

Exploring the Trade Dynamics of Commercialized NTFPs in Gorkha, Nepal Aastha Tiwari

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ABSTRACT

The commercialization of NTFPs has begun to receive attention for its potential to improve rural livelihoods and generate export revenues. This study focuses on the collection and marketing of commercialized NTFPs from Gorkha district. Primary data were gathered, drawing data from fiscal years (2075-81) of export permit records from the Division Forest Office, Gorkha, through key informants and phone interviews. Descriptive analysis was employed, with graphs and charts prepared using MS Excel, and ArcGIS utilized for mapping the study area. Currently, 38 plant species of NTFPs were traded from the district, categorized into seven groups based on their commercial applications. Medicinal and Aromatic Plants (MAPs) dominate the sector, comprising 66% of the total trade volume, followed by wild foods and dyes. Over the past five fiscal years, Gorkha district traded a total of 180,510 kg of NTFPs, generating approximately Rs. 2,256,615 in revenue. The highest revenue was recorded in FY 2080-81, followed by FY 2078-79. Six species - Girardinia diversifolia, Swertia chirayita, Neopicrorhiza scrophulariiflora, Moringa Oleifera, Curculigo orchioides, and Nardostachys grandiflora are noted for their high value based on revenue collected, while Bergenia ciliata, Majitho, Setakchini, Allo, and Kalo Musali lead in terms of quantity traded. The collection and supply chain of NTFPs in Gorkha district involves community and local collectors gathering products from various villages, which are then aggregated at local depots, such as Macchikhola, Baluwa Bajar, Dodheni Bajar. To ensure legality and facilitate transport, NTFPs were verified and issued transport permits by the DFO, Gorkha. Subsequently, regional traders distribute these products to different districts and national markets. The study recommends establishing species-specific scientific trading regulations to optimize market opportunities. Adequate research and favorable resources should be allocated to explore other potentially commercially traded NTFPs. Commercialization of NTFPs in Gorkha district could contribute significantly to local economic development by generating income for rural communities, but to optimize market opportunities and ensure sustainable trade, species-specific scientific regulations and further research are essential. This would help enhance the efficiency of the



supply chain, ensure the legality of the trade, and potentially expand the range of commercially traded NTFPs.

Keywords: Gorkha, non-timber forest products, revenue, trade

1. Introduction

Forests play a vital role in economies and livelihoods, serving as sources of diverse resources essential for both local sustenance and national revenue. According to (Bhatt et al., 2021), forests provide energy, timber, and a wide array of non-timber forest products (NTFPs), including medicinal and aromatic plants. These products range from fuelwood and construction materials to wild foods and medicinal herbs (Saha & Sundriyal, 2012). According to (Forest Act, 2019),"non-forest products" are any other biologically derived products, such as herbs, wildlife, or wildlife trophies, except wood or lumber made from trees that are either inside or outside of forests. It appears that De Beer and Macdermott first used the term NTFPs in 1989. NTFPs are synonymous with minor forest produce (MFP) or non-wood forest produce (NWFP), as described by FAO.

Nepal, known for its rich biodiversity, particularly excels in NTFPs and medicinal plants, which are integral to daily life, meeting essential needs like food and medicine (Bhattarai, 2022). In Nepal, NWFPs are synonymous with NTFPs, jadibuti, medicinal and aromatic plants (MAPs), or minor forest products. In terms of production and trade, Nepal is a rich source of non-timber forest products (NTFPs) (Shrestha et al., 2020). The eight categories into which the Government of Nepal has divided NTFPs are: fruits and seeds (65), leaves/stems (30), barks (25), whole plants (21), gum, resin and lac (8), roots and rhizomes (48), gum and flower (hair) (16), and others (24).

