



Traditional knowledge research in India: A bibliometric-based review and thematic analysis

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Received 12 March 2024; revised 31 January 2025; accepted 10 March 2025

Supplementary Data

Appendix A —: List of Literatures (107) for Full text review

- 1 Abdullah A, Andrabi S A H & Mir R A, Traditional medicine in the treatment of gastrointestinal diseases in northern part of Kashmir Himalayas, *Ethnobot. Res. Appl.*, 23 (2022). <https://doi.org/10.32859/ERA.23.22.1-17>
- 2 Anthwal A, Gupta N, Sharma A, Anthwal S & Kim K H, Conserving biodiversity through traditional beliefs in sacred groves in Uttarakhand Himalaya, India, *Resour Conserv Recycl.*, 54 (11) (2010) 962-971. <https://doi.org/10.1016/j.resconrec.2010.02.003>
- 3 Badola H K & Pradhan B K, Plants used in healthcare practices by Limboo tribe in South-West of Khangchendzonga Biosphere Reserve, Sikkim, India, *Indian J Tradit Know.*, 12 (3) (2013) 355-369.
- 4 Bhagya B & Sridhar K R, Ethnobiology of coastal sand dune legumes of Southwest coast of India, *Indian J Tradit Know.*, 8 (4) (2009) 611-620.
- 5 Chakrabarty S P & Kaur R, A Primer to Traditional Knowledge Protection in India: The Road Ahead, *Liverpool Law Review.*, 42 (3) (2021) 401-427. <https://doi.org/10.1007/s10991-021-09281-4>
- 6 Chettri N & Sharma E, A scientific assessment of traditional knowledge on firewood and fodder values in Sikkim, India, *For Ecol Manag.*, 257 (10) (2009) 2073-2078. <https://doi.org/10.1016/j.foreco.2009.02.002>
- 7 Das A, Gujre N, Devi R J & Mitra S, A Review on Traditional Ecological Knowledge and Its Role in Natural Resources Management: North East India, a Cultural Paradise, *Environ Manag.*, 72 (1) (2023) 113-134. <https://doi.org/10.1007/s00267-021-01554-y>
- 8 Dasgupta R, Dhyani S, Basu M, Kadaverugu R, Hashimoto S, *et al.*, Exploring Indigenous and Local Knowledge and Practices (ILKPs) in Traditional Jhum Cultivation for Localizing Sustainable Development Goals (SDGs): A Case Study from Zunheboto District of Nagaland, India, *Environ Manag.*, 72 (1) (2023) 147-159. <https://doi.org/10.1007/s00267-021-01514-6>
- 9 Demunshi Y & Chugh A, Role of traditional knowledge in marine bioprospecting, *Biodiv Conserv.*, 19 (11) (2010) p. 3015-3033. <https://doi.org/10.1007/s10531-010-9879-9>
- 10 Devi W D, Bonysana R, Kapesa K, Mukherjee P K & Rajashekar Y, Edible insects: As traditional medicine for human wellness, *Future Foods*, 7 (6) (2023), Elsevier B.V. <https://doi.org/10.1016/j.fufo.2023.100219>
- 11 Dey A, Nandy S, Mukherjee A & Modak B K, Sustainable utilization of medicinal plants and conservation strategies practiced by the aboriginals of Purulia district, India: a case study on therapeutics used against some tropical otorhinolaryngologic and ophthalmic disorders, *Environ Dev Sustain.*, 23 (4) (2021) 5576-5613. <https://doi.org/10.1007/s10668-020-00833-8>
- 12 Dhyani A Nautiyal B P & Nautiyal M C, Importance of Astavarga plants in traditional systems of medicine in Garhwal, Indian Himalaya, *Int J Biodiver Sci Ecosyst Serv Manag.*, 6 (1-2) (2010) 13-19. <https://doi.org/10.1080/21513732.2010.521490>
- 13 Dixit S K, Langstieh K C S & Abraham A, Integrating indigenous knowledge and rural tourism in Kongthong, the “whistling village” of India, *Worldw Hosp Tour Themes.*, 15 (1) (2023) 41-51. <https://doi.org/10.1108/WHATT-08-2022-0097>
- 14 Ghosh Tarafdar R, Nath S, Das Talukdar A & Dutta Choudhury M, Antidiabetic plants used among the ethnic communities of Unakoti district of Tripura, India, *J Ethnopharmacol.*, 160 (2015) 219-226. <https://doi.org/10.1016/j.jep.2014.11.019>
- 15 Ghosh-Jerath S, Singh A, Kamboj P, Goldberg G & Magsumbol M S, Traditional knowledge and nutritive value of indigenous foods in the oraoon tribal community of Jharkhand: An exploratory cross-sectional study, *Ecol Food Nutr.*, 54 (5) (2015) 493-519. <https://doi.org/10.1080/03670244.2015.1017758>
- 16 Gupta A K, Sinha R, Koradia D, Patel R, Parmar M, *et al.*, Mobilizing grassroots’ technological innovations and traditional knowledge, values and institutions: Articulating social and ethical capital, *Futures.*, 35 (9) (2003) 975-987. [https://doi.org/10.1016/S0016-3287\(03\)00053-3](https://doi.org/10.1016/S0016-3287(03)00053-3)
- 17 Habibullah Khan M & Yadava P S, Antidiabetic plants used in Thoubal district of Manipur, Northeast India, *Indian J Tradit Know.*, 9 (3) (2010) 510-514.
