

The Value Network for Madhya Pradesh Minor Forest Produce Federation: Facing Off Product Diversification Dilemma

Dr. Sharadindu Pandey^{1*} and Ananda Vadivelu²

¹Faculty member, Indian Institute of Forest Management, Bhopal, India

²Assistant Professor, School of Economics, RV University, Bangalore - 560059, India, anandav@rvu.edu.in

*Correspondence: Dr. Sharadindu Pandey; spandey@iifm.ac.in

ABSTRACT- Commercial forestry sector in India is largely state owned. Madhya Pradesh is a unique state in India in the sense that two different forms of the organizations are working for timber and non-timber production in the state. It's notable that Government of India has endorsed this model of doing commercial forestry and advised all the states in the country to adapt this model. It becomes important then to review the business model of the state's forest resources especially the non-nationalized forest produce which is open for private sector. Unlike leading India based business entities like Patanjali, Dabur and Himalaya, the income generated through the network of the MP Minor Forest Produce (MFP) federation (which is government supported entity) is majorly distributing the profits among the collectors of the herbal produce. The thriving of this federation network is essential for the sake of livelihood, conservation and public health. These outcomes are relevant in the context of achieving the sustainable development goals. An independent consultant Mr. Darpan Kumar (pseudonym) analyses the business choices available in the industry and the state of strategic direction of the federation. The study presents the product/business diversification dilemma.

Keywords: MFP federation, Vindhya herbal, Traditional pharmaceutical product, Nutraceutical product, Cosmeceutical product, Value Chain network.

ARTICLE INFORMATION

Author(s): Dr. Sharadindu Pandey and Ananda Vadivelu;

Received: 11/02/2023; **Accepted:** 18/03/2023; **Published:** 30/03/2023;

e-ISSN: 2347-4696;

Paper Id: IJBM 1102-01;

Citation: 10.37391/IJBM.110106

Webpage-link:

www.ijbmr.forexjournal.co.in/archive/volume-11/ijbmr-110106.html



Publisher's Note: FOREX Publication stays neutral with regard to Jurisdictional claims in Published maps and institutional affiliations.

1. INTRODUCTION

Mr. Darpan Kumar (pseudonym) is an independent consultant working in the area related to the commercialization of forest-based products. He observes that unlike the majority of the Indian states where forest corporations are responsible for the commercialization of timber and non-timber product, the states like Madhya Pradesh and Chhattisgarh have parallel structures for both types of forest product categories. The forest corporation in Madhya Pradesh is involved in plantation and selling the timber and MP MFP Federation Ltd (Madhya Pradesh Minor Forest Produce Federation Ltd) deals with all NTFPs (Non-Timber Forest produce). It is dealing with four nationalized MFPs and medicinal plants viz. Tendu leaf (Leaves of *Diospyros melonoxylon*), Harra (*Terminalia Chebula*), Sal seeds (*Shorea Robusta*) and Gum. The Federation's annual turnover is 350 crores (Forest Department presentation, 2014). Mr. Kumar observes that the federation is heavily relying on tendu patta which is 175 lakhs man days of employment, in comparison of not even 1 lakh man days (taking all other

product class together). The federation is facing the challenge to replace the livelihood from tendu leaves to other sources. It also faces the challenge of increasing its constituent 'Vindhya Herbal' brand and other brand's revenue base. All this will contribute in the income of the primary collectors and add new collectors for additional livelihood opportunities.

Madhya Pradesh is a state of India where 31% of area is classified as forest area. The state has got federation (formed in 1984), which is first in the country to transfer the rights of the MFP to the Gram Sabha, abiding the constitutional mandate of devolution of powers to *Panchayat Raj Institutions* (PRIs) (Democratic local bodies). The 'Federation model of Madhya Pradesh state', for promoting non-Timber Forest produce (NTFP) has got Government of India (2016) endorsement, replicating this MP model to other states/UTs of India. The federation uses only 20% of the profits for infrastructural development/cash payments, 60% is transferred to primary collectors and 20% is used for NWFP (Non-wood forest produce) and forest regeneration. Mr. Kumar feels that transformation of the federation's business will not only substitute/extend the livelihood option for communities dependent on forest-based resources, but it will also improve the socio-economic status of these communities. Because the major chunk of the profits is transferred to community only.

2. THE STRATEGIC INTENT OF THE MP FOREST FEDERATION

The state forest department has been supporting the federation in their business segment of Medicinal plant collection and trading through the brand viz. Vindhya herbal. It is the largest

forest federation in India involved in the NTFP (Non-Timber Forest produce) business. The federation along with MP state Mandi Board funded a major unit viz. MFP-PARC (Minor Forest Produce-Processing and Research Centre) as a project, which is a processing and research centre. This centre is now an independent business unit mainly responsible for the R&D and marketing of the traditional pharmaceutical products. The organization has the following strategic intent:

Vision: NTFP sustainability for equity.

Mission: Develop and Strengthen equitable marketing platform for NTFPs to enhance livelihood options.

Goal: Improved economic status of Forest dependent people through scientific and participatory NTFP management.

The NTFP sustainability is about sustainable harvesting of NTFP resources and the equity is about reducing the income differential among the value chain partners or mainly the primary collectors.

Table 1: Exhibit 1: Price-differential analysis of the top performing products in the Ayurveda market

S.N.	Bestselling product	Price of the bestselling product (MRP in INR, INR 100 equals to USD 1.40 as on 5-12-2019)	Comparable Vindhya Herbal product	Price of the comparable Vindhya Herbal Product (MRP in INR)
1	Ashwagandha Tablet- Himalaya (250 mg×60 tablets)	132	Ashwagandha Capsule (60 units)	270
2	Almond Oil-Dabur (50 ml)	195	NA	NA
3	Honitus Hot Sip Ayurvedic Khaada- Dabur (30 sachets)	210	NA	NA
4	Confido tablets- Himalaya (60 counts)	120	Gold Power-500 capsule (60)	1800
			Shilajeet (60)	3000
5	Gokshura Men's Wellness-Himalaya (60 tablets)	147	Gokshuradi Guggulu (60 tablets)	75
6	Chyawanprash-Dabur (1 Kg)	310	Chyawanprash (1 kg)	400
7	Carbohydrate metabolizer BGR-Amil pharma (34 tablets)	1515	NA	NA
8	Liv. 52-Himalaya (100 tablets)	100	L-5 (100 tablets)	350
9	Wheat Grass Juice- Kapiva	450	NA	NA
10	Mahabhringraj Tail- Vaidyanath (200 ml)	255	Bhringraj Tail (200 ml)	260