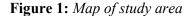
Additionally, according to (Lamichhane et al., 2021), twelve species are given priority for commercial production and market promotion. Nepal is home to a wide variety of nontimber plant products (NTFP), of which 700 are medicinal, 440 are wild foods, 30 are spices, and the remaining 71 produce fiber (Shrestha et al., 2020). These products contribute significantly to the national economy, constituting about 5% of the GDP (Pyakurel & Baniya, 2011). Both domestically and internationally, there is a tremendous demand for NTFPs (Piya et al., 2011). The demand and market value of NTFPs have increased significantly in the last several years. Foresters are now considering the prices of a wide range of commodities other than timber due to declining timber earnings in some places (FAO, 1997). In Nepal alone, NTFP trade is significant, with estimates ranging from 7,000 to 27,000 tons valued at US\$ 7– 30 million annually (Olsen, 2005). Commercialization of NTFPs has begun to receive attention because of their potential to improve rural livelihoods and generate export earnings (Pradhan & Maharjan, 1994). The collection and marketing of NTFP is a major source of rural income and an important source of revenue to the government (Shrestha et al., 2020). As revenues from timber decline in some regions, the value of NTFPs becomes increasingly recognized, prompting a shift in focus among foresters and policymakers towards sustainable management and utilization of these invaluable forest resources (FAO, 1997). This study investigated the intensity of NTFP collection and sale, the revenue obtained through the collection of a representative species NTFP in Gorkha district, Nepal. This study includes only the commercially traded NTFPs in the area.

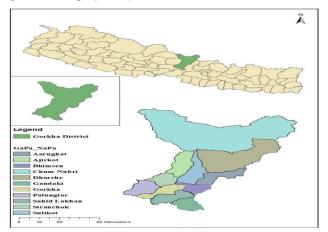
Recognizing the critical importance of NTFPs for the national economy and addressing the current gaps in revenue data, this study aims to answer the following questions: What amount of revenue has been generated from the major NTFPs over the last five fiscal years? The findings of this study could provide valuable insights for policymakers and forestry practitioners, enabling them to formulate evidence-based policies to enhance the status and contribution of NTFPs in the study area (Dhungana & Bhattarai, 2008). Understanding the economic impact of NTFPs is vital for creating development strategies that not only protect forest resources but also uplift the local communities that depend on them. This study underscores the need for comprehensive data collection and analysis to support sustainable practices and informed decision-making in the NTFPs sector.

This study aimed to analyze the trend of commercialized non-timber forest products in Gorkha district. I have analyzed the quantity and revenue collected from NTFPs trade during the fiscal year (2075-2081) and examine trading routes of commercialized NTFPs from Gorkha

2. Materials and Methods

The study was carried out in Gorkha District, located between 27°15'-28°15' N latitude and 84°27'-85°58' E longitude in Gandaki Province, Nepal. The study area was rich in natural resources. It falls in sub-tropical and temperate regions from altitude 330 masl to 8156 masl. This district covers 3614.70 sq.km area. Of the total forest area of Gorkha district, the majority of area is covered by forest area (82.72%) followed by other wooded land (16.60%) and bushes (0.66%). Gorkha, situated in the mid-hills of Nepal has always been blessed with natural resources. The district lies at the meeting point between the Western and Eastern Himalayan floristic regions (Singh and Singh 1987); the huge variations in climate and habitat, and the mixing of two major floristic regions, are reflected in the richness of the district's biodiversity. The southern fertile plains of this district are utilized in agricultural lands whereas the northern region is rich in NTFPs and animal husbandry. Jatamasi, Atis, Kutki, Padamchal, Lauthsalla, Allo, Chiraito are some of the important NTFPs that are found in Gorkha district.





Source: DFO, Gorkha 2018

2.1 Data Collection

Purposive sampling was done. Two officers from DFO, Gorkha and one officer from sub DFO were questioned to get the information about the status of NTFPs found in Gorkha district and official procedure involved in the trade of NTFPs. To find out the route map of trade of major NTFPs, three traders involved in its trade were interviewed. Two traders were interviewed by phone who were not available during the site visit. One official of Gorkha Ayurvedic Company was interviewed to know about some queries according to my research objectives. The official data on NTFPs quantity, revenue collected was retrieved from the DFO, Gorkha to present in usable tabular form for further analysis. Secondary data were collected by reviewing various reports, such as the CITES Export permit report and collected from various published and unpublished documents related to this study. They are maps, official records, research reports, forest management plan, annual reports and other published and unpublished documents from Division Forest Office Gorkha, CFUG records and IOF library. Other necessary information will also be downloaded from related websites.