- 18 Haq S M, Khoja A A, Lone F A, Waheed M, Bussmann R W, *et al.*, Keeping healthy in your skin plants and fungi used by indigenous Himalayan communities to treat dermatological ailments, *Plants.*, 12 (7) (2023). <https://doi.org/10.3390/plants12071575>

- 19 Hassan M, Haq S M, Majeed M, Umair M, Sahito H A, *et al.*, Traditional food and medicine: ethno-traditional usage of fish fauna across the valley of Kashmir: A Western Himalayan region, *Diversity*, 14 (6) (2022). <https://doi.org/10.3390/d14060455>
- 20 Hazarika T K, Lalramchuana & Nautiyal B P, Studies on wild edible fruits of Mizoram, India used as ethno-medicine, *Genet Res Crop Evol*, 59 (8) (2012) 1767-1776. <https://doi.org/10.1007/s10722-012-9799-5>
- 21 Jan M, Mir T A, Ganie A H & Khare R K, Ethnomedicinal use of some plant species by gujjar and bakerwal community in gulmarg mountainous region of Kashmir Himalaya, *Ethnobot Res Appl*, 21 (2021). <https://doi.org/10.32859/ERA.21.38.1-23>
- 22 Kala C P, Indigenous uses, population density, and conservation of threatened medicinal plants in protected areas of the Indian Himalayas, *Conserv Biol*, 19 (2) (2005) 368-378. <https://doi.org/10.1111/j.1523-1739.2005.00602.x>
- 23 Kareti S R, Haran R H & Rajpoot V S, Diversity of ethnomedicinal plants among tribal communities in Anuppur District, Madhya Pradesh, Central India, *J Herbs Spices Med Plants*, 29 (1) (2023) 1-23. <https://doi.org/10.1080/10496475.2022.2084481>
- 24 Karunyal Samuel J & Andrews B, Traditional medicinal plant wealth of Pachalur and Periyur hamlets Dindigul district, Tamil Nadu, *Indian J Tradit Know*, 9 (2) (2010) 264-270.
- 25 Kawtikwar P S, Bhagwat D A, Dinesh & Sakarkar M, Deer antlers-traditional use and future perspectives, *Indian J Tradit Knowe*, 9 (2) (2010) 245-251.
- 26 Khan S, Masoodi T H, Islam M A, Wani A A & Gattoo A A, Ethnomedicinal study of wild plants used by fringe communities in Temperate Forests of Himalayan Kashmir, India. *Phytomedicine Plus*, 2 (2) (2022). <https://doi.org/10.1016/j.phyplu.2022.100251>
- 27 Khoja A A, Haq S M, Majeed M, Hassan M, Waheed M, *et al.*, Diversity, Ecological and Traditional Knowledge of Pteridophytes in the Western Himalayas. *Diversity*, 14 (8) (2022). <https://doi.org/10.3390/d14080628>
- 28 Kichu M, Malewska T, Akter K, Imchen I, Harrington D, *et al.*, An ethnobotanical study of medicinal plants of Chungtia village, Nagaland, India, *J Ethnopharmacol*, 166 (2015) 5-17. <https://doi.org/10.1016/j.jep.2015.02.053>
- 29 Kiewhuo P, Mozhui L, Kakati L N, Lirikum & Meyer-Rochow V B, Traditional rearing techniques of the edible Asian giant hornet (*Vespa mandarinia* Smith) and its socio-economic perspective in Nagaland, India, *J Insects Food Feed*, 8 (3) (2022) 325-335. <https://doi.org/10.3920/JIFF2021.0088>
- 30 Kosalge S B & Fursule R A, Investigation of ethnomedicinal claims of some plants used by tribals of Satpuda Hills in India, *J Ethnopharmacol*, 121 (3) (2009) 456-461. <https://doi.org/10.1016/j.jep.2008.11.017>
- 31 Kumar A, Kumar S, Komal Ramchiary N & Singh P, Role of traditional ethnobotanical knowledge and indigenous communities in achieving sustainable development goals, In *Sustainability (Switzerland)*, 13 (6) (2021). MDPI AG. <https://doi.org/10.3390/su13063062>
- 32 Kumari N, Radha Kumar M, Mekhemar M, Lorenzo J M, Pundir A, *et al.*, Therapeutic uses of wild plant species used by rural inhabitants of Kangra in the western Himalayan region, *South African J Bot*, 148 (2022) 415-436. <https://doi.org/10.1016/j.sajb.2022.05.004>
- 33 Lakshmi Poorna R, Mymoon M & Hariharan A, *Preservation and protection of traditional knowledge – diverse documentation initiatives across the globe*, 107 (8) (2014) <https://www.jstor.org/stable/24107164>
- 34 Lal M, Chandraker S K & Shukla R, Quantitative ethnobotanical study of therapeutic plants of Amarkantak hills in Achanakmar-Amakantak Biosphere Reserve, Central India, *Acta Ecol Sin*, 43 (1) (2023) 139-153. <https://doi.org/10.1016/j.chnaes.2022.03.002>
- 35 Mahalwal S & Kabra A, Indigenous knowledge and sustainability concerns in an era of climate change: the Sahariya Adivasi and salai trees (*Boswellia serrata*) in central India, *For Trees Livelihood*, 32 (1) (2023) 26-41. <https://doi.org/10.1080/14728028.2022.2164360>
- 36 Manohar R, Pushpan R & Rohini., Mustard and its uses in Ayurveda, In *Indian J Tradit Know*, 8 (3) (2009) p 400-404.
