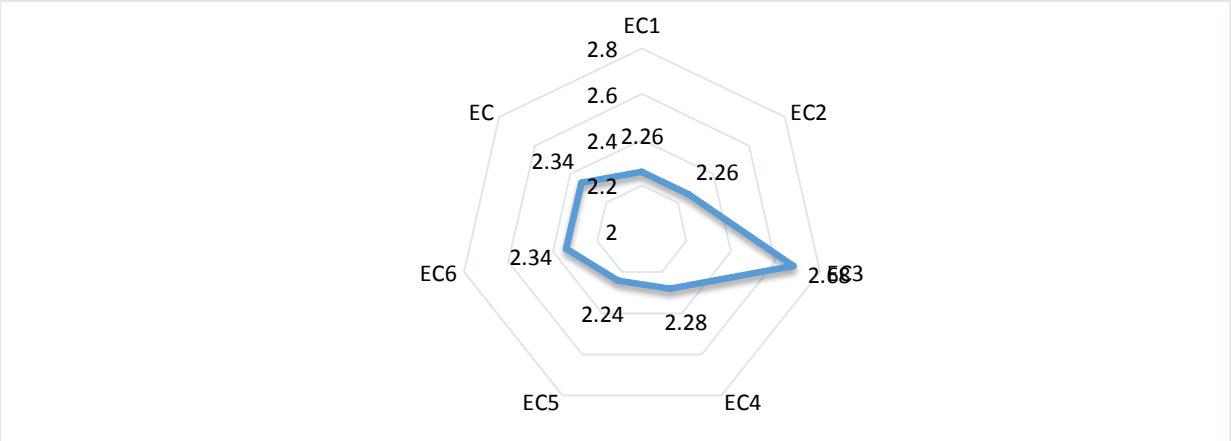
It is evident from the table 2 that in all selected villages, majority of the households have reported medium level of economic capital (44.45%) i.e. sustainability in danger followed by unsustainable (35%) while only 21% have rated sustainable conditions. Among the communities, the majority of respondents from Anghami tribe stated that they were in better position and 36 % falls under sustainable condition followed by Seema (32%) and Aos (24%). On the other hand, majority of Lotha, Ao, and Seema communities have stated that they were falls under medium range while Yimchuger, Sangtam and Rengma were more in unsustainable and experiencing vulnerable conditions which needs to emphasize more on economic opportunities through promoting agriculture, entrepreneurship and other employment generation activities to these communities.

Fig.1 Households in terms of Economic Capital indicators



Similarly, the distribution of economic capital among the indicators shown in Tabl.A.1 and figure 1 indicates that majority of households living in semi pucca and kacha houses than pucca houses and very few households (12%) have stated that they possess some valuable household assets while majority (53%) have reported that they do not have valuable assets in their houses. On contrary to that most of the households have reported that they have electricity connection with regular power supply except in summer season while few households have stated that power fluctuations and power cuts are some of the hindrances experiencing during the summer seasons. Accessibility of credit from banks and other financial institutions was insignificant and they have been adjusting with their self-financing though the banks operating kisan mela to attract the farmer borrowers to avail loans for productive purposes.

Fig. 2. The Level of Economic Capital



Though the household savings are common in all selected communities after joining SHGs, the amount was very insignificant. Similarly, rearing livestock's especially Piggery in some of the households were noticed during the survey time and respondents have reported that they will get additional income through selling pigs during the Christmas time. The data reveals that irrespective of the tribal community, the economic capital for all selected villages have shown that majority have stated that they were fall under medium range (sustainable in danger) followed by unstainable conditions which needs to initiate more welfare schemes to meet their basic needs of food and nutritional security and other economic well beings of communities.

Social Capital (SC)- it is refers to features of social organisation, such as networks, trust, participation and bonding among people within a community expressed through culture, customs and traditions, which can improve efficiency within the community by facilitating coordinated actions to generate useful goods and services and thus achieve individual as well as community well-being (Dasgupta, 2001).

$$S_k = \frac{1}{n}\sum_{k=1}^{n}\left(S_1 + S_2 + S_3 + ... + S_6\right)$$

$$S1 = \frac{1}{n}\sum_{m=1}^{n} x_n \text{ and } S2 = \frac{1}{n}\sum_{m=1}^{n} x_n \text{ and so on}$$