Photo credit: Ganesh Tiwari

2.2 Tabulation of raw data

Export permit record (FY 2075-81) from DFO, Gorkha was collected and analyzed. Only plant based NTFPs collection was analyzed.

3. Data Analysis

The collected data underwent a meticulous process of refinement and organization before analysis. Descriptive analysis was performed. This involved data entry into Excel spreadsheets. Subsequently, data analysis was conducted using MS Excel software to derive meaningful insights and draw conclusions. The research findings were effectively visualized and presented through the use of tables, figures, bar diagrams, pie charts, and other graphical representations.

Arc GIS was used to prepare maps of study areas. Quantitative data will be analyzed through the NTFPs guidelines.

4. Results

4.1 Collection of NTFPs

NTFPs are collected by the households either for subsistence or commercial purposes (Shrestha et al., 2020). However, discussion of the NTFPs used for subsistence purposes is beyond the scope of this paper. This study thus includes only the commercially traded NTFPs in the area. Table 1 shows the list of the NTFP collected in the study area over the period of 5 FY.

Altogether thirty-eight types of NTFPs were and trade from Gorkha district. Collected NTFPs are divided into seven categories according to the use of the species. Categories of NTFPs are MAPs, Fiber, paper, Wild food, dyes, condiments/ spices, and others (use in cuts, wounds).

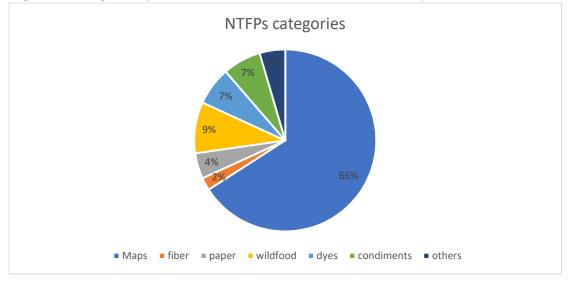


Figure 2: Categories of collected commercialized NTFPs in the study area



1. Kalo musali2. Lauth Salla3. Chiraito4. SitalchiniPhoto credit: Aastha Tiwari

Ma	Common/English	Saiantifia Nama	NTEDa Catagory	
No.	Name	Scientific Name	NTFPs Category	
1	Allo/Himalayan neetle	Girardinia diversifolia	Fiber	
2	Argeli	Edgeworthia gardneri	Paper	
3	Ban Haledo	Curcuma aromatica Salisb.	MAPs	
4	Ban karela	Momordica dioica	Wild food	
5	Ban lasun	Lilium nepalense	MAPs, Condiments	
6	Banmula	Raphanus raphanistrum	Wild food	
7	Banpyaz	Allium canadense	Wild food	
8	Bisfez	Polypodium vulgare	MAPs	
9	Bojho	Acorus calamus	MAPs	
10	Bukiful	Anaphalis busua	Others (use in cut, wounds)	
11	Chiraito	Swertia chirayita	MAPs	
12	Chutro	Berberis aristate	MAPs, Dyes	
13	Dalchini/Tejpat	Cinnamomum tamala	MAPs, Condiments	
14	Dhupi (leaf/seed)	Juniperus communis	MAPs	
15	Guchi chyau/Morel	Morchella esculenta	MAPs	
16	Gurjo	Tinospora sinensis	MAPs	
17	Hal hale	Rumex nepalensis Sprengel	MAPs	
18	Jatamasi	Nardostachys grandiflora	MAPs	
19	kalo dhana	Ipomoea hederacea	MAPs	
20	Musali	Curculigo orchioides	MAPs	
21	Kurilo	Asparagus racemosus Wild	MAPs, Wild food	
22	Kutki	Picorhiza scrophulariiflora	MAPs	
23	Lokta/Nepali paper plant	Daphne bholua	Paper	
24	Majitho	Rubia manjith	MAPs, Dyes	
25	Muraska Ful		Others	
26	Naagbeli Powder	Lycopodium clavatum	MAPs	
27	Nagkesar	Mesua ferrea	MAPs	
28	Nirmasi	Aconitum gammiel	MAPs	
29	Padamchal	Rheum nobile	MAPs, Dyes, Condiments	
30	Pakhanbed	Bergenia ciliate	MAPs	
31	Pani amala	Nephrolepsis cordifolia	MAPs	
32	Pipla	Piper longum	MAPs	
33	Satuwa/Love apple,paris	Paris pollyphylla	MAPs	
34	Setakchini/ Khiraula	Moringa Oleifera	MAPs	
36	Somlata	Ephedra gerardiana	MAPs	
37	Sughandawal	Valeriana jatamansi	MAPs	
38	Titepati	Artemisia indica	MAPs	