- 37 Medhi R P & Chakrabarti S, Traditional Knowledge of NE people on conservation of wild orchids, In *Indian J Tradit Know*, 8 (1) (2009) p. 17-22.
- 38 Mir T A, Jan M & Khare R K, Ethnomedicinal application of plants in Doodhganga forest range of district Budgam, Jammu and Kashmir, India, *Eur J Integr Med*, 46 (2021). <https://doi.org/10.1016/j.eujim.2021.101366>
- 39 Mir T A, Jan M & Khare R K, Ethnomedicinal practices and conservation status of medicinal plants in the Bandipora District of Kashmir Himalaya, *J Herbs Spices Med Plants*, 28 (2) (2022) 125-142. <https://doi.org/10.1080/10496475.2021.2014012>
- 40 Mishra H, Pandey B W, Mukwada G, De Los Rios P, Nigam N, *et al.*, Trapped within nature: climatic variability and its impact on traditional livelihood of Gaddi transhumance of Indian Himalayas, *Local Environ*, 28 (5) (2023) 547-563. <https://doi.org/10.1080/13549839.2022.2162025>
- 41 Mishra N, Rout S D & Panda T, Ethno-zoological studies and medicinal values of Similipal Biosphere Reserve, Orissa, India, *Afr J Pharm Pharmacol*, 5 (1) (2011) 6-11. <https://doi.org/10.5897/AJPP09.241>
- 42 Mozhui L, Kakati L N & Meyer-Rochow V B, Entomotherapy: a study of medicinal insects of seven ethnic groups in Nagaland, North-East India, *J Ethnobiol Ethnomed*, 17 (1) (2021). <https://doi.org/10.1186/s13002-021-00444-1>
- 43 Negi C S, Traditional culture and biodiversity conservation: Examples from Uttarakhand, Central Himalaya, *Mt Res Dev*, 30 (3) (2010) 259-265. <https://doi.org/10.1659/MRD-JOURNAL-D-09-00040.1>
- 44 Negi V, Maikhuri R, Pharswan D, Thakur S & Dhyani P, Climate change impact in the Western Himalaya: people's perception and adaptive strategies, *Science Press and Institute of Mountain Hazards and Environment*, 14 (2) (2017) 403-416.
- 45 Negi V S, Kewlani P, Pathak R, Bhatt D, Bhatt I D, *et al.*, Criteria and indicators for promoting cultivation and conservation of Medicinal and Aromatic Plants in Western Himalaya, India, *Ecol Indic*, 93 (2018) 434-446. <https://doi.org/10.1016/j.ecolind.2018.03.032>
- 46 Negi V S & Maikhuri R K, Socio-ecological and religious perspective of Agrobiodiversity conservation: Issues, Concern and priority for sustainable agriculture, central Himalaya, *J Agric Environ Ethics*, 26 (2) (2013) 491-512. <https://doi.org/10.1007/s10806-012-9386-y>

- 47 Negi V S, Maikhuri R K, Phondani P C & Rawat L S, An inventory of indigenous knowledge and cultivation practices of medicinal plants in Govind Pashu Vihar Wildlife Sanctuary, Central Himalaya, India, *Int J Biodivers Sci Ecosyst Serv Manag*, 6 (3-4) (2010) 96-105. <https://doi.org/10.1080/21513732.2011.575385>
- 48 Negi V S, Pathak R, Sekar K C, Rawal R S, Bhatt I D, *et al.*, Traditional knowledge and biodiversity conservation: a case study from Byans Valley in Kailash Sacred Landscape, India, *J Environ Plann Manag*, 61 (10) (2018) 1722-1743. <https://doi.org/10.1080/09640568.2017.1371006>
- 49 Negi V S, Pathak R, Thakur S, Joshi R K, Bhatt I D, *et al.*, Scoping the need of mainstreaming indigenous knowledge for sustainable use of bioresources in the Indian Himalayan Region, *Environ Manag*, 72 (1) (2023) 135-146. <https://doi.org/10.1007/s00267-021-01510-w>
- 50 Ningthoujam S S, Talukdar A Das, Potsangbam K S & Choudhury M D, Challenges in developing medicinal plant databases for sharing ethnopharmacological knowledge, In *J Ethnopharmacol*, 141 (1) (2012) p. 9-32. <https://doi.org/10.1016/j.jep.2012.02.042>
- 51 O'Neill A R, Badola H K, Dhyani P P & Rana S K, Integrating ethnobiological knowledge into biodiversity conservation in the Eastern Himalayas, In *J Ethnobiol Ethnomed*, 13 (1) (2017). BioMed Central Ltd. <https://doi.org/10.1186/s13002-017-0148-9>