Where x= Households, $\mathcal{M}$=1 to 1000

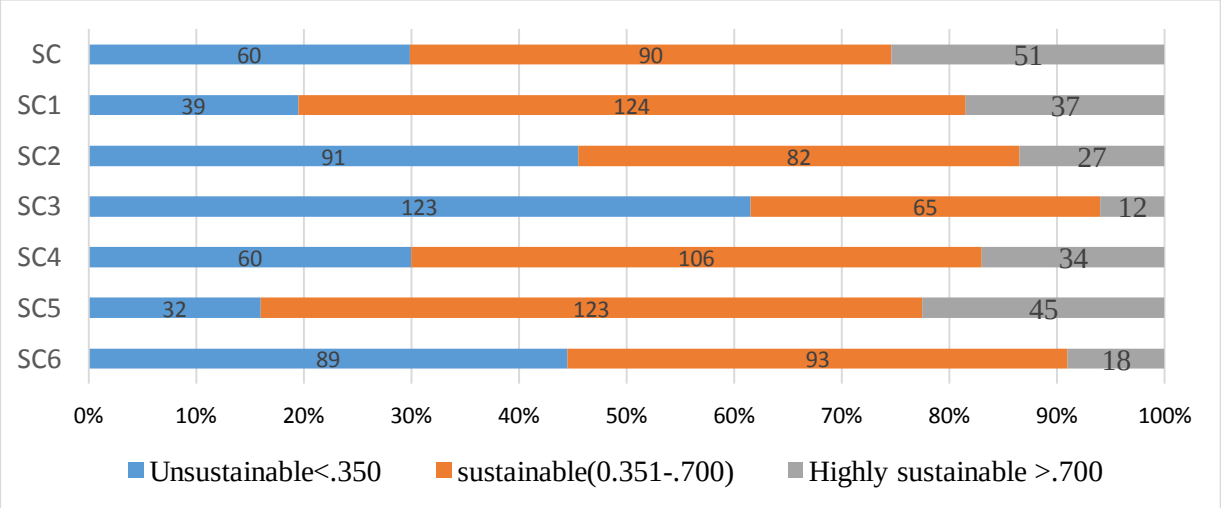
Table.3 depicts that the distribution of social capital among the tribal communities indicated that around 45% of respondents have stated that their social capital is medium level followed by low (30%) in all selected villages. Among the community, Aos were in better conditions enjoying higher social capital followed by Yimchunger and Lotha and Sangtam communities. On the other hand, indicator wise distribution shown in Table A.2 and fig. 3 reveals that active participation of community organisations/ membership in social groups (Naga Mother's association, Naga Hoho etc.) was one of the unique features of the Naga society playing a significant role to attain social capital followed by receiving justice in village meetings (indigenous self-governance) in which collective decision taken by the village council approved by village head (Toshimenla Jamir 2012).

Table 3. Distribution of Social Capital (SC) Index among the Tribes

Village Name (Tribal Community)	Low <0.350	Medium 0.351-0.70	High >0.701	All	Mean Score
Mongsenyimti **[Ao]**	4 (16.0)	13 (52.0)	8 (32.0)	25 (100)	0.602
Khonoma **[Anghami]**	9 (36.0)	10 (40.0)	6 (24.0)	25 (100)	0.482
Chozuba **[Chakhasang]**	8 (32.0)	10 (40.0)	7 (28.0)	25 (100)	0.482
Akuk **[Lotha]**	5 (20.0)	15 (60.0)	5 (20.0)	25 (100)	0.488
Kashanyishi **[Rengma]**	12 (48.0)	6 924.0)	7 (28.0)	25 (100)	0.448
Chare **[Sangtam]**	7 (28.0)	13 (52.0)	5 (20.0)	25 (100)	0.468
Khukiye **[Seema]**	10 (40.0)	9 (36.0)	6 (24.0)	25 (100)	0.456
Iponger **[Yimchunger]**	5 (20.0)	13 (52.0)	7 (28.0)	25 (100)	0.573
All	60 (30.0)	89 (44.5)	51 (25.5)	200 (100)	0.499

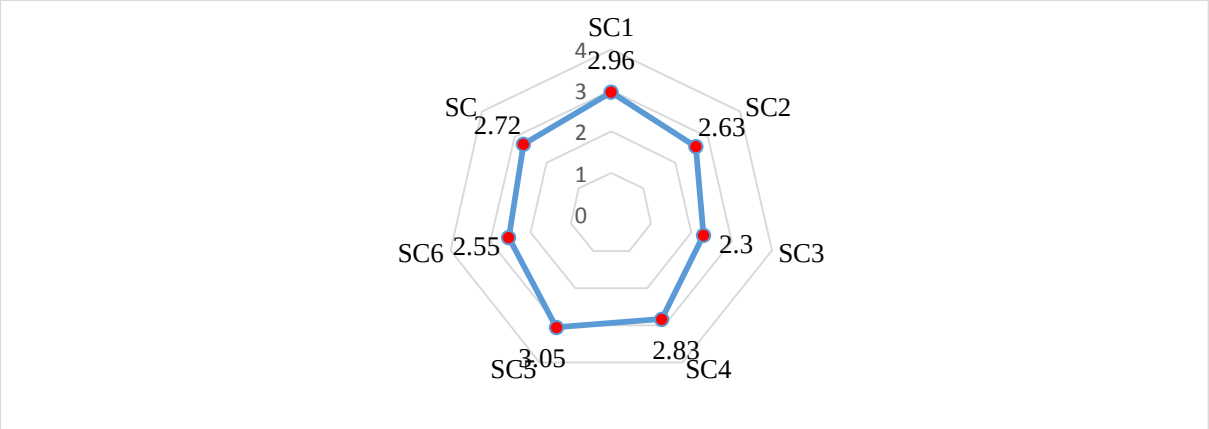
Source: Authors calculation from the primary data
Note: Figures in parenthesis are percentages