 Table 1: Major Commercialized NTFPs Traded in Gorkha District

4.2 Quantities and revenue collected from NTFPs trade during 5 FY

The total amount of NTFPs traded from Gorkha in the last five FY was 180510 kg and the amount of revenue generated was around Rs.2256615 (Figure 3)



Figure 3: NTFPs collected During 5FY from Gorkha district

We can observe that more revenue was collected in FY 2080-81 followed by FY 2078-79. Market demand might be one of the reasons for change in the quantity collection each year. In the last five FY, the collection of five species was more than 10000 kg. Those five species are Pakhanbed, Majitho, Setakchini, Allo and Kalo Musali.

According to the total trade estimate, these two species (Kalo Musali and Allo) are traded in the highest quantities.

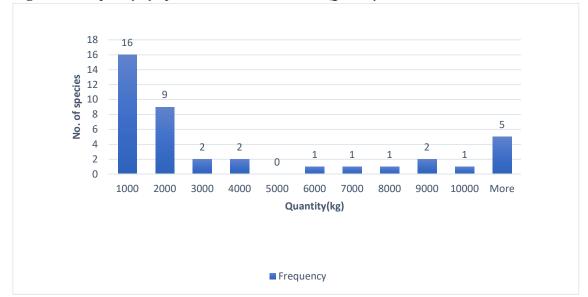
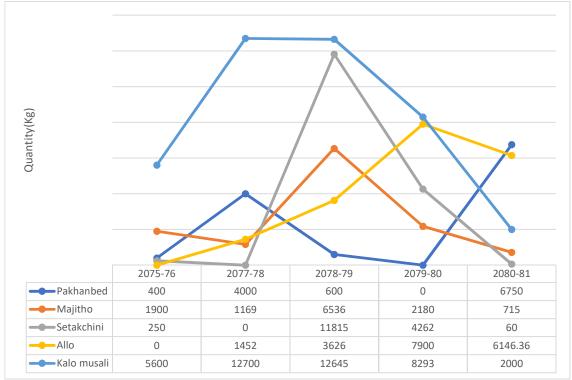


Figure 4: Frequency of Species collection based on Quantity





On the basis of Revenue collection six species have collected revenue more than Rs. 100000 in 5FY.

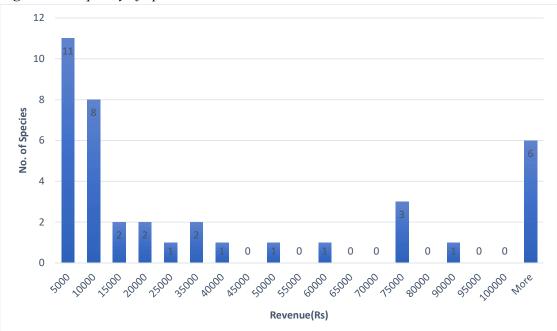


Figure 6: Frequency of Species collection based on Revenue

Figure 7 shows the trend of six major species. Those six species are allo, chiraito, kutki, Setakchini, kalo Musali and Jatamasi. Jatamasi provides maximum revenue through traded comparatively a small amount.

