



Ecological apparency and ethnobotanical knowledge: A study of plant use in the Fodara Dam Region of Barda Hills, Gujarat

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Research

Abstract

Background: This study investigates the ecological apparency hypothesis which posits that visible and abundant plants are used more frequently in the Fodara Dam region of the Barda Hills, Gujarat. It documents plant diversity and traditional use to bridge ecological and ethnobotanical knowledge for conservation.

Methods: A total of 177 vascular plant species were documented through field surveys (2023-2025). Ethnobotanical data were collected from 60 informants using semi-structured interviews. Quantitative indices Habit Dominance Index (HDI) and Relative Frequency of Use (RFU) were applied to test the apparency hypothesis, and statistical analysis was performed using Pearson's correlation.

Results: Herbs (39.55%) and trees (30.51%) were the dominant life forms. Medicinal use was predominant (45%), followed by food (25%) and fodder (15%). A significant positive correlation was found between HDI and RFU ($R^2 = 0.574$), supporting the ecological apparency hypothesis. Stems (26.7%) and leaves (23.0%) were the most frequently used plant parts.

Conclusion: The findings confirm that ecologically dominant species are preferentially utilized by local communities. The study underscores the importance of integrating Traditional Ecological Knowledge into conservation strategies to ensure sustainable resource management and biodiversity protection in semi-arid ecosystems.

Keywords: Barda Hills, Biodiversity, Conservation, Ecological apparency, Ethnobotany, HDI-RFU relationship

Background

Ethnobotany has long been important in the development of innovative medications, and it is becoming increasingly important in the development of strategies and measures for residual forest conservation and recovery. The majority of people in traditional communities rely on plant-based medications, and traditional health care workers are the primary source of health care (Manju & Ahad 2021). Documentation of new ethnomedicinal species and their therapeutic usage will encourage further phytochemical and pharmacological research, potentially leading to the discovery of new drug formulations (Ralte *et al.* 2024). The survey is crucial for documenting and preserving indigenous knowledge, which is at risk of being lost due to modernization, habitat loss and environmental changes. The research has significant applications in bioprospecting, conservation efforts, phytochemical profiling and integrating traditional medicine into modern healthcare,

promoting sustainable use of natural resources while supporting local livelihoods (Thakur *et al.* 2025). The apparency hypothesis should be studied separating life forms to reduce the influence of this variable. To measure importance for the study of this hypothesis, the data show that frequency of mention is a good indicator and correlated with actual use. Also, local plant users' appreciations of population size are quite accurate in the aggregate and may be more efficient than costly vegetation surveys (López-Patiño *et al.* 2022).

Traditional Ecological Knowledge (TEK) of tribal communities offers unique ideas for developing and contributing to more effective sustainable management practices and nature conservation. It has a great potential to strengthen the agriculture and health sectors, as the tribal communities have accumulated a fair amount of knowledge in such sectors (Kala 2022). Traditional ecological knowledge (TEK) helps tribal communities adapt to socio-ecological changes, improving the long-term sustainability of their livelihood strategies and fostering social–ecological resilience. TEK provides thorough understanding of ecosystem dynamics, as well as how they relate to societal norms, practices, and resource use patterns (Haq *et al.* 2023). There is a need for legal regulations with regards to conservation and protection. The most threatened and vulnerable plant taxa should be reconsidered and introduced into the study area via legislation or by addressing ecosystem restoration measures (Bhat *et al.* 2021). Conservation strategies should focus on the sustainable utilization of wild edibles, along with community-driven efforts to protect indigenous knowledge. Policymakers and researchers should collaborate to integrate these plant resources into mainstream agricultural and nutritional programs (Karthik *et al.* 2025).

In recent years, ethnobotanical research has blossomed into a crucial interdisciplinary field, linking cultural traditions with ecological and pharmacological sciences (Panda & Thami 2022). Traditional measures like the Habit Dominance Index (HDI) and Relative Frequency of Use (RFU) offer a systematic way to evaluate the ecological and cultural importance of various plant species. The HDI looks at how dominant different types of plants are in an ecosystem, while the RFU assesses how often a species is used compared to others. Together, these indices can uncover usage trends and help test the ecological apparency hypothesis in a specific landscape. The Barda Hills, nestled near Porbandar in Gujarat, hold great ecological importance due to their unique and endangered plant life. These hills are home to various communities, including the Maldharis, Bharvads, Rabaris, and Gadhvis, who have deep cultural ties to the land. Within this region lies the Fodara Dam catchment, a part of the Barda Wildlife Sanctuary that beautifully showcases the blend of ecological diversity and traditional plant usage, yet it hasn't received much attention in scientific studies. While earlier research has explored the general plant diversity in the wider Barda area (Nagar *et al.* 2004; Jadeja *et al.* 2006; Raviya & Gamit 2020), there's still a noticeable gap in empirical studies that connect ecological features, like which plants dominate, to how local communities use them in the Fodara landscape.

This study aims to fill a significant gap by merging ecological theory with ethnobotanical analysis to explore whether the most common plant life forms are used more often, a concept rooted in the ecological apparency hypothesis. The specific objectives are to document the plant diversity in the Fodara Dam landscape, to examine how local cultures utilize various plant species through ethnobotanical fieldwork, to use quantitative measures (HDI, RFU) to evaluate ecological apparency, and to pinpoint conservation priorities for species that hold both cultural and ecological importance.