Fig.3 Households in terms of Social Capital indicators



On contrary to that majority of the respondents have stated that they have not been benefitting fully the welfare measures offered by the central as well as state governments in which the selection of the beneficiaries was depends on influence of political and other socio-economic backgrounds of the people. Majority of respondents have stated that they have been experiencing delay in accessibility of benefits due to prevailing inefficient and ineffective delivery mechanism. Among the communities, Ao community was in better condition to attain SC followed by Anghami, Seema and Sangtam. The overall mean score of this capital is 2.72 which is higher than the other three capitals in all selected villages. Though the respondents were expressed their disappointments in some aspects like exercise in voting rights and accomplishment of welfare benefits, the overall situation of social capital is at significant level and enjoying their social freedom within the boundaries ( ).

Fig. 4. The Level of Social Capital



Human Capital: Human capital refers to education, skills and health of the people in a community required to enhance human labour productivity and in turn community well-being.

(HC) $H_j = \frac{1}{n}\sum_{j=1}^{n}\left(H_1 + H_2 + H_3 + ... + H_6\right)$

H1= $\frac{1}{n}\sum_{m=1}^{n} x_n$ and H2= $\frac{1}{n}\sum_{m=1}^{n} x_n$ and so on

Where x= Households, $\mathcal{M}$=1 to 1000

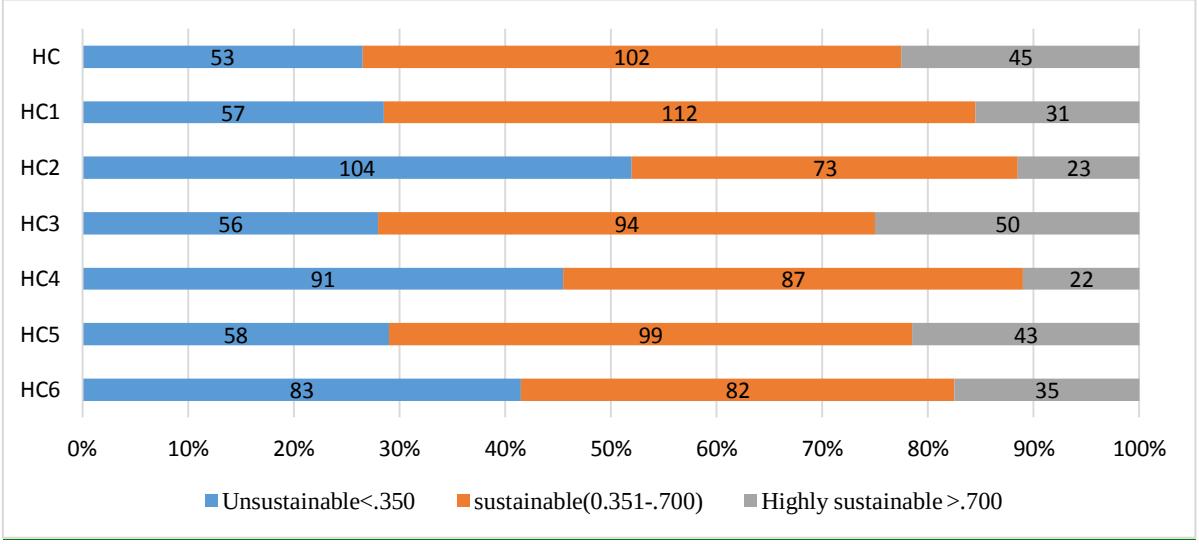
The table 4 shows that the responses of 200 households among the 8 tribal communities in Nagaland indicates that about 51% of respondents have falls under medium level of human capital followed by Low/unsustainable (26.5%) and only 22.5 % have reported that they were under sustainable condition. Among the communities, Lotha and Sumi tribes were in better conditions followed by Yimchunger and Rengma in selected villages during the study period.