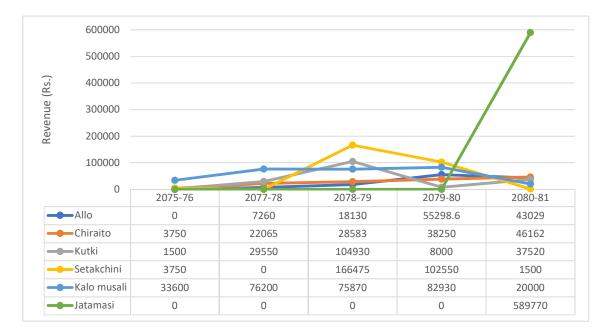


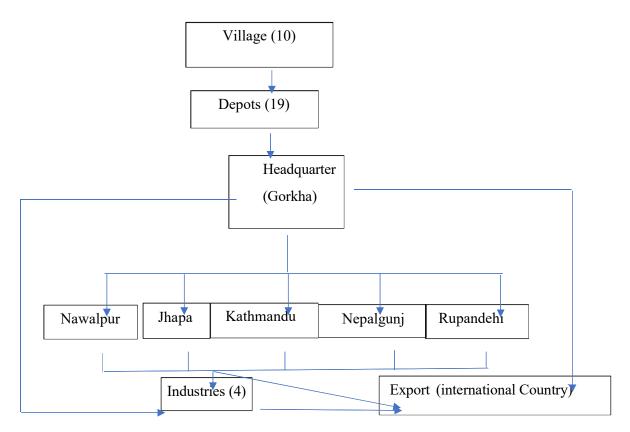
Figure 7: Trend of major NTFPs acc. To Revenue collected

4.3 Trading Route of major NTFPs Traded

Detailed trading route of NTFPs traded in Gorkha is shown in figure 8. Community and local collectors collect NTFPs from different villages and wards of Gorkha Districts. They are Laprak, Uhiya, Gumda, Raagrung, Palungtar-10, Dharche-2,7, Chum numbri 1,2,3 and supply to Depots. Depots of NTFPs traded are Macchikhola, Baluwa bajar, Dodheni Bajar, Laprak Gupsipakha, Khorla besi, Ragrung, Vachek bajar, Sangmang, Lapubesi, Sotibajar, Arkhet, Gumda, Kerauja, Chanaute bajar,Mandredunga, Barpark, Gorkha bajar, 13 kilo, Aarughat, Rato rinchudam.

For the verification and making transport permits NTFPs are supplied to DFO, Gorkha. Then District level or regional traders supplied them to different districts and National markets. NTFPs are supplied to different districts either in raw form or processed form.

Figure 8: Detailed Trading route of NTFPs Traded from Gorkha



The trading route of the NTFPs after the national markets has not been discussed in this study because discussion of the marketing channel outside Nepal is beyond the scope of this study.

5. Discussion

5.1 Collection of NTFPs

Collection of NTFPs and trade is directly driven by Market demand. Emphasis was on including the products and species that were traded in the largest quantities and/or had a high unit value. According to the total trade estimate, these two species (kalo Musali and Allo) are traded in the highest quantities. Jatamasi provides maximum revenue through a comparatively small amount. Laws, policies and provisions for the collection of such species which comes under CITIES II was formed before a year. This is the reason behind increase in trade of its quantity.

5.2 Quantities and revenue collected from NTFPs trade during 5 FY

Inhabitants in Northen Gorkha district was involved in trade with MAPs to southern Nepal at least 80-90 years ago (Poudel, 2007). Average amount of major NTFPs (Jatamasi, Chiraito, Panchaule, Padamchal, Kutki) traded annually from Gorkha District (FY 2041/42) was calculated 15,510Kg (Olsen, 1998). There has been shift in the trade of species. Similar research of (Sharma et al., 2004) shows that 3200MT of NTFPs were exported from Nepal

contributing RS. 14.9 million as revenue in the FY 2058/59.