- 52 Panda S K, Das R, Leyssen P, Neyts J & Luyten W, Assessing medicinal plants traditionally used in the Chirang Reserve Forest, Northeast India for antimicrobial activity, *J Ethnopharmacol*, 225 (2018) 220-233. <https://doi.org/10.1016/j.jep.2018.07.011>
- 53 Panda S K, Padhi L, Leyssen P, Liu M, Neyts J, *et al.*, Antimicrobial, anthelmintic, and antiviral activity of plants traditionally used for treating infectious disease in the Similipal Biosphere Reserve, Odisha, India, *Front Pharmacol*, 8 (10) (2017). <https://doi.org/10.3389/fphar.2017.00658>
- 54 Panda S K, Rout S D, Mishra N & Panda T, Phytotherapy and traditional knowledge of tribal communities of Mayurbhanj district, Orissa, India, *J Pharmacognosy Phytother*, 3 (7) (2011) 101-113. <http://www.academicjournals.org/jpp>
- 55 Pandey R, Kumar P, Archie K M, Gupta A K, Joshi P K, *et al.*, Climate change adaptation in the western-Himalayas: Household level perspectives on impacts and barriers, *Ecol Indic*, 84 (2018) 27-37. <https://doi.org/10.1016/j.ecolind.2017.08.021>
- 56 Pareek A & Trivedi P C, Cultural values and indigenous knowledge of climate change and disaster prediction in Rajasthan, India, In *Indian J Tradit Know*, 10 (1) (2011) p 183-189.
- 57 Pattanaik C, Reddy C S, Dhal N K & Das R, Utilisation of mangrove forests in Bhitarkanika wildlife sanctuary, Orissa, In *Indian Journal of Traditional Knowledge*, 7 (4) (2008) p 598-603.
- 58 Paul S & Chugh A, Assessing the role of Aayurvedic “Bhasms” as ethno-nanomedicine in the metal based nanomedicine patent regime, In *J Intellect Prop Rights*, 16 (2011).
- 59 Prakash P, Radha Kumar M, Kumari N, Prakash S, Rathour S, *et al.*, Therapeutic uses of wild plants by rural inhabitants of maraog region in district Shimla, Himachal Pradesh, India, *Hortic*, 7 (10) (2021). <https://doi.org/10.3390/horticulturae7100343>
- 60 Radha, Prakash S, Sharma N, Kumar A, Kumari N, *et al.*, A survey on ethnoveterinary medicines used by the tribal migratory shepherds of Northwestern Himalaya, *J Ethnopharmacol*, 296 (2022). <https://doi.org/10.1016/j.jep.2022.115467>
- 61 Rai A K, Palni U & Prakash Tamang J, Traditional knowledge of the Himalayan people on production of indigenous meat products, In *Indian Journal of Traditional Knowledge*, 8 (1) (2009) p 104-109.
- 62 Rajith N P, Navas M, Thaha A M, Manju M J, Anish N, *et al.*, A study on traditional mother care plants of rural communities of South Kerala, In *Indian Journal of Traditional Knowledge*, 9 (1) (2010) p. 203-208
- 63 Rana D, Bhatt A, Lal B, Parkash O, Kumar A, *et al.*, Use of medicinal plants for treating different ailments by the indigenous people of Churah subdivision of district Chamba, Himachal Pradesh, India, *Environ Dev Sustain*, 23 (2) (2021) 1162-1241. <https://doi.org/10.1007/s10668-020-00617-0>
- 64 Rao K S, Semwal R L, Maikhuri R K, Nautiyal S, Sen K K, *et al.*, Indigenous ecological knowledge, biodiversity and sustainable development in the central Himalayas, *Trop Ecol*, 44 (1) (2003) 93-111.
- 65 Rashid S, Pathan N A, Ahmad Jan H, Majeed L R & Nisar B, Study of perceptual attitude of resource limited Uri populace of District Baramullah toward traditional medicinal usage in the Kashmir Himalayas, *J Herbs Spices Med Plants*, 29 (2) (2023) 115-133. <https://doi.org/10.1080/10496475.2022.2111016>
- 66 Ray S, Weaving the links: Traditional knowledge into modern science, *Futures*, 145 (2023). <https://doi.org/10.1016/j.futures.2022.103081>
- 67 Ridwan Q, Wani Z A, Hanief M, Pant S, Shah A A, *et al.*, Indigenous knowledge and perception of local people towards biodiversity conservation in Rajouri District of Jammu and Kashmir, India, *Sustainability (Switzerland)*, 15 (4) (2023). <https://doi.org/10.3390/su15043198>
- 68 Rist L, Uma Shaanker R, Milner-Gulland E J & Ghazoul J, The use of traditional ecological knowledge in forest management: an example from India, (2010).