Table 4. Distribution of Human Capital (HC) Index among the Tribal communities

Village Name (Tribal Community)	Low <0.350	Medium 0.351-0.70	High >0.701)	All	Mean Score
Mongsenyimti **[Ao]**	10 (40.0)	11 (44.0)	4 (16.0)	25 (100)	0.480
Khonoma **[Anghami]**	7 (28.0)	16 (64.0)	2 (8.0)	25 (100)	0.410
Chozuba **[Chakhasang]**	6 (24.0)	14 (56.0)	5 (20.0)	25 (100)	0.474
Akuk **[Lotha]**	5 (20.0)	11 (44.0)	9 (36.0)	25 (100)	0.569
Kashanyishi **[Rengma]**	7 (28.0)	12 (48.0)	6 (24.0)	25 (100)	0.496
Chare **[Sangtam]**	5 (20.0)	16 (64.0)	4 (16.0)	25 (100)	0.516
Khukiye **[Seema]**	8 (32.0)	8 (32.0)	9 (36.0)	25 (100)	0.573
Iponger **[Yimchunger]**	5 (20.0)	14 (56.0)	6 24.0)	25 (100)	0.522
All	53 (26.5)	102 (51.0)	45 (22.5)	200 (100)	0.505

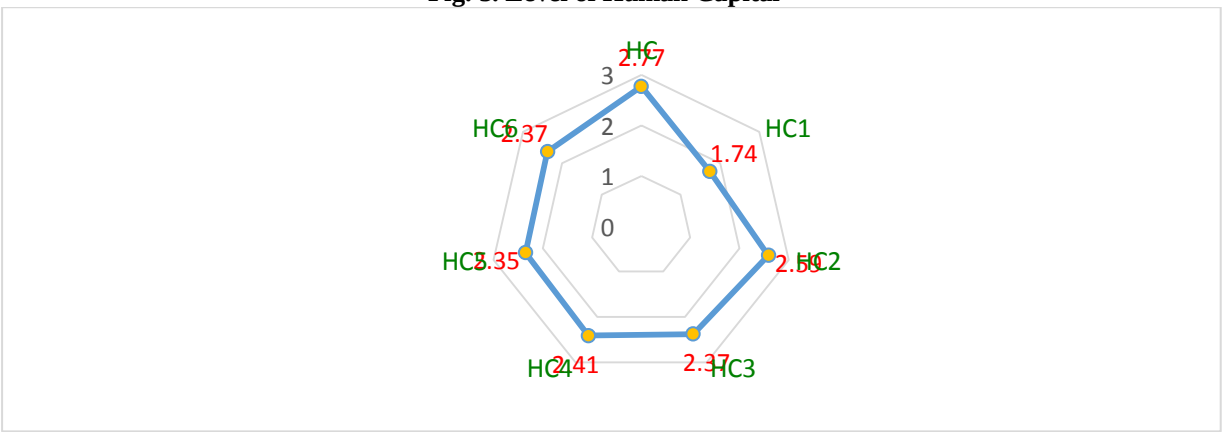
Source: Authors calculation from the primary data
Note: Figures in parenthesis are percentages

Fig.3 Households in terms of Human Capital indicators



On the other hand, among the indicator wise distribution shown in table A.3 and figure. 3 shows that literacy rate, nutrition and livelihood diversification plays significant role in which majority of household heads are literates and attaining food security by farming activities and receiving food grains through PDS and diversifying their livelihoods through promoting and expanding non-farm activities in respective villages. On contrary to that majority of the respondents have stated that lack of safe drinking water was the one of the crucial constraints in all the selected villages and water harvesting during the rainy season, irregular and inadequate water supply from storage endangers the public health menaces reported by the respondents in all the selected villages.

Fig. 3. Level of Human Capital



On the other hand, most of the respondents have stated that they have been receiving trainings from the government officials like NSRLM, KVK, and SHGs to enrich their technical skills and enhance the productivity levels in frequent intervals. Among the communities, Chakasang community in Phek district rated highest level of Human capital followed by Ao's, Anghami and Rengma. The mean score of all the indicators from all the communities was 2.37 on which literacy and nutritional security strengthen the HC, while lack of safe drinking water was a hindrance for human capital in all the selected villages needs to explore the possibilities to provide adequate safe drinking water to each and every households.

Natural Capital (NC) refers to the natural resources like land, water and forest resources vitality and resilience for community residing in forest regions relies for their livelihood and which provides a base for their cultural expression and identity in the society (Dasgupta, 2010). Natural resources constitute the very lifeline of the tribal population in entire north east regions in which more that 70 percent of the north eastern states covered

forestry except Assam( ) and these resources play a significant role in their socio-economic well-being of the tribal communities.

$$N_j = \frac{1}{n}\sum_{k=1}^{n}\left(N_1 + N_2 + N_3 + ... + N_6\right)$$

$$\text{N1}= \frac{1}{n}\sum_{m=1}^{n} x_n \text{ and N2}= \frac{1}{n}\sum_{m=1}^{n} x_n \text{ and so on}$$