5.3 Trading Route of major NTFPs Traded

Early studies focused on identifying species and products in trade (e.g. Dobremez and Jest 1976; Manandhar 1980) while recent studies have mainly investigated trade patterns. The trade in MAPs in and from Nepal was investigated from August 1998 to September 1999 and covered a set of 32 focal products, including eleven alpine and sub-alpine products, identified on the basis of literature (Pradhan and Maharjan 1994). Similar trade route obtained in this study was obtained by (Bhandari, 2019) in his research of trade of Allo. Interviews with old informants showed that inhabitants in Northen Gorkha District were involved in trade with MAPs to southern Nepal at least 80-90 years ago (Olsen, 1998). At that time collectors went to Kathmandu and the Terai (Nepal's southernmost physiographic belt making up the northern fringe of the Gangetic plain) to sell their products; however, the traders have followed the expansion of the road network into the hills and today traders are present in Gorkha District and all surrounding districts. Though the landscape possesses many potential species for trade, their nominal contribution to revenue was due to lack of commercialization. People collect what they can sell, and it is difficult for the DFO staff to prevent it. All collectors in Gorkha District say that each VDC has its own alpine area for grazing and MAP collection (Larsen and Smith, 2004). A major problem in commercialization of NTFPs is the low volume in which they are collected and produced, in contrast to the large quantities that are required for the markets. This problem could be addressed by establishing cooperatives, and using these cooperatives for collective marketing which will ensure optimum benefits to collectors.

6. Conclusion

In the documentation of thirty-eight commercialized NTFPs from Gorkha district, the most dominant type was found to be MAPs (66%), followed by wild foods (9%) and dyes (7%). FY 2023-24 saw higher revenue collection than followed by 2021-22 and 2022-23. Kalo Musali, Setakchini and Allo etc. are some of the most commonly traded species on a large scale. However, Jatamasi provides maximum revenue through a comparatively small amount. NTFPs are traded in five other districts as major markets.

Only small amounts of other NTFPs are marketed. Therefore, research must also focus on other potential categories of NTFPs. The current record-keeping system to include informal transactions and detailed information on quantities traded, prices, and market destinations should be improved. Adequate research and favorable resources should be allocated to explore other potentially commercially traded NTFPs. Research should be directed towards developing improved cultivation techniques for commercially valuable NTFPs, such as Jatamasi, to increase supply while ensuring sustainability. Explore the potential for innovative uses of NTFPs beyond traditional applications. Research could focus on expanding their use in industries such as pharmaceuticals, cosmetics, and natural food products, thus opening new markets and creating higher-value products. Also conduct studies that assess the socioeconomic impacts of NTFP trade on local communities, especially focusing on income generation, employment, and rural development. Understanding these impacts can inform policies aimed at supporting livelihoods through sustainable NTFP commercialization. By addressing these areas, further research can enhance the understanding and sustainable development of NTFPs in Gorkha district, improving both local livelihoods and broader economic opportunities.