- 69 Roy M, Sarkar B C, Shukla G, Vineeta, Debnath M K, *et al.*, Traditional homegardens and ethnomedicinal plants: Insights from the Indian Sub-Himalayan region, *Trees, Forests People*, 8 (2022). <https://doi.org/10.1016/j.tfp.2022.100236>
- 70 Satya S, Bal L M, Singhal P & Naik S N, Bamboo shoot processing: food quality and safety aspect (a review), In *Trends Food Sci Technol*, 21 (4) (2010) p. 181-189. <https://doi.org/10.1016/j.tifs.2009.11.002>
- 71 Semwal D, Pardha Saradhi P, Kala C & Sajwan B, Medicinal plants used by local Vaidyas in Ukimath block, Uttarakhand, *Indian J Tradit Know*, 9 (3) (2010) 480-485.
- 72 Sen A & Ghosh P D, A note on the ethnobotanical studies of some pteridophytes in Assam, In *Indian Journal of Traditional Knowledge*, 10 (2) (2011) p 292-295.
- 73 Sen A & Nagendra H, ‘Songs of the Lake’: Understanding cultural expressions of nature through dwindling folk-songs and mythologies in Bengaluru, *South Asia: J South Asia Stud*, 46 (2) (2023) 283-302. <https://doi.org/10.1080/00856401.2023.2175968>

- 74 Sen S, Chakraborty R & De B, Challenges and opportunities in the advancement of herbal medicine: India's position and role in a global context, In *J Herb Med*, 1 (3-4) (2011) pp. 67-75). <https://doi.org/10.1016/j.hermed.2011.11.001>
- 75 Sen S, Chakraborty R, De B & Devanna N, An ethnobotanical survey of medicinal plants used by ethnic people in West and South district of Tripura, India, *J For Res*, 22 (3) (2011) 417-426. <https://doi.org/10.1007/s11676-011-0184-6>
- 76 Shanavaskhan A E, Sivadasan M, Alfarhan A H & Thomas J, Ethnomedicinal aspects of angiospermic epiphytes and parasites of Kerala, India, In *Indian J Tradit Know*, 11 (2) (2012) p 250-258.
- 77 Sharma A, Thakur D & Uniyal S K, Taboos: Traditional beliefs and customs for resource management in the western Himalaya, In *Indian J Tradit Know*, 20 (2) (2021) p 575-581.
- 78 Sharma G, Sharma R & Sharma E, Traditional knowledge systems in large cardamom farming: biophysical and management diversity in Indian mountainous regions, In *Indian J Tradit Know*, 8 (1) (2009) p 17-22.
- 79 Sharma J, Gaur R D, Gairola S, Painuli R M & Siddiqi T O, Traditional herbal medicines used for the treatment of skin disorders by the Gujjar tribe of Sub-Himalayan tract, Uttarakhand, In *Indian J Tradit Know*, 12 (4) (2013) p 736-746.
- 80 Sharma R, Sharma Y P, Hashmi S A J, Kumar S & Manhas R K, Ethnomycological study of wild edible and medicinal mushrooms in district Jammu, J&K (UT), India, *J Ethnobiol Ethnomed*, 18 (1) (2022). <https://doi.org/10.1186/s13002-022-00521-z>
- 81 Shil S, Dutta Choudhury M & Das S, Indigenous knowledge of medicinal plants used by the Reang tribe of Tripura state of India, *J Ethnopharmacol*, 152 (1) (2014) 135-141. <https://doi.org/10.1016/j.jep.2013.12.037>
- 82 Silori C S & Badola R, Medicinal plant cultivation and sustainable development, *Mt Res Dev*, 20 (3) (2000) 272-279. <https://doi.org/10.1659/0276>
- 83 Singh A, Lal M & Samant S S, Diversity, indigenous uses and conservation prioritization of medicinal plants in lahaul valley, proposed cold desert biosphere reserve, India, *Int J Biodivers Sci Manag*, 5 (3) (2009) 132-154. <https://doi.org/10.1080/17451590903230249>
- 84 Singh A, Nautiyal M C, Kunwar R M & Bussmann R W, Ethnomedicinal plants used by local inhabitants of Jakholi block, Rudraprayag district, western Himalaya, India, *J Ethnobiol Ethnomed*, 13 (1) (2017). <https://doi.org/10.1186/s13002-017-0178-3>
- 85 Singh A & Singh P K, An ethnobotanical study of medicinal plants in Chandauli District of Uttar Pradesh, India, *J Ethnopharmacol*, 121 (2) (2009) 324-329. <https://doi.org/10.1016/j.jep.2008.10.018>
- 86 Singh B, Borthakur S K & Phukan S J, A survey of ethnomedicinal plants utilized by the indigenous people of Garo hills with special reference to the nokrek biosphere reserve (Meghalaya), India, *J Herbs Spices Med Plants*, 20 (1) (2014) 1-30. <https://doi.org/10.1080/10496475.2013.819476>