Some of the bestselling Ayurveda drugs use innovative packaging e.g., sachet packaging. For which, they may charge premium pricing. Some other products e.g., wheat grass juice, whose comparable products are not available with the Vindhya herbal brand, the comparison was not performed. Many of the products of Vindhya herbal are using premium pricing strategy. Mr. Darpan formed the impression that the premium pricing

3. COMMUNITY VALUE ADDED OF VINDHYAL HERBAL PRODUCTS

Community value added is a kind of business review parameter (where the business entity creates more value with the same resource, in terms of profit and revenue maximization). Mr. Kumar referred the product catalogue and brochures of the Vindhya herbal. He performed the price margin analysis with the respective product after adjusting the quantities. To assess the magnitude of the value addition (to provide the improved economic status for forest dependent communities, which is the goal of the MFP-PARC), the price differential analysis of top 10 productsⁱⁱⁱ in market and Vindhya Herbal products was performed. The Vindhya herbal product was compared with the product of the competitive firm at the prevailing market rate. The product categoriesⁱⁱⁱ of the Vindhya Herbal brand is provided in the annexure at the end of this case. The findings were:

strategy of vindhya herbal may be suitable for the purpose of Business-to-Business sales, mainly. However, for business to consumer marketing the premium pricing of Vindhya herbal shall have to justify offerings through consumer satisfaction. To understand the value addition by the processor unit, the raw material price^{iv}, wholesale price and Minimum Retail Price (MRP) were taken. The product Ashwagandha (Withania

Somnifera) prices (at Neemuch, MP mandi) are compared (Annexure exhibit A5 and other data).

He observed that there is substantial difference between whole sale and the retail prices. The sale through Sanjeevani outlets or franchisee will yield more revenue for the processor than sales through Business-to-Business transactions. Primary collectors get benefits from the raw material selling as well as bonus of the processor's profit. Mr. Darpan extends his price spread analysis to the other products and noticed that the average of the wholesale price ratio and the raw material price ratio (4.35) is

the proceeds which goes to the processor and the average of the MRP and raw material price ratio (10.89) goes to the intermediaries. He built another impression that the Forward supply chain partners are the largest beneficiary in the value chain. The higher the proportion of the product sold through integrated value chain model, higher the benefits for the primary collectors.

Mr. Kumar find it interesting to compare the Vindhya Herbal prices with the Patanjali Ayurveda^v.

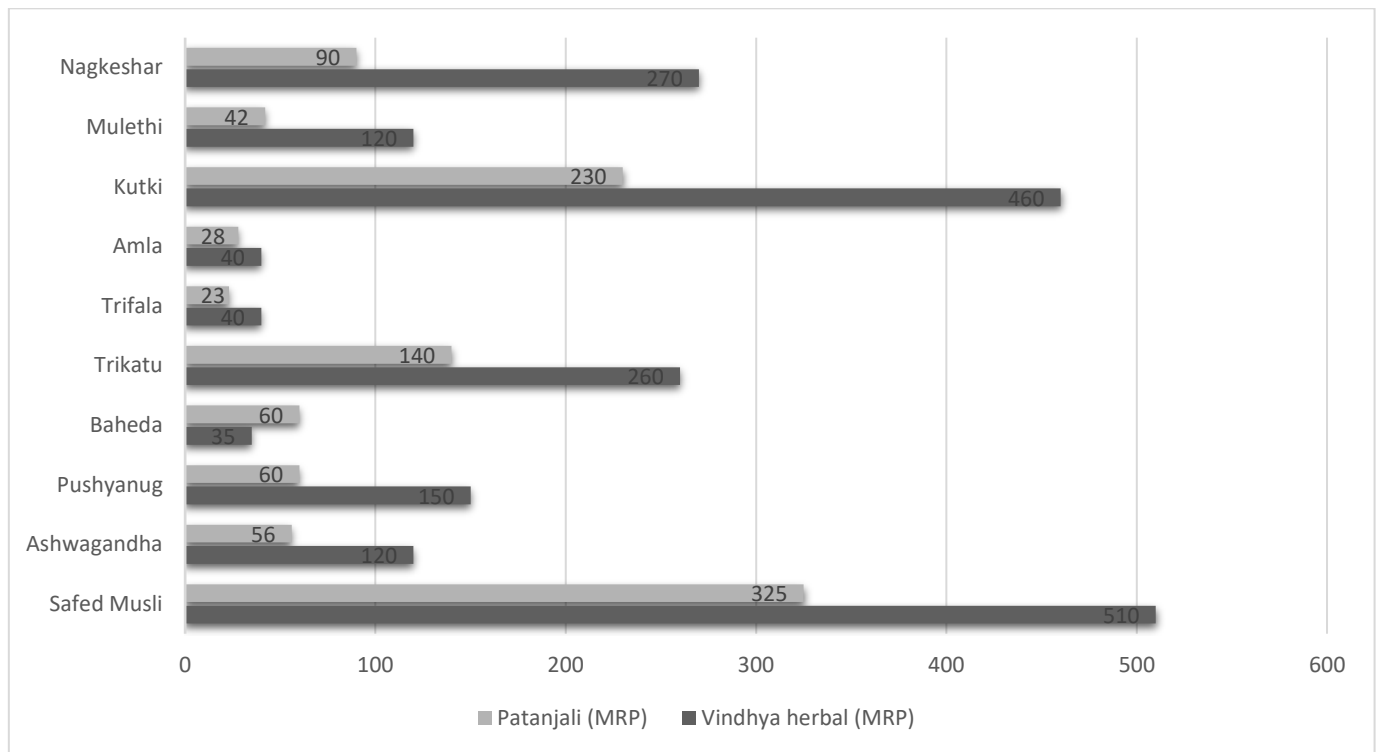


Figure 1: Exhibit 2: MRP comparison of Vindhya Herbal and Patanjali



Figure 2: Exhibit 3: Average % deviation in the prices of Vindhya Herbal and Patanjali

Vindhya herbal has been enjoying premium prices as much as double than that of Patanjali Ayurveda, barring a few cases. Mr. Kumar thought that the dominant strategy for the Vindhya herbal is focus strategy, whereby it is able to charge substantial premium for its product. However, the gross sales proceeds also dependent on sales volume. The focus strategy may face price reduction threat unless its product is offering differentiation. There may be a little differentiation in the Powder (*Choorna*) and similar other categories of the products taken above. Mr. Kumar is not sure how to attain competitive advantage by combining the broad differentiation strategy. This strategy is about offering the competitive products at other market segments e.g., direct consumer segment.