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References

- 1. ANSAB (1997). Environment and forest enterprise activity: Forest Products market/enterprise options study, final report submitted to USAID-Nepal. Asia Network for Small Scale Agricultural Bio-resources, P.O. Box 16, Kathmandu, Nepal
- Bhatt, B. P., Chhetri, S. G., Silwal, T., & Poudel, M. (2021). Economic contribution of forestry sector to national economy in Nepal. *Journal of Resources and Ecology*, 12(5), 620-627.
- Bhattarai, S. (2022). Non-wood forest products of nepal: Status, issues, and challenges. In Non-Wood Forest products of Asia: Knowledge, conservation and Livelihood (pp. 179-204). Cham: Springer International Publishing.
- 4. Saha, D. and Sundriyal, R.C. (2012). Utilization of non-timber forest products in humid tropics: Implications for management and livelihood, Forest Policy and Economics, Volume 14, Issue 1.
- 5. Dhungana, S P, & Bhattarai, R C. (2008). Exploring economic and market dimensions of the forestry sector in Nepal. Forest and Livelihood, 7(1), 58.
- 6. Food and Agricultural Organization (F.A.O, 1997). Wildlife utilization and food security in Africa. Food and Agriculture Organization of the United Nations, Rome. Pp 11 10.
- 7. FOREST ACT Nepal 2019 Section 1 Sub section 2(e)
- 8. Laird, S A, Wynberg, R, McLain, R. J. (2011). Regulating complexity: Policies for the governance of non-timber forest products. Tropical Forestry, 7, 227–253.
- Lamichhane, R., Gautam, D., Miya, M. S., & Timilsina, S. (2021). Role of non-timber forest products in the national economy: a case of Jajarkot district, Nepal. Grassroots Journal of Natural Resources, 4(1), 94-105. https://doi.org/10.33002/nr2581.6853.040107
- 10. Larsen, H. O., & Smith, P. D. (2004). Stakeholder perspectives on commercial medicinal plant collection in Nepal. *Mountain Research and Development*, *24*(2), 141-148.

- 11. Magar, G. T., Balami, S., & Bajracharya, D. M. (2023). Ethnobotanical documentation and ecological diversity of non-timber forest products in Annapurna conservation area, Nepal. International Journal of Applied Sciences and Biotechnology, volume 8 issue 2
- 12. Olsen, C.S. (2005). Valuation of commercial central Himalayan medicinal plants. Ambio, 34(8), 607–610.
- 13. Olsen, C. S. (1998). The trade in medicinal and aromatic plants from central Nepal to northern India. Economic Botany, 279-292.
- Piya, L., Maharjan, K. L., Joshi, N. P., & Dangol, D. R. (2011). Collection and marketing of non-timber forest products by the Chepang community in Chitwan district of Nepal. Journal of Agriculture and Environment, 12, 10–21. https://doi.org/10.3126/aej.v12i0.7558
- Pradhan J, & Maharjan, P. (Eds). (1994). Proceedings of the national seminar on nontimber forest products: Medicinal and aromatic Plants, Kathmandu, 11–12 September 1994. Kathmandu: Ministry of Forests and Soil Conservation, and Herbs Production and Processing Co. Ltd
- Pyakurel, D., & Baniya, A. (2011). NTFPs: Impetus for conservation and livelihood support in Nepal. A reference book on ecology, conservation, product development and economic analysis of selected NTFPs of Langtang area in the sacred Himalayan landscape. WWF Nepal.
- 17. Pyakurel, D., & Oli, BR (2013). Market study of tradable and economically important medicinal and aromatic plants of eastern Nepal. Thapathali: A report submitted to Department of Plant Resources
- Sharma, V. D., & Rajbhandari, M (2019). sustainable harvesting and value addition of maps in community forests in Dolakha, Nepal. IUFRO World Series Volume 27, 43.
- 19. Shrestha, S., Shrestha, J., & Shah, K. K. (2020). Non-timber forest products and their role in the livelihoods of people of Nepal: A critical review. *Grassroots Journal of Natural Resources*, 3(2), 42-56.
- Singh, M.P, Malla, S.B, Rajbhandari, S.B, & Manandhar A. (1979). Medicinal plants of Nepal: Retrospects and prospects. Economic Botany 33(2),185–198