Where x= Households, $\mathcal{M}$=1 to 1000

Table 5. Distribution of Natural Capital (SC) Index among the Tribes

Village Name (Tribal Community)	Low <0.350	Medium 0.351- 0.70	High >0.701	All	Mean Score
Mongsenyimti **[Ao]**	6 (24.0)	11 (44.00	8 (32.0)	25 (100)	0.493
Khonoma **[Anghami]**	6 (24.0)	11 (44.0)	8 (32.0)	25 (100)	0.554
Chozuba **[Chakhasang]**	3 (12.0)	11 (44.0)	11 (44.0)	25 (100)	0.612
Akuk **[Lotha]**	6 (24.0)	15 (60.0)	4 (16.0)	25 (100)	0.451
Kashanyishi **[Rengma]**	12 (48.0)	11 (44.00	2 (8.0)	25 (100)	0.427
Chare **[Sangtam]**	12 (48.0)	6 (24.0)	7 (28.0)	25 (100)	0.389
Khukiye **[Seema]**	12 (48.0)	8 (32.0)	5 (20.0)	25 (100)	0.420
Iponger **[Yimchunger]**	10 (40.0)	11 (44.0)	4 (16.0)	25 (100)	0.414
All	67 (33.5)	84 (42.0)	49 (24.5)	200 (100)	0.470

Source: Authors calculation from the primary data
Note: Figures in parenthesis are percentages

Fig.4 Households in terms of Natural Capital Indicators

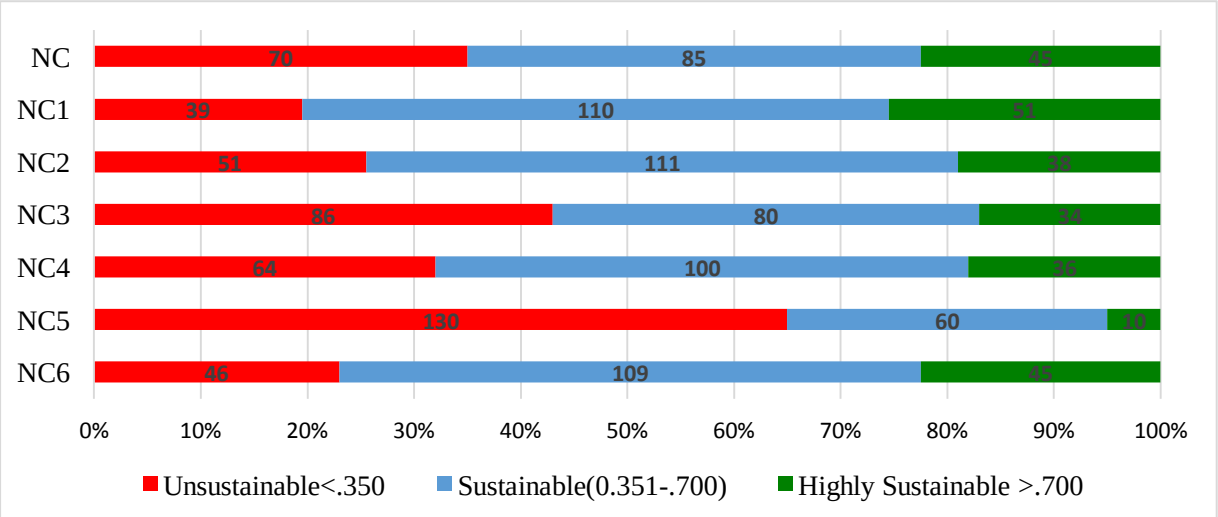
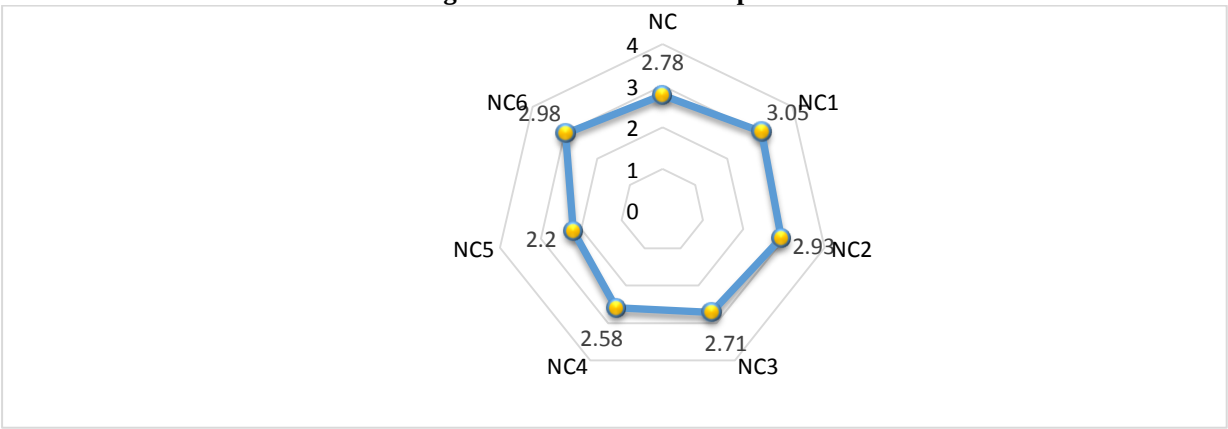