During his primary data collection at one of the processing sites of the Vindhya herbal based at Rehati (Sehore) (the unit tied up with the same federation used the brand called 'Vindhya Amrit'), he observed that the mean deviation of the number of Tendu leave collector family is 165.72 and the average number of the families are 1293 (See exhibit A6). Only 12% deviation in last 10 years indicates that MFP collection has not been a consistent source of occupation in the region. Mr. Kumar found that MFP collection has not been providing replacement of the livelihood from Tendu Patta collection. It has been providing supplementary source of livelihood for the community. He further found that the bonus distribution by the Rehti processing unit is not consistent (See exhibit A7). Keeping in view the attainment of deficiency in the vision of the federation, Mr. Kumar decided to check the secondary data. Mr. Darpan felt the need to assess to what extent the MFP network has occupied the market size in the different segments of wellness industry (See exhibit A10) and its 2 years' global growth (See exhibit A9).

MFP network is essentially in Ayurveda segment which is related with 'Traditional and Complementary medicine', as above. The segment has more than 80% of the growth, which is overwhelming than the other segments. The presence of the MFP network in the segment shows that the network has good potential in future. However, so far as present market size is concerned, the market share of the Traditional and complementary segment was lower (See exhibit A8). It is now quite clear to Mr. Kumar that many segments as above have higher market share. Others business segments include the categories viz. work place, thermal/mineral springs, spa economy, wellness real estate etc. It was apparent that MFP network is in high growth segment. However, it has smaller market base. Mr. Kumar wondered should MFP federation push to venture into other segments for better volume growth. However, to scale up its production and processing capability, the sustainable harvesting of the natural resource was also a challenge. On top of his mind, Mr. Darpan has collaborative action model among the various developing agencies. This model is similar to the corporate growth model of 'valuenet'. Valuenet or Value network is the cooperative strategy to work with the market entities. Mr. Kumar felt that the optimal network model for NTFP sustainability cum livelihood, for the value addition in the present business has the following opportunities:

3.1 Adaptation of Forest Farming Model

The model is about to increase the production of herbs by providing the forest land for the purpose of farming and to give access to the community to collect the herbs. In India, this has recently been done by the Haryana Forest department with an MOU^{vi} with Patanjali Ayurveda Limited. With the knowledge support of Patanjali, the Haryana Forest department wants to develop 53000 acres of land as a world herbal forest. As per the NMPB (National Medicinal Plant Board) (2017)^{vii} study, the Madhya Pradesh has identified the following areas (Medicinal Plant Conservation Areas-MPCAs), for the conservation of the medicinal plants:

Table 2: Exhibit 4: The areas for the conservation of the traditional medicinal plants in the state of Madhya Pradesh

S.N.	Name of MPCA	District	Area (in Ha)
1	Bhundakona	Anuppur	200
2	Latari Bithali	Balaghat	248
3	Chappari	Mandla	248
4	Panarpani	Hoshangabad	200
5	Shyamgiri	Panna	216
6	Kapoomala	Chhindwara	200
7	Hinota	Panna	200
8	Bhagpura	Khandwa	234
9	Pakka Paracha	Sehore	200
10	Bhinsamukunda	Narsimpur	200
11	Narayanapur	Sagar	200
12	Nawali and Sawad	Mandsaur	250
13	Kupi-Jatashankri	Chhatarpur	200
	Total		2796

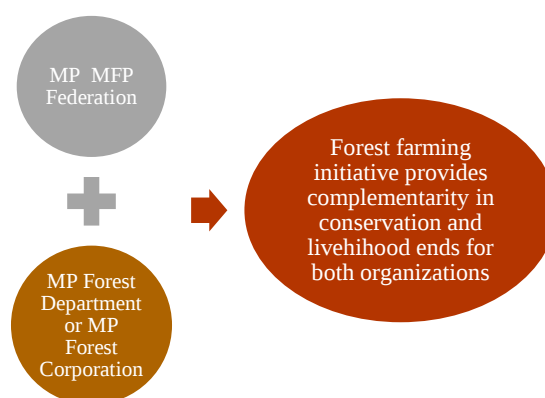


Figure 3: Exhibit 5: Strategic Equilibrium: Federation and Forest Department/Corporation

Given the forest area at Madhya Pradesh, the conservation area of 2796 hectare is quite less than what Haryana has envisaged. Mr. Kumar realized the need to expand the farm forestry base in the state of Madhya Pradesh in collaboration with forest department of the state and the NMPB.

3.2 Exploring new business segments and consolidating existing one

Wellness tourism^{viii} and personal care are some high market size segment which may evolve as a relative diversification strategy for the production forestry sector of the state. Any attempt of the federation to be present at 'cash how' business segment will yield more revenue for them. Secondly, the present business of the federation is at 'question mark' stage where they have high potential but not able to convert in market share, and resultant volume/revenue growth. In all three strategies evolved during above discussion, the federation will earn more revenue and resultant impact on livelihood, conservation and public health.

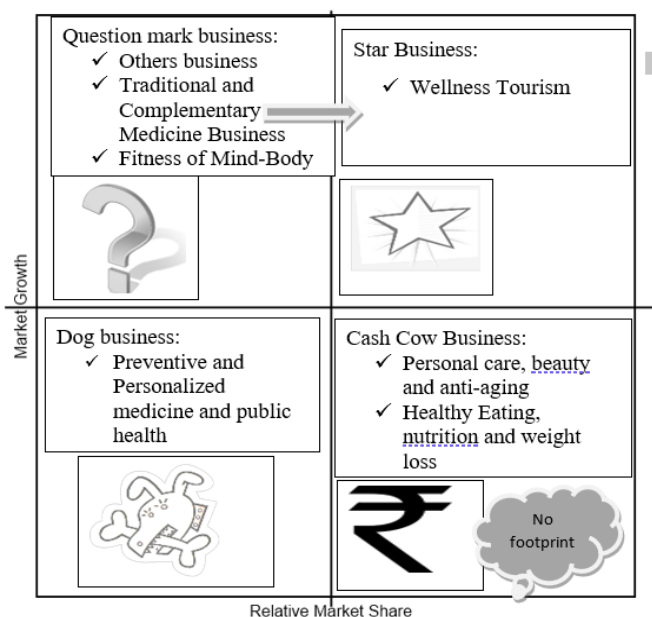


Figure 4: Exhibit 6: Boston Consultancy Group (BCG) Matrix for wellness industry businesses

The definitions of business nomenclature used in BCG matrix is self-explanatory. The state's MFP federation business lies at the question mark state where potential is high but the market share of business exploitation is low. The federation is also not present in the cash cow segment where business exploitation or the revenue potential is high. The optimal strategic ends for both the strategic positions are shown by the arrow and the cloud shapes.