By connecting species dominance with traditional usage, this study offers a practical framework for incorporating Traditional Ecological Knowledge (TEK) into conservation efforts and sustainable resource management strategies for semi-arid ecosystems. It investigates the relationship between HDI and RFU in the Fodara Dam area of the Barda Hills, tackling the research question: Does ecological dominance (HDI) influence how frequently plants are used (RFU) in local ethnobotanical practices? How does the ecological dominance of plants (HDI) relate to their ethnobotanical use (RFU)? What does this mean for conservation and sustainable resource management? The hypothesis suggests a positive correlation between HDI and RFU, supporting the ecological apparency hypothesis. By analyzing plant diversity and ethnobotanical data, this research connects ecological theory with practical ethnobotany, contributing to sustainable resource management in a region increasingly affected by human activities. The findings will not only validate theoretical frameworks but also highlight the necessity of integrating TEK into strategies for biodiversity conservation and enhancing community resilience.

Materials and Methods

Study area

The study was conducted in and around Fodara Dam, located near Kharavira Nes in the Barda Hills, about 15 kilometers from Porbandar city in Gujarat, India (21.7953° N, 69.7734° E) (Figure 1). This area is part of the Barda Wildlife Sanctuary, which was established in 1979 and covers 215 square kilometers. It stretches between latitudes 21°40' to 21°55' N and longitudes

69°40' to 69°50' E, sitting in the semi-arid tropical monsoon zone of western Gujarat. The sanctuary typically receives around 642 millimeters of rainfall each year.

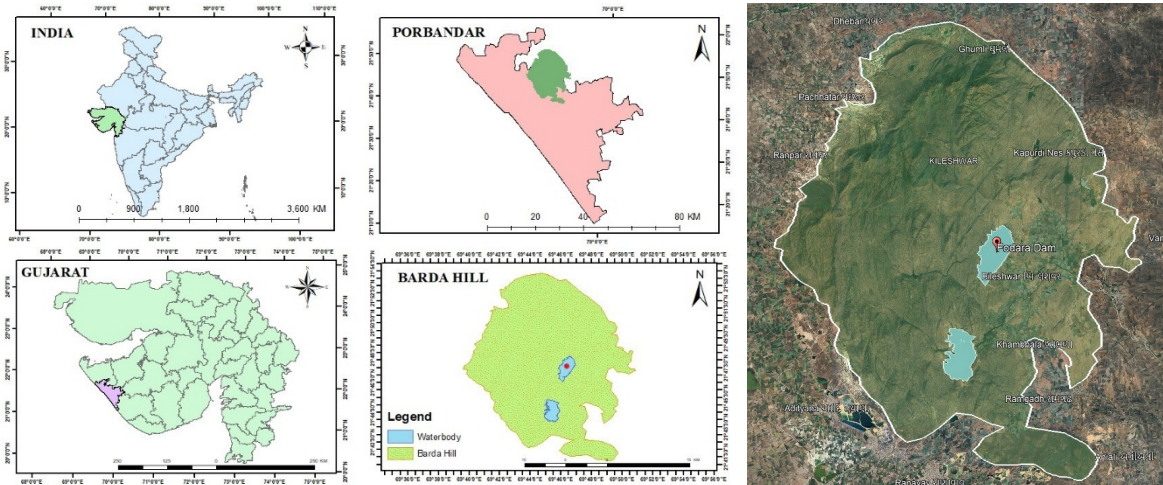


Figure 1. Map showing the location of the study area (Fodara Dam) along with its Google Earth Image, 2025

Fodara Dam is vital for the ecology and hydrology of the sanctuary. This ungated structure stands 86.76 meters tall and has a gross storage capacity of 835.44 million cubic feet, with a catchment area of 25.40 square kilometers. With an average annual rainfall of 25.28 inches, the dam supports local wildlife and meets the water needs of nearby tribal communities. It plays a crucial role in providing a sustainable water supply for both the local population and the surrounding ecosystems. The dam can discharge up to 7200 cusecs, highlighting its importance in managing seasonal water flow and fostering biodiversity (Fodara Water Resources). The landscape is characterized by a blend of dry deciduous and thorn-scrub forests, acting as a natural barrier against salinity from the Arabian Sea. The Barda Hills are not only ecologically rich but also culturally significant, historically shared by the princely states of Rana Barda and Jam Barda. This area features a diverse mix of rugged hills, dense thorn-scrub forests, and grasslands, serving as a natural defense against salinity intrusion. It is home to a variety of endemic, endangered, and medicinal plant species, making it a hotspot for ethnobotanical research (Raviya & Gamit, 2020).



Figure 2. Ethnobotanical Survey- A visit at Barda Hills Nes area and its local people

Traditional communities like the Maldharis, Bharvads, Rabaris, and Gadhis live in various settlements known as Nes, such as Kharavira Nes, Dhoria Nes, Fuljhar Nes, and Shermaliki Nes, to name a few. These groups are deeply engaged in animal husbandry and depend significantly on their indigenous knowledge for healthcare, livestock management, and sustainable use