Table 5 depicted that about 42 % of the respondents have stated that availability of natural capital was moderate (sustainable in danger) followed by unsustainable (33.5%) and about 24% have stated that they were in sustainable in nature. Among the communities, Chakhasang community in Chozuba village attains more natural capital followed by Ao's and Anghami while Rengma(Kashanyishi), Sangtam(Chare) and Sumi (Khukiye) were attains less capital. On the other hand, Lotha and Yimchunger communities avail medium range natural capital during the study period. Similarly, the indicator wise distribution of natural capital was depicted in table A.4 and figure .4 and it indicates that Non-timber Forest products (NC1) plays significant role in all the selected villages followed by vulnerability preparedness (protection from floods and other natural calamities) and production of cereals (Rice) at higher percentage of land since rice is main staple food for Naga society.

Fig. 4.1 Level of Natural Capital



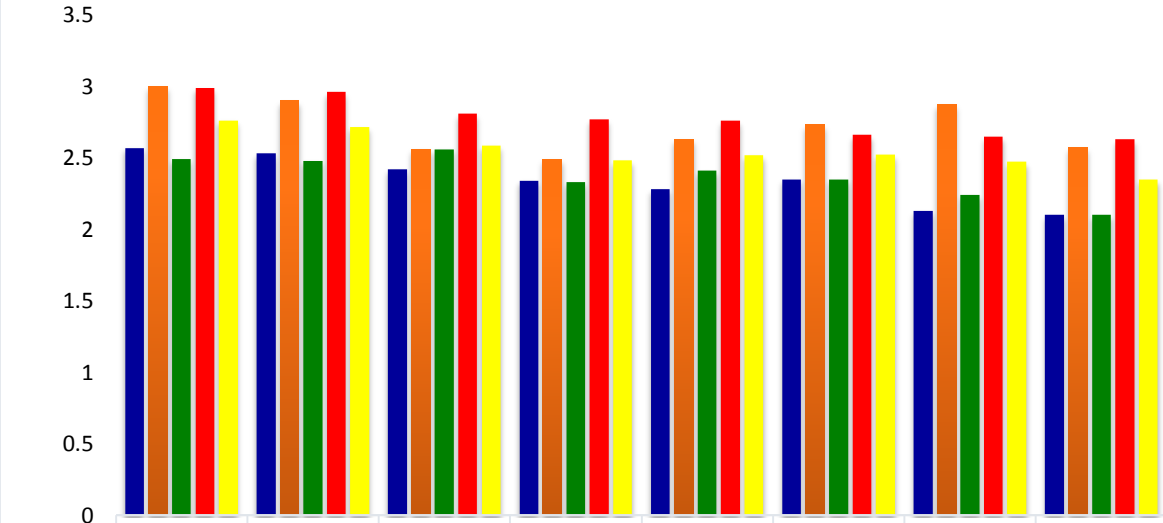
On the other hand, practicing organic farming is very insignificant though the farmers are consuming less chemical fertilizers in the state and in recent years they have been trying to adopt organic farming practices stated by some of the respondents. The other indicators like cultivation of horticultural crop, owning individual land holding are moderate in condition since community ownership predominates for major communities and lack of institutional support to produce more horticultural products though the state bestowed huge potentials with suitable climate and fertile land resources for horticultural crops (Sashimatsung and Girbabu 2016). In overall situation the attaining natural capital is in moderate condition thugh they have huge potentials to explore it. Majority of respondents were not willing to exploit the natural resources since they have been practicing indigenous methods of cultivation and predominance of community ownership of land holdings in the state. Among the communities, Ao tribe securing major score about 2.99 followed by Anghami, Chakhasang. Lotha communities since the selected villages have been located nearby the forest region.

Sustainable development Index: The term sustainable development refers to a strategy to ensure a non-declining stock of productive capacity in the form of economic, social, human and natural capitals producing desirable per capita well-being in both present and future generation of the community (Dasgupta, 2007a&b). Hence, sustainable development index (SDI) can be measured using the method given below for assessing the productive base for the communities to study the dynamics of present and future well being among the tribal communities in Nagaland.