- 87 Singh B, Singh B, Kishor A, Singh S, Bhat M N, *et al.*, Exploring plant-based ethnomedicine and quantitative ethnopharmacology: Medicinal plants utilized by the population of Jasrota Hill in Western Himalaya, *Sustainability (Switzerland)*, 12 (18) (2020). <https://doi.org/10.3390/su12187526>
- 88 Singh B, Sultan P, Hassan Q P, Gairola S & Bedi Y S, Ethnobotany, traditional knowledge, and diversity of wild edible plants and Fungi: A case study in the Bandipora District of Kashmir Himalaya, India, *J Herbs Spices Med Plants*, 22 (3) (2016) 247-278. <https://doi.org/10.1080/10496475.2016.1193833>
- 89 Singh H, Husain T, Agnihotri P, Pande P C & Khatoon S, An ethnobotanical study of medicinal plants used in sacred groves of Kumaon Himalaya, Uttarakhand, India, *J Ethnopharmacol*, 154 (1) (2014) 98-108. <https://doi.org/10.1016/j.jep.2014.03.026>
- 90 Singh K N & Lal B, Ethnomedicines used against four common ailments by the tribal communities of Lahaul-Spiti in western Himalaya, *J Ethnopharmacol*, 115 (1) (2008) 147-159. <https://doi.org/10.1016/j.jep.2007.09.017>
- 91 Singh R K, Pretty J & Pilgrim S, Traditional knowledge and biocultural diversity: Learning from tribal communities for sustainable development in northeast India, *J Environ Plann Manag*, 53 (4) (2010) 511-533. <https://doi.org/10.1080/09640561003722343>
- 92 Singh R K, Rallen O & Padung E., Elderly adi women of Arunachal Pradesh: "living Encyclopedias" and cultural refugia in biodiversity conservation of the Eastern Himalaya, India, *Environ Manag*, 52 (3) (2013) 712-735. <https://doi.org/10.1007/s00267-013-0113-x>
- 93 Smith B M, Basu P C, Chatterjee A, Chatterjee S, Dey U K, *et al.*, Collating and validating indigenous and local knowledge to apply multiple knowledge systems to an environmental challenge: A case-study of pollinators in India, *Biol Conserv*, 211 (2017) 20-28. <https://doi.org/10.1016/j.biocon.2017.04.032>
- 94 Srinivasan P, Subramaniyan V, Thilaka G K, Krishnasamy K, Jeyalachagan S, *et al.*, A survey on medicinal plant knowledge among the indigenous communities (Tamilians) in the delta regions of Tamil Nadu, India, *J Herbs Spices Med Plants*, 28 (1) (2022) 36-72. <https://doi.org/10.1080/10496475.2021.1962474>
- 95 Srivastava R C, Singh R K, Community A & Mukherjee T, Indigenous biodiversity of Apatani plateau: Learning on biocultural knowledge of Apatani tribe of Arunachal Pradesh for sustainable livelihoods. In *Indian J Tradit Know*, 9 (3) (2010) p 432-442.
- 96 Srivastava S K, Babu N & Pandey H, Traditional insect bioprospecting-As human food and medicine, In *Indian J Tradit Know*, 8 (4) (2009) p 485-494.
- 97 Subba Rao S, Indigenous knowledge organization: An Indian scenario, *Int J Inf Manag*, 26 (3) (2006) 224-233. <https://doi.org/10.1016/j.ijinfomgt.2006.02.003>
- 98 Sukumaran S, Sujin R M, Geetha V S & Jeeva S, Ethnobotanical study of medicinal plants used by the Kani tribes of Pechiparai Hills, Western Ghats, India, *Acta Ecol Sin*, 41 (5) (2021) 365-376. <https://doi.org/10.1016/J.CHNAES.2020.04.005>
- 99 Swiderska K, Argumedo A, Wekesa C, Ndalilo L, Song Y, *et al.*, Indigenous peoples' food systems and biocultural heritage: addressing indigenous priorities using decolonial and interdisciplinary research approaches, *Sustainability (Switzerland)*, 14 (18) (2022). <https://doi.org/10.3390/su141811311>
- 100 Tag H, Kalita P, Dwivedi P, Das A K & Namsa N D, Herbal medicines used in the treatment of diabetes mellitus in Arunachal Himalaya, northeast, India, *J Ethnopharmacol*, 141 (3) (2012) 786-795. <https://doi.org/10.1016/j.jep.2012.03.007>

- 101 Tangjang S, Namsa N D, Aran C & Litin A, An ethnobotanical survey of medicinal plants in the Eastern Himalayan zone of Arunachal Pradesh, India, *J Ethnopharmacol*, 134 (1) (2011) 18-25. <https://doi.org/10.1016/j.jep.2010.11.053>