Conservation and Livelihood are the two main sustainable development goals of the MFP network in the state. The above analysis focuses on the livelihood potential from the varied applications of the major medicinal plants of the state. Mr. Kumar explored about the major medicinal plants available in Madhya Pradesh^{ix} (See exhibit A4). He felt that each plant opens up the opportunity of speciality business or enterprise.

3.3 Network Mix and Product/Business Diversification

Network mix is a part of cooperative strategy eco-system whereby all the entities together optimize their strategic ends.

The network hub of the state NTFP product has to be MFP federation. The network goals include significant improvement in MP state Sustainable Development Goals (SDG) parameters like livelihood, conservation and health which is related with the medicinal plant sector. Mr. Kumar attempted to map the network mix and network performance indicators for three business scenarios, Ayurveda Pharmaceutical segment (or traditional or complementary medicine segment), Nutraceutical segment (Health eating, nutrition and weight loss segment) and Cosmeceutical segment (Personal cares, beauty and anti-aging segment, fitness of mind and body and wellness tourism segments).

Table 3: Exhibit 7: Network mix for Ayurveda Pharmaceutical segment

	Level of Business	Network entities
1	MFP federation	Forest department of the state for forest farming, NMPB for forest farming, AYUSH and other players for purchase contract, TRIFED for capacity building of processor unit by District societies and marketing ^x
2	District Union	Capacity building and marketing through TRIFED, Supplies to Deptt. of Ayush and other buyers like TRIFED stores and Khadi Bhandar etc., NSDC for skill development
3	Primary collection Societies	Collection and Cultivation of medicinal plant through NMPB fund

(Abbreviation used: **TRIFED**: Cooperative Marketing Development Federation of India Limited by Ministry of tribal Affairs, Govt. of India, **NMPB**: National Medicinal Plant Board under Ministry of Ayush, Govt. of India, **NSDC**: National Skill Development Corporation, Under Ministry of Skill and Entrepreneurship, Govt. of India)

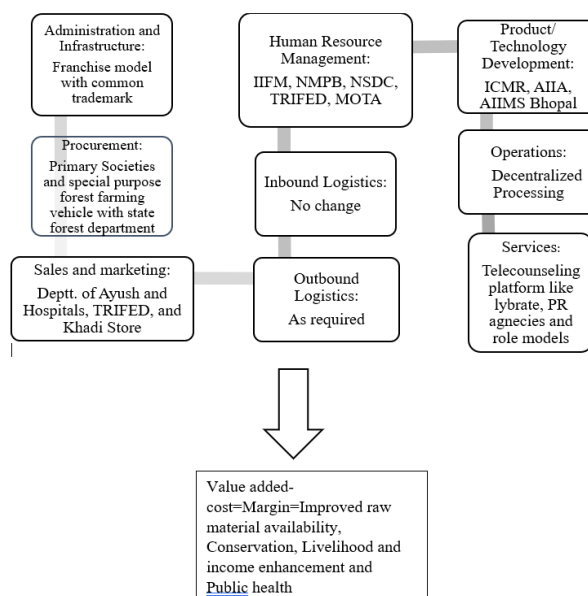


Figure 5: Exhibit 8: Optimal Value Chain Network for Pharma business^{xi & xii}

(Abbreviation used: **IIFM**: Indian Institute of Forest Management under Ministry of Environment, Forest and Climate Change, Govt. of India, **ICMR**, Indian Council of Medical Research Under Ministry of Health and Family Welfare, Govt. of India, **AIIA**: All India Institute of Ayurveda under Ministry of AYUSH, Govt. of India, **AIIMS**: All India Institute of Medical Sciences under Ministry of Health and Family Welfare, Govt. of India, **MOTA**: Ministry of Tribal Affairs, Govt. of India)

The value chain network mapped by Mr. Kumar for the traditional pharmaceutical segment included the framework of all the primary and support activities of a business. Presently due to lack of standardised processes in the processing of the traditional Ayurveda medicines, the intellectual property infrastructure is sporadic. The major client i.e. AYUSH department hospitals and drug stores within the state do not allow the use of single trademark i.e. 'Vindhya herbal', for different processes adopted at different processing units. Mr. Kumar feels that the franchising model may bring the due standardization and promote the use of common trademark. Forest Management institutions like IIFM in consultation with the business ecosystem institutions can prepare the curriculum related to different present and future occupations with the support of National Medicinal Plant Board and the National Skill Development Council. Mr. Kumar is not much sure about the network strategy implementation challenges and the implications.

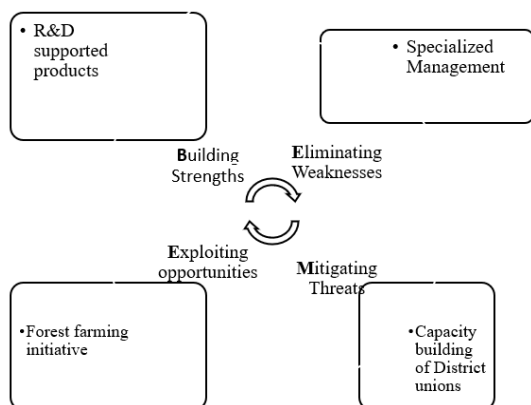


Figure 6: Exhibit 9: BEEM (highlighted text) Analysis for achieving SDG goals through Pharma business^{xiii}

Table 4: Exhibit 10: Network mix for Ayurveda Nutraceutical segment

	Level of Business	Network entities
1	MFP federation	Indus Mega Food Park Khargone for setting up entity in nutraceutical segment ^{xiv} , Technology from Central Food Technology Research Institute Mysore
2	District Union	Capacity building and marketing through TRIFED, Supplies to retail stores, NSDC for skill development, procurement through MP organic
3	Primary collection Societies	Collection and Cultivation of medicinal plant through NMPB fund

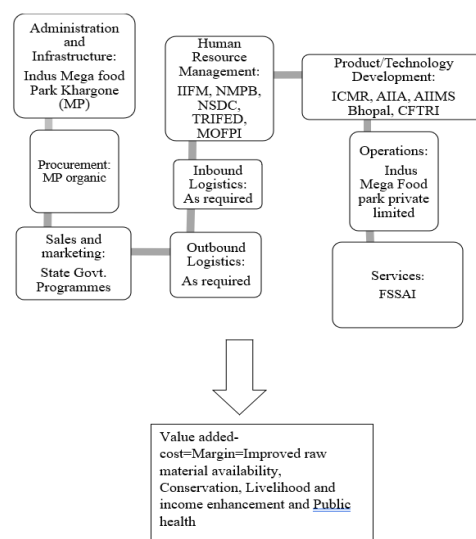


Figure 7: Exhibit 11: Optimal Value Chain Network for Nutraceutical business^{xv & xvi & xvii}