$\mathbf{SDI} = \frac{1}{n}\sum_{j,k=1}^{n}(\overline{E}_j + \overline{S}_k + \overline{H}_j + \overline{N}_k)$ Where**, n**=4, j= 1 to 6and k= 1 to 6. As shown in the figure 5 &5.1 below $\frac{1}{n}\sum_{j,k=1}^{n}(\overline{E}_j = 2.34 + \overline{S}_k = 2.72 + \overline{H}_j = 2.37 + \overline{N}_k = 2.78)$

$\mathbf{SDI} = \frac{1}{n}\sum_{j,k=1}^{n}(2.34 + 2.72 + 2.37 + 2.78)$ $\mathbf{SDI} = \frac{10.21}{4} = 2.55$

Figure. 5. Community wise Capitals chakhasang, reand Sustainble Development



	Ao	Anghami	Chakhasang	Lotha	Rengma	Sangtam	Seema	Yimchunger
EC	2.57	2.53	2.42	2.34	2.28	2.35	2.13	2.1
SC	3	2.9	2.56	2.49	2.63	2.73	2.87	2.57
HC	2.49	2.48	2.56	2.33	2.41	2.35	2.24	2.1
NC	2.99	2.96	2.81	2.77	2.76	2.66	2.65	2.63
SDI	2.76	2.72	2.59	2.48	2.52	2.52	2.47	2.35

Hence the average sustainable development index was 2.55 on the scale of 1 to 5 which is a medium range or in other terms sustainable in danger. Among the community wise distribution shown in figure. 5 indicates that Ao (2.76), Anghami (2.72) and Chakhasang (2.59) tribes registered slightly higher than the average while other tribes have registered lower than the average and it reveals that government needs to be initiate more development programmes to meet sustainable development in the state of Nagaland. Similarly, the figure 5.1 depicts the overall sustainable development index and it is reveals that vividly the low level of economic capital (closed to centre) with the average score 2.35 and the high levels of NC and SC with the scores of 2.78 and 2.72 respectively. It is an interesting to note that the comparative difference among the four capitals, though the central governments and other international organisations disseminating aids and support to stimulate the socio-economic conditions in the State, poor economic and human capitals in rural areas in terms of unhygienic living condition, poverty & unemployment, inadequate educational and health infrastructure, lack of safe drinking water for the majority of communities especially in the eastern part of the state was pushing into unsustainable conditions. On the other hand, Natural capital and social capitals are in better positions registered as a strengths or assets being eroded and hence is not being able to improve the economic and human conditions or prevent from unsustainable conditions or inequalities in rural areas.

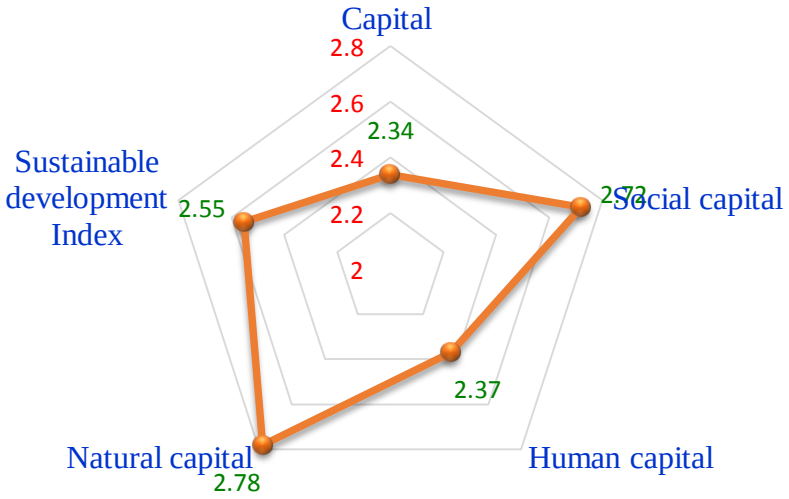


Figure.5.1 The level of Sustainable Development

IV. Conclusion

Nagaland is a tribal state and arguably one of the backward state in the north east regions. Though the central government have been pumping financial and other resources into this state just because of less developed status, existing imbalances have been deepening among the communities contributing to the depletion of capital and productive base in recent years. The study made an attempt to assess the sustainable development levels of eight major tribal communities in Nagaland with suitability of their well-being. The study was found that in all selected communities, the SD levels are moderate or in other terms sustainable in danger and the capital stocks had failed to support desirable well-being of the people in rural Nagaland. The productive base among the capital stocks, natural and social capitals provides better desirable well beings than economic and human capitals and it differs from tribe to tribe. Hence, maintaining a right balance among the four capitals is of utmost importance for SD through stimulating the productive base deliberations and preventing the depletion of existing stocks will strengthen the well-beings of the people.

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Appendix Tables.