- 102 Tarak D, Namsa N D, Tangjang S, Arya S C, Rajbonshi B, *et al.*, An inventory of the ethnobotanicals used as anti-diabetic by a rural community of Dhemaji district of Assam, Northeast India, *J Ethnopharmacol*, 138 (2) (2011) 345-350. <https://doi.org/10.1016/j.jep.2011.08.018>
- 103 Tushar Basak S, Sarma G C & Rangan L, Ethnomedical uses of Zingiberaceous plants of Northeast India, *J Ethnopharmacol*, 132 (1) (2010) 286-296. <https://doi.org/10.1016/j.jep.2010.08.032>
- 104 Vidyarthi S, Samant S S & Sharma P, Traditional and indigenous uses of medicinal plants by local residents in Himachal Pradesh, North Western Himalaya, India, *Int J Biodivers Sci Ecosyst Serv Manag*, 9 (3) (2013) 185-200. <https://doi.org/10.1080/21513732.2013.823113>
- 105 Vijendra N & Pavan Kumar K, Traditional knowledge on ethno-medicinal uses prevailing in tribal pockets of Chhindwara and Betul Districts, Madhya Pradesh, India, *Afr J Pharm Pharmacol*, 4 (9) (2010) 662-670. <http://www.academicjournals.org/ajpp>
- 106 Yadav S S, Singh M K, Hussain S, Dwivedi P, Khattri S, *et al.*, Therapeutic spectrum of piperine for clinical practice: a scoping review, In *Crit Rev Food Sci Nutr*, 63 (22) (2023) p. 5813-5840. Taylor and Francis Ltd. <https://doi.org/10.1080/10408398.2021.2024792>
- 107 Yonzan H & Tamang J P, Traditional processing of Selroti-A cereal based ethnic fermented food of the Nepalis, In *Indian Journal of Traditional Knowledge*, 8 (1) (2009) p 110-114.

 Appendix B — List of keywords in each clusters

Cluster No.	Cluster Name	Keywords in Cluster (No. of Keywords)
1	Western ghats	Western ghats, agroforestry, livelihoods, local ecological knowledge (04)
2	Culture	Culture, food security, tribals, Orissa, tribe (05)
3	Indigenous knowledge	Indigenous knowledge, conservation, India, biodiversity, Himalaya, sustainable development, northeast India, Uttarakhand, diversity, Himalayas, Rajasthan, folk medicine, Himachal Pradesh, Indian central Himalaya, livestock, bioprospecting, ethnopharmacology, folklore, healthcare, biological diversity, distribution, ethno-botany, ethnomedicine, ethnoveterinary practices, kumaonhimalaya, local communities, preservation, sacred grove, Tripura (29)
4	Odisha	Odisha, sacred groves, biodiversity conservation (03)
5	Intellectual property rights	Intellectual property rights, intellectual property, trips, convention on biological diversity, documentation, patent, access and benefit sharing, benefit sharing, cbd, traditional knowledge digital library (09)
6	Manipur	Manipur, traditional healers (02)
7	Utilization	Utilization (01)
8	Indigenous community	Indigenous community, wild edible plants (02)
9	Traditional ecological knowledge	Traditional ecological knowledge, indigenous communities (02)
10	Traditional knowledge	Traditional knowledge, medicinal plants, ethnomedicine, ethnobotany, Assam, ayurveda, livelihood, herbal medicine, ethnomedicinal plants, Kerala, western Himalaya, medicinal plant, Sikkim, herbal healers, tribes, genetic resources, Ladakh, traditional medicine, Uttar Pradesh, ethnobotanical survey, north East India, phytotherapy, rice (23)
11	Agriculture	Agriculture, genetic diversity (02)
12	Bundelkhand	Bundelkhand (01)
13	Climate change	Climate change, sustainability, local knowledge, adaptation, communication (05)
14	Indigenous	Indigenous, plant diversity, home gardens (03)
15	Patents	Patents (01)
16	Development	Development, ecology, knowledge (03)
17	Tamil Nadu	Tamil Nadu, indigenous people, ailments (03)
18	Entomophagy	Entomophagy (01)
19	Arunachal Pradesh	Arunachal Pradesh (01)
20	Geographical indication	Geographical indication (01)
21	Bioactive compounds	Bioactive compounds, nutrition (02)
22	Informant consensus factor	Informant consensus factor, fidelity level, use value (03)