(Abbreviations used: **CFTRI**: Central Food Technology Research Institute, Under Council of Scientific and Industrial Research, Govt. of India, **MOFPI**: Ministry of Food Processing Industries under Govt. of India)

However, to consolidate the shift from the focused differentiation strategy to the broad differentiation, keeping in view the sustainable harvesting challenges and the revenue maximizing goal, the federation may promote nutraceutical-based businesses. Mr. Kumar feels that this segment does use limited quantity of the herbal resource but contributes in broad reach of the brand. It is about positioning traditional medicine not only as main stream therapeutics but also as supplementary and preventive use. The Allopathic hospitals like AIIMS and research bodies like ICMR also support this proposition. The market rival Patanjali is already in this segment whose products are positioned for lifestyle consumption rather than treatment purposes. Mr. Kumar feels the need of separation of management and administration function and use of professional management to grow the business. He wonders why federation or other state forest corporations do not have significant footprint in this segment despite the huge success of private players like Patanjali and P&G, as the federations and corporations have greater resource reach advantage.

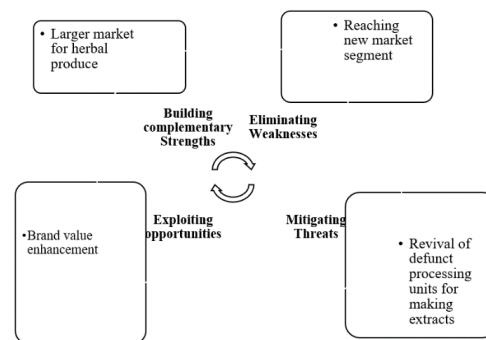


Figure 8: Exhibit 12: BEEM Analysis for achieving SDG goals and business supplementation and complementation through Nutraceutical business^{xviii}

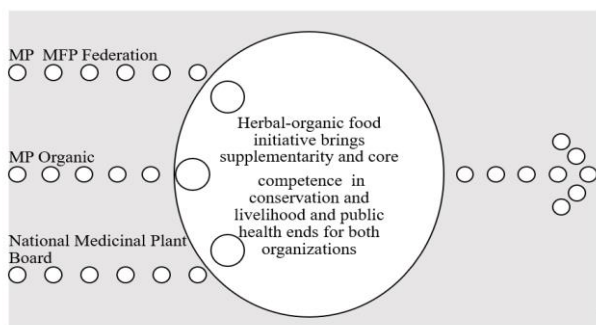


Figure 9: Exhibit 13: Strategic Equilibrium: Federation and MP Organic

Mr. Darpan further feels that the stalwarts for nutraceutical segments are working in isolation. MP organic is the supplier of the health food products. The blending of organic products with the herbal extract may reinforce each other's strategy. As the forest department supported entity or community may not have sufficient access to the cultivable land for the food production, the tie up with the MP organic may enrich the brand.

Table 5: Exhibit 14: Network mix for Ayurveda Cosmeceutical segment

	Level of Business	Network entities
1	MFP federation	Tourism Development corporations, Integrated and alternative therapy department of hospitals & Hotels for spa and wellness segment
2	District Union	Capacity building and marketing through TRIFED, Supplies to general stores, NSDC for skill development
3	Primary collection Societies	Collection and Cultivation of medicinal plant through NMPB fund

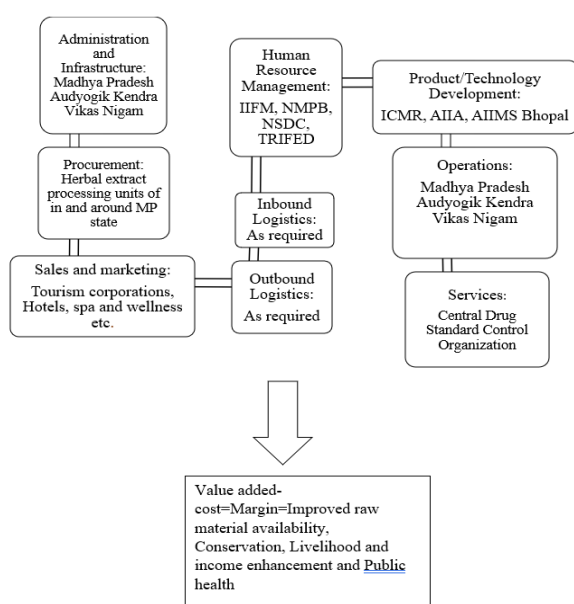


Figure 10: Exhibit 15: Optimal Value Chain Network for Cosmeceutical business

Mr. Kumar feels that the wellness segment provides prime opportunity for the federation as the players like Himalaya and Emami are so successful there. He feels that, this segment when served by the forest department supported entity, it can provide access to the diverse herbal repository. It would also be better from the conservation point of view when the end product uses the herbal content in small quantity.

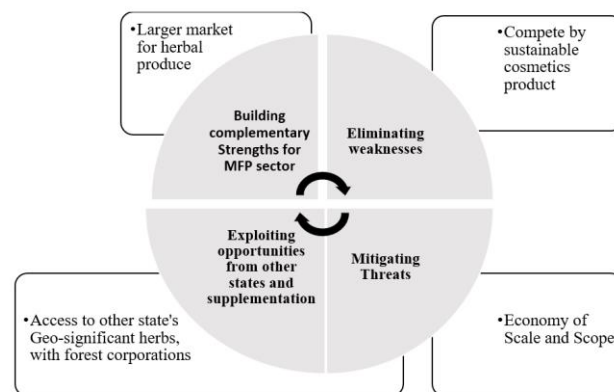


Figure 11: Exhibit 16: BEEM Analysis for achieving SDG goals and business supplementation and complementation through Cosmeceutical business^{xx}

Mr. Darpan feels that the herbs accessible at the different agro-climatic areas of the state might not be suitable for only pharmaceutical use. The opening up of this segment might help those collectors who are living in the areas concerned. Such business division can open up the opportunity for other states based collectors also, to supply the herbs for the cosmeceutical purposes.