Table. A.1 The Level of Economic Capital among the tribes in Nagaland

Tribes	**EC1**	**EC2**	**EC3**	**EC4**	**EC5**	**EC6**	**EC**	**Rank**
Ao	2.68	2.60	2.84	2.64	2.36	2.32	**2.57**	i
Anghami	2.40	2.56	2.92	2.08	2.28	2.92	**2.53**	ii
Chakhasang	2.20	2.36	2.88	2.24	2.40	2.44	**2.42**	iii
Lotha	2.44	2.12	2.76	1.96	2.40	2.36	**2.34**	v
Rengma	2.24	2.32	2.72	2.12	2.16	2.12	**2.28**	vi
Sangtam	2.64	2.04	2.52	2.60	2.00	2.24	**2.35**	iv
Seema	1.72	2.20	2.24	1.96	2.36	2.32	**2.13**	vii
Yimchunger	1.72	1.84	2.56	2.60	1.92	1.96	**2.10**	viii
Mean	2.26	2.26	2.68	2.28	2.24	2.34	2.34	

Table. A.2 The Level of Social Capital among the tribes in Nagaland

Tribes	**SC1**	**SC2**	**SC3**	**SC4**	**SC5**	**SC6**	**SC**	**Rank**
Ao	3.16	2.64	2.92	3.20	3.28	2.80	**3.00**	i
Anghami	3.08	3.08	2.28	3.28	3.08	2.60	**2.90**	ii
Chakhasang	2.88	2.52	1.96	2.92	2.76	2.36	**2.56**	vii
Lotha	2.80	2.28	2.32	2.16	3.12	2.16	**2.49**	viii
Rengma	2.68	2.80	2.16	2.84	2.88	2.44	**2.63**	v
Sangtam	3.08	2.80	2.12	2.76	3.04	2.56	**2.73**	iv
Seema	3.12	2.68	2.32	3.12	3.32	2.64	**2.87**	iii
Yimchunger	2.88	2.24	2.28	2.32	2.92	2.80	**2.57**	vi
Mean	**2.96**	**2.63**	**2.30**	**2.83**	**3.05**	**2.55**	**2.72**	

Table. A.3 The Level of Human Capital among the tribes in Nagaland

Tribes	HC1	HC2	HC3	HC4	HC5	HC6	HC	Rank
Ao	3.12	1.84	2.60	2.12	2.68	2.52	**2.49**	ii
Anghami	2.76	2.04	2.68	2.40	2.72	2.28	**2.48**	iii
Chakhasang	2.84	1.88	2.92	2.60	2.92	2.20	**2.56**	i
Lotha	3.08	1.44	2.72	2.48	1.80	2.44	**2.33**	vi
Rengma	2.68	1.68	2.56	2.60	2.64	2.32	**2.41**	iv
Sangtam	2.64	1.84	2.52	2.32	2.16	2.64	**2.35**	v
Seema	2.72	1.64	2.36	2.60	2.04	2.08	**2.24**	vii
Yimchunger	2.32	1.56	2.32	1.84	2.24	2.28	**2.10**	vii
Mean	2.77	1.74	2.59	2.37	2.40	2.35	**2.37**	

Table. A.4 The Level of Natural Capital among the tribes in Nagaland

Tribes	NC1	NC2	NC3	NC4	NC5	NC6	NC	Rank
Ao	3.12	3.28	2.76	3.44	2.28	3.08	**2.99**	i
Anghami	3.32	2.80	3.32	2.64	2.52	3.16	**2.96**	ii
Chakhasang	2.88	2.64	2.88	3.00	2.36	3.12	**2.81**	iii
Lotha	3.20	2.88	2.44	2.92	2.12	3.04	**2.77**	iv
Rengma	2.88	3.04	2.72	2.68	2.32	2.92	**2.76**	v
Sangtam	3.20	2.72	2.44	2.76	2.20	2.64	**2.66**	vi
Seema	2.64	3.24	2.68	2.52	1.88	2.96	**2.65**	vii
Yimchunger	3.12	2.84	2.40	2.68	1.92	2.92	**2.63**	viii
Mean	**3.05**	**2.93**	**2.71**	**2.58**	**2.2**	**2.98**	**2.78**	

Source: Authors calculation from the primary data

Table A.5 Capital Based SD Indicators used in the Study

Economics Capital Indicators	**Social Capital Indicators**
EC1 :Housing Conditions	SC1 :Getting justice in Village meetings
EC2 :Household Assets	SC2 :Accessibility of welfare schemes
EC3:Availability of Electricity	SC3 :Exercise the Voting Rights
EC4 :Household Debt position	SC4 :Women participation in decision making
EC5 :Household Savings	SC5 :Freedom to be a member in social groups
EC6 :Owning Livestock	SC6 :Indigenous Self-Governance
Human Capital Indicators	**Natural Capital Indicators**
HC1: Nutrional accessibility	NC1 :Dependence on Forest for NTFP
HC2 :Safe Drinking Water	NC2 :Dependence on Agriculture
HC3 :Literacy levels	NC3 :Dependence on Horticulture
HC4:Availing Training Facilities	NC4 :Owning land Holdings
HC5:Livelihood Diversification	NC5 :Practicing Organic farming
HC6:Possion of Skills	NC6 :Vulnerability Preparedness