23	Phytochemicals	Phytochemicals (01)
24	Resilience	Resilience (01)
25	Bellary	Bellary, Karnataka (02)
26	Jammu and Kashmir	Jammu and Kashmir (01)
27	Fermented food	Fermented food (01)

Appendix C — List of literatures for specific themes

Themes	Literatures
Theme 1: Recording of TK: Collation and Documentation	(V. S. Negi <i>et al.</i> , 2018),(Tangjang <i>et al.</i> , 2011), (Kumari <i>et al.</i> , 2022), (Chettri & Sharma, 2009), (K. N. Singh & Lal, 2008), (A. Singh & Singh, 2009), (Kosalge & Fursule, 2009), (Tushar <i>et al.</i> , 2010), (Tarak <i>et al.</i> , 2011), (Tag <i>et al.</i> , 2012), (Shil <i>et al.</i> , 2014), (H. Singh <i>et al.</i> , 2014), (Ghosh Tarafdar <i>et al.</i> , 2015), (Kichu <i>et al.</i> , 2015), (Panda <i>et al.</i> , 2018), (Radha <i>et al.</i> , 2022), (Anthwal <i>et al.</i> , 2010), (Sukumaran <i>et al.</i> , 2021), (Lal <i>et al.</i> , 2023), (Mir <i>et al.</i> , 2021), (Roy <i>et al.</i> , 2022), (Khan <i>et al.</i> , 2022), (Vijendra & Pavan Kumar, 2010), (Jan <i>et al.</i> , 2021), (Abdullah <i>et al.</i> , 2022), (B. Singh <i>et al.</i> , 2014), (Srinivasan <i>et al.</i> , 2022), (V. S. Negi <i>et al.</i> , 2010), (Panda <i>et al.</i> , 2011), (Kala, 2005), (A. Singh <i>et al.</i> , 2009), (Kareti <i>et al.</i> , 2023), (Hassan <i>et al.</i> , 2022), (Khoja <i>et al.</i> , 2022), (B. Singh <i>et al.</i> , 2016), (Mir <i>et al.</i> , 2022), (Panda <i>et al.</i> , 2017), (Kumari <i>et al.</i> , 2022), (Yonzan& Tamang, 2009), (Bhagya & Sridhar, 2009), (Rajith <i>et al.</i> , 2010), (Karunyal Samuel & Andrews, 2010), (R. C. Srivastava <i>et al.</i> , 2010), (Semwal <i>et al.</i> , 2010), (Habibullah Khan & Yadava, 2010), (A. Sen & Ghosh, 2011), (Shanavaskhan <i>et al.</i> , 2012), (Badola& Pradhan, 2013), (J. Sharma <i>et al.</i> , 2013), (A. Sharma <i>et al.</i> , 2021), (Rai <i>et al.</i> , 2009), (Dhyani <i>et al.</i> , 2010), (Mahalwal& Kabra, 2023), (Mozhui <i>et al.</i> , 2021), (Haq <i>et al.</i> , 2023), (R. K. Singh <i>et al.</i> , 2013), (V. S. Negi <i>et al.</i> , 2023), (Rana <i>et al.</i> , 2021), (Dey <i>et al.</i> , 2021), (Hazarika <i>et al.</i> , 2012), (V. S. Negi & Maikhuri, 2013), (S. Sen, Chakraborty, & De, 2011), (A. Singh <i>et al.</i> , 2017), (Mozhui <i>et al.</i> , 2021), (R. Sharma <i>et al.</i> , 2022), (Rashid <i>et al.</i> , 2023), (B. Singh <i>et al.</i> , 2020), (Ridwan <i>et al.</i> , 2023), (Vidyarathi <i>et al.</i> , 2013), (R. K. Singh <i>et al.</i> , 2010), (V. S. Negi, Pathak, <i>et al.</i> , 2018), (Ghosh-Jerath <i>et al.</i> , 2015).
Theme 2: Traditional Medicinal System (TMS)	(Singh B. <i>et al.</i> , 2014), (Kareti <i>et al.</i> , 2023), (Rana <i>et al.</i> , 2021), (Rana <i>et al.</i> , 2021), (B. Singh <i>et al.</i> , 2020), (A. Singh <i>et al.</i> , 2017) , (Vijendra & Pavan Kumar, 2010), (Sen <i>et al.</i> , 2011), (Dhyani <i>et al.</i> , 2010), (Silori & Badola, 2000), Kosalge & Fursule, 2009), (Kichu <i>et al.</i> , 2015), (Karunyal Samuel & Andrews, 2010), (Panda <i>et al.</i> , 2018), (Tag <i>et al.</i> , 2012), (Tarak <i>et al.</i> , 2011), (Srinivasan <i>et al.</i> , 2022), (Kala, 2005), Singh & Lal, (2008), Shanavaskhan <i>et al.</i> , (2012).
Theme 3: Environment and Sustainability	(H. Mishra <i>et al.</i> , 2023), (Negi <i>et al.</i> , 2018), (Rist <i>et al.</i> , 2010), (Ridwan <i>et al.</i> , 2023), (Kumar <i>et al.</i> , 2021), (O'Neill <i>et al.</i> , 2017), (Das <i>et al.</i> , 2023), (Dasgupta <i>et al.</i> , 2023), (Singh R.K. <i>et al.</i> , 2013), (Negi, C. S., 2010), (Sharma A. <i>et al.</i> , 2021), (Pareek & Trivedi, 2011), (Medhi & Chakrabarti, 2009), (Kala, 2005), (Rao, Semwal, <i>et al.</i> , 2003), (Silori & Badola, 2000), (Anthwal <i>et al.</i> , 2010), (Smith <i>et al.</i> , 2017), (Negi, Kewlani, <i>et al.</i> , 2018), (Pandey <i>et al.</i> , 2018).