Tendu leaves are used in making smoking product (pipe shaped tobacco product rolled with dry leaf) i.e. *Bidi*. This is not a sustainable business stream so far as public health is concerned. There has been a quest of policy makers to promote the medicinal plants and other nationalized business in the state, to not only replace the potential livelihood loss from the *Tendu* leave business, but grow the beneficiary base and the income of the first line in the value chain i.e. primary collector. The contract farming based business models of Patanjali Ayurveda and Dabur have registered success given their strong market presence. Traditional medicinal segment is fast growing but low in market share. The value chain of the medicinal plant need to leverage their existing strengths by consolidating the scientific base of the traditional product and develop the new market competences. The value chain required continuous entrepreneurial zeal among the promoters of the MFP network. It requires structural reforms in the line of the successful cooperative movement in India. The MFP network lacks thorough professional cadre strength in the key positions. The federation requires the delineation in the supervisory/administrative, and the management structure. Mr. Darpan Kumar explored the possible network mix and identified the institutional partners of the value chain network. He feels that the models need validation, with rival/add on hypotheses. He also feels that the soft drivers like skill, shared values are key to the potential network performance, at

respective institutions and network for the present pharma business and the potentially diversified nutraceutical and the cosmeceutical business.

ANNEXURES

Exhibit A1: Office of Vindhya Herbal House



Exhibit A2: Revenue of Vindhya Herbal business unit under MP Forest Department, Govt. of M.P. (in crores of Rupees, 1 crore Rupees is equal to USD 1,39,819 as on 5-12-2019)

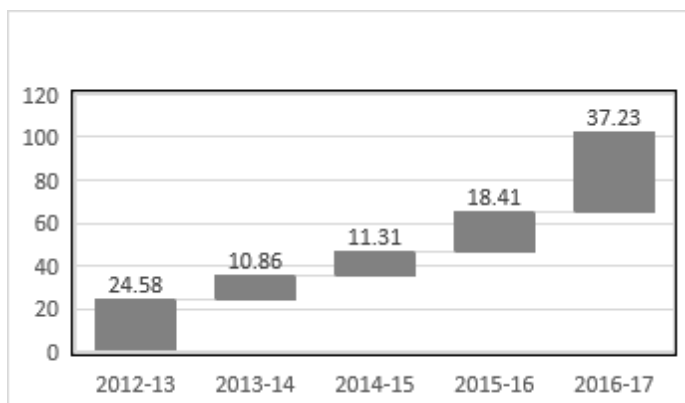


Exhibit A3: The Product categories of the Vindhya Herbal

S.N.	Product Category	Number of products
1	Classical Ayurveda Choornas (Single and Compound)	121
2	Patent herbal Capsules	30
3	Ayurveda Oils	28
4	Aasavas and Aristas	41
5	Patent Ayurveda Churnas	08
6	Patent Cream and Ointment	05
7	Tablet/Gutika/Gugglu	92
8	Paak/Avleha	06
9	Mandoor/Bhasm/Parpati	07
10	Honey	01

Exhibit A4: The major medicinal plants available in the State of Madhya Pradesh

Scientific Name (Local name)	
Acorus Calamus (Buch or Sweet Flag)	Aegle Marmelos (Bel)
Aloe Vera (Gwarpatha)	Andrographis Paniculata (Kalmegh)
Asperagus Racemosus (Satawar)	Azadiracta Indica (Neem)
Chlorophytum Borivilianum (Safed Musli)	Cymbopogon Martini (Lemon Grass)
Cymbopogon Flexuosus (Lemon Grass)	Cymbopogon Winterianus (Java Citronella)
Cyperus Rotundus (Nagarmotha)	Embelia Ribes (Baibidung)
Embllica Officinalis (Aonla)	Gymnema Sylvestre (Gudmar)
Jatropha Curcus (Ratanjot)	Ocimum Basilicum (Tulsi)
Phyllanthus Amarus (Bhui Amla)	Plantago Ovata (Isabgol)
Rauwolfia Serpentine (Sarpagandha)	Terminalia Arjuna (Arjun)
Terminalia Belerica (Baheda)	Terminalia Chebula (Harra)
Tinospora Cordifolia (Giloy)	Vetiveria Zizanioides (Khus)
Withania Somnifera (Aswagandha)	

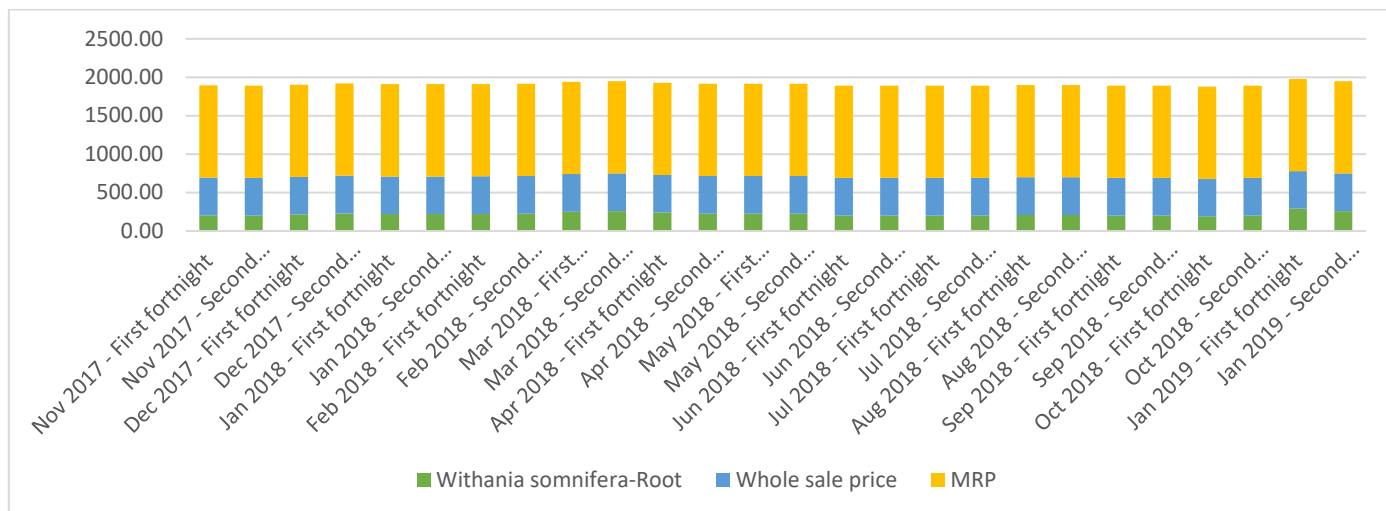


Exhibit A5: Ashwagandha -Raw material and product pricing (In Rs. /Kg)

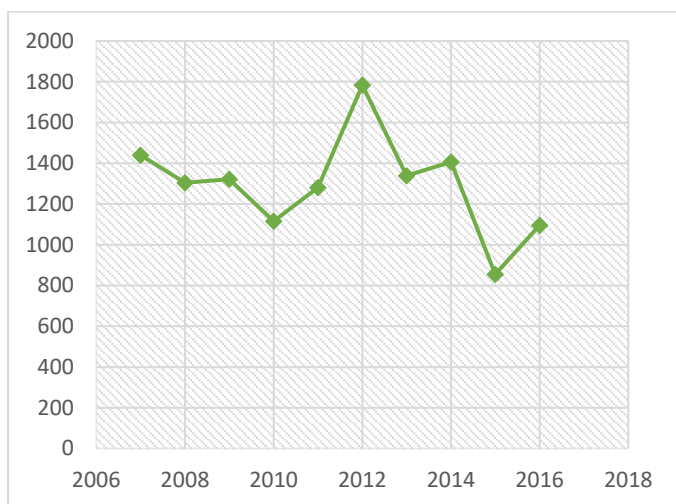


Exhibit A6: Number of MFP collector families (Rehti based processor data)

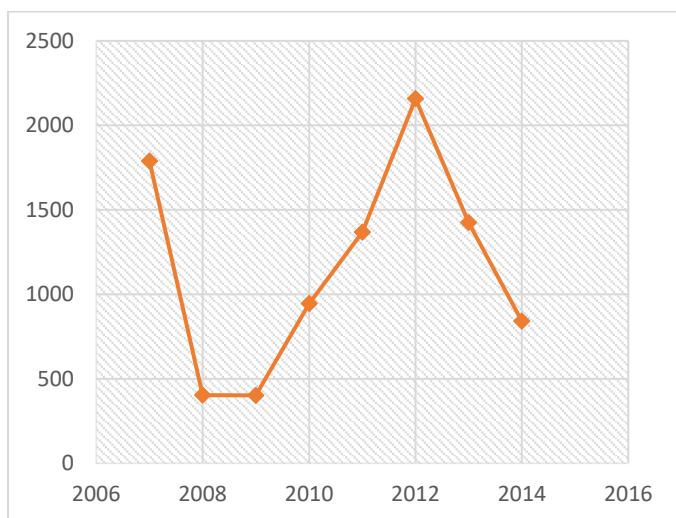


Exhibit A7: Average Bonus per family (INR, INR 100 equals to USD 1.40 as on 5-12-2019)

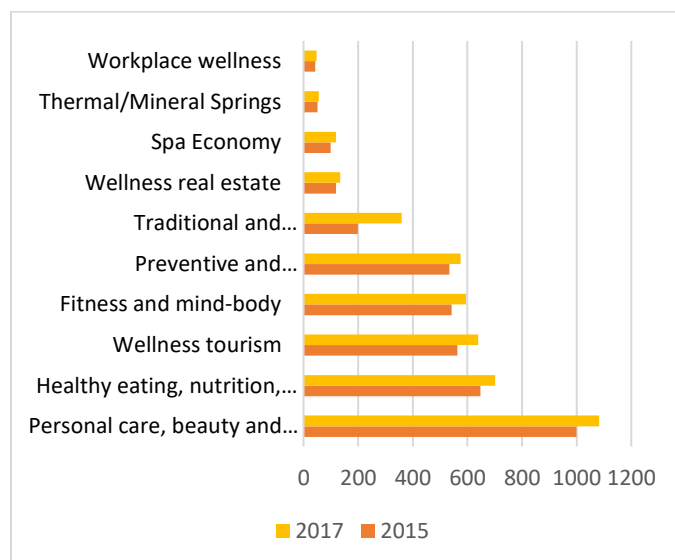


Exhibit A8: Global market size of different segment of wellness Industry (In Billion US dollars) (Source: www.statistica.com)

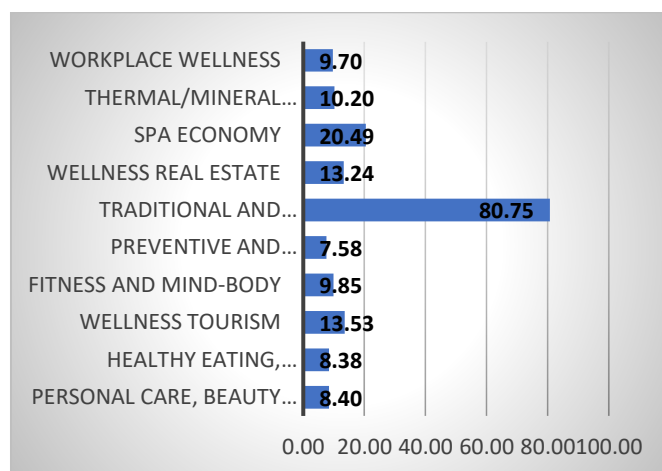


Exhibit A9: Global wellness Industry (% growth, 2015-17) (Source: www.statistica.com)

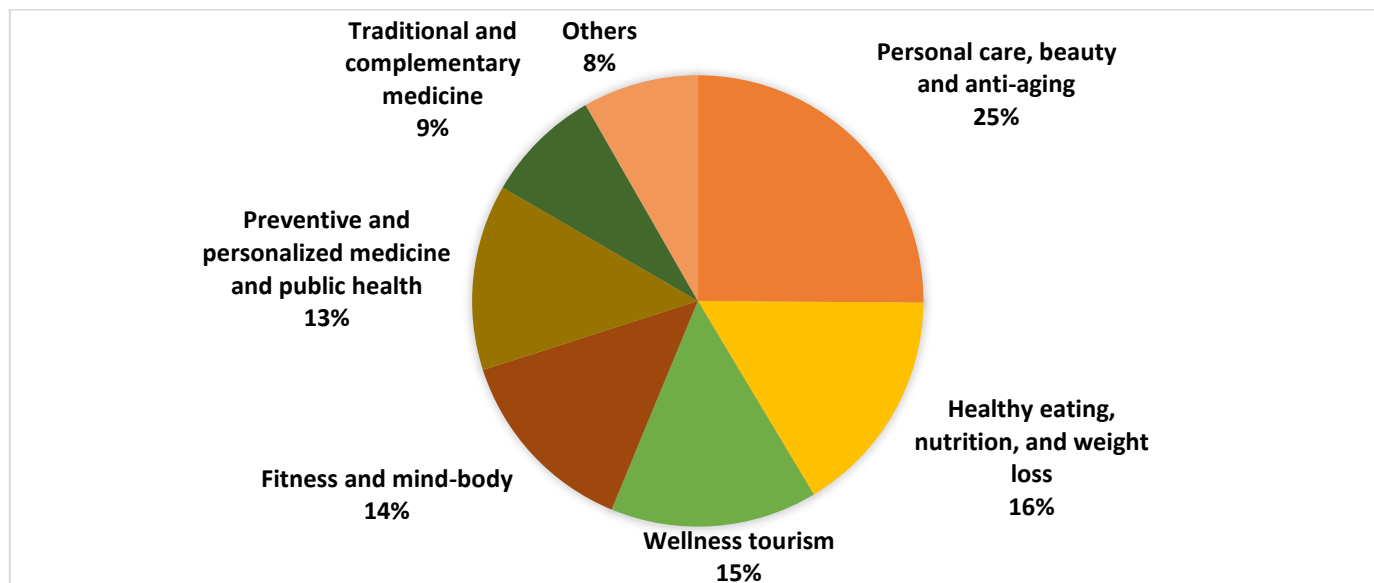


Exhibit A10: Global market segments-2017 (Source: www.statistica.com)



Exhibit A11: Some value added products for nutraceutical and cosmeceutical segments

study as well as experts based at the IIFM also contributed to this case study.

Disclaimer: The case study is written for the purpose of class room teaching and training use. It does not claim to mimic the entire business situation and positions of various people involved there. However, the data used here is real life based and collected from the concerned people.

REFERENCES

- [1] Mike Troilo, Masato Abe and Nick Freeman (2022), Looking Beyond the Pandemic: Building Back Better for MSME Finance. IJBMR 10(4), 82-93. DOI: 10.37391/IJBMR.100401.
- [2] Costas Siriopoulos (2022), Financial Markets are not efficient: Financial Literacy as an Effective Risk Management Tool. IJBMR 9(1), 65-73. DOI: 10.37391/IJBMR. 090110.
- [3] Writings of P. J. Dilip Kumar. <https://scholar.google.co.in/citations?user=SNiOI38AAAAJ&hl=en>,
- [4] http://www.academia.edu/11997756/Decentralized_governance_and_forests_in_India. Accessed on Nov. 30, 2017
- [5] <https://journal-jger.springeropen.com/articles/10.1186/s40497-015-0029-4>
- [6] http://mpintherbalfair.net/pdf/herbal_fair2017_brochure_new.pdf
- [7] <http://www.sciencedirect.com/>
- [8] <https://www.jstor.org/>
- [9] <http://www.emeraldinsight.com/>
- [10] [http://trifed.in/trifed/\(S\(ipobix5artkapxthi0bwzuye\)\)/mfp_network_about.aspx](http://trifed.in/trifed/(S(ipobix5artkapxthi0bwzuye))/mfp_network_about.aspx)
- [11] <http://www.mfpfederation.org/Website/content/suggn.html>
- [12] http://mpforest.org/intranet/edusat/Training_Material/29102014.pdf
- [13] <http://aranya.gov.in/downloads/Madhyapradesh.pdf>

4. ACKNOWLEDGEMENT

The study acknowledges the Indian Institute of Forest Management Bhopal for the grant, especially the Research Advisory Committee, reviewers of the grant proposal and the Institute's administration. The respondents contributed to the

- [14] <http://www.agmp.nic.in/reports/Epitome%20govt%20of%20MP%202011-12%20Eng.pdf>
- [15] https://en.wikipedia.org/wiki/Grounded_theory
- [16] <https://cmap.ihmc.us/>
- [17] https://www.researchgate.net/post/What_is_the_difference_between_theoretical_sampling_and_snowball_sampling_in_qualitative_research

- [18] <https://www.statista.com/statistics/270720/market-size-of-the-wellness-industry-by-segment/>



Creative Commons Attribution (CC BY) license
(<http://creativecommons.org/licenses/by/4.0/>)

© 2023 by the Dr. Sharadindu Pandey and Ananda Vadivelu. Submitted for possible open access publication under the terms and conditions of the

ⁱ <https://www.amazon.in/gp/bestsellers/hpc/4264020031>

ⁱⁱ Source: product catalogue received from MFP-PARC.

ⁱⁱⁱ http://www.vindhyaherbals.com/downloads/price_list.pdf

^{iv} <http://e-charak.in/echarak/marketwise1.do>

^v <https://www.patanjaliayurved.net/category/churna/18>

^{vi} <https://prharyana.gov.in/en/haryana-forest-department-today-signed-a-memorandum-of-understanding-mou-with-patanjali-anusandhan>

^{vii} Goraya, G. S. and Ved, D. K. (2017). Medicinal Plants in India: An Assessment of their Demand

^{viii} <http://tourism.gov.in/wellness-medical-tourism>

^{ix} <http://mpenvs.nic.in/index2.aspx?slid=569&sublinkid=293&langid=1&mid=1>

^x [http://trifed.in/trifed/\(S\(mmazag5sulo35dyw3oirbryu\)\)/Van_Dhan_Vikas.aspx](http://trifed.in/trifed/(S(mmazag5sulo35dyw3oirbryu))/Van_Dhan_Vikas.aspx)

^{xi} IIFM stands for Indian Institute of Forest Management, NMPB- National Medicinal Plant Board, NSDC=National Skill Development Council, TRIFED; Tribal Federation, MOTA- Ministry of Tribal Affairs, Govt. of India, ICMR- Indian Council of Medical Research, AIIA; All India Institute of Ayurveda, AIIMS- All India Institute of Medical Sciences, AYUSH- Govt. Department for Alternative and Supplementary therapy

^{xii} Based on the primary data collected from the processing units of Bhopal, Sehore and Vidisha

^{xiii} Based on the primary data collected from the processing units of Bhopal, Sehore and Vidisha

^{xiv} <http://mofpi.nic.in/Schemes/mega-food-parks>

^{xv} MOFPI-Ministry of Food Processing, Govt. of India, FSSAI-Food Safety and Standard Authority of India, CFTRI-Central Food Technology Research Institute

^{xvi} MP Organic- a brand of MP state Rajya Beej and Khad Nigam

^{xvii} Based on the primary and secondary data collected from the business experts of the NTFP sector

^{xviii} Based on the primary and secondary data collected from the business experts of the NTFP sector

^{xix} Based on the primary and secondary data collected from the business experts of the NTFP sector

^{xx} Based on the primary and secondary data collected from the business experts of the NTFP sector