Appendices

Apper		of each species collected in 5 FY						
NT		QUANTITY (K.G/FY)						
No.	Smaaia-	2075 76	2077-	2079 70	2070.90	2000 01	TOTAL	
1	Species	2075-76	78	2078-79	2079-80	2080-81	TOTAL	
1	Chutro			24		10	10	
2	Guchi chyau	25		24			49	
3	Banpyaz					80	80	
4	Sughandawal				70	10	80	
5	Kurilo					120	120	
6	Muraska Ful			160			160	
7	nagkesar	285					285	
8	Titepati					350	350	
9	Gurjo	30	400				430	
10	Bojho				470		470	
11	Satuwa	50		388	45		483	
12	Ban karela			500			500	
13	Padamchal					600	600	
14	Dhupi (seed)	18			200	500	718	
15	Pani amala			910			910	
16	Pipla	985					985	
17	Dalchini		700	300		105	1105	
18	Nirmasi		180	515	300	160	1155	
19	Argeli			600	600		1200	
20	Naagbeli							
	Powder		295	340	250	400	1285	
21	Dhupi (leaf)			300	1000		1300	
22	Ban lasun	174		465.415	876		1515.415	
23	kalo dhana				1000	535	1535	
24	Banmula	1900					1900	
25	Somlata	1960					1960	
26	Bisfez			2696	219		2915	
27	Tejpat	1950	500			500	2950	
28	Hal hale	1400	700	1500			3600	
29	Ban Haledo	1100	,	3500	334		3834	
30	Kutki	50	985	3498	200	938	5671	
31	Bukiful	4860	500	500	1000	750	6860	
32	Seto musali	000	3085	3700	295		7080	
33	Chiraito	250	1471	1905.52	293	2479	8655.52	
		230	14/1	1903.32	2330			
34	Jatamasi		4006	2500	2000	8764	8764	
35	Lokta	400	4996	2500	2000	500	9996	
36	Pakhanbed	400	4000	600		6750	11750	

Appendix I: Quantity of each species collected in 5 FY

37	Majitho	1900	1169	6536	2180	715	12500
38	Setakchini	250		11815	4262	60	16387
39	Allo		1452	3626	7900	6146.36	19124.36
40	Kalo Musali	5600	12700	12645	8293	2000	41238
	TOTAL	22087	33133	59523.94	34044	31722.36	180510.3

Appendix II: Revenue of each species collected in 5 FY

		Revenue					
No.						2080-	_
	Species	2075-76	2077-78	2078-79	2079-80	81	TOTAL
1	Muraska Ful			320			320
2	Kurilo					600	600
3	Banpyaz					1200	1200
4	nagkesar	1450					1450
5	Ban karela			1500			1500
6	Dhupi (leaf)			600		1000	1600
7	Gurjo	150	2000				2150
8	Bojho				2350		2350
9	Dhupi (seed)	54			2600		2654
10	Pani amala			2730			2730
11	Sughandawal				1750	2850	4600
12	Chutro					5052	5052
13	Bukiful	3735	500	500	1000		5735
14	Padamchal					6000	6000
15	Tejpat	3900	1000			1500	6400
16	Argeli			3000	4200		7200
17	Dalchini		4900	2100		1050	8050
18	Somlata	9800					9800
19	Pipla	9850					9850
20	kalo dhana				7000	3745	10745
21	Hal hale	4200	2100	4500			10800
22	Ban Haledo			17500	1670		19170
23	Satuwa	2000		15900	1800		19700
24	Guchi chyau	12500		12000			24500
25	Banmula	28500					28500
26	Bisfez			27960	2190		30150
27	Seto Musali		15425	18500	2950		36875
28	Ban lasun	5220		13962	26280		45462
29	Lokta		24980	12500	10000	9900	57380
30	Naagbeli						
	Powder		14750	17000	12500	26600	70850
31	Nirmasi		10800	30900	18000	11325	71025

32	Majitho	9500	5845	32681	15260	10008	73294
33	Pakhanbed	2800	28000	4200		47250	82250
34	Allo		7260	18130	55298.6	43029	123717.6
35	Chiraito	3750	22065	28583	38250	46162	138810
36	Kutki	1500	29550	104930	8000	37520	181500
37	Setakchini	3750		166475	102550	1500	274275
38	Kalo Musali	33600	76200	75870	82930	20000	288600
39	Jatamasi					589770	589770
40	TOTAL	134809	245375	612341	396578.6	866061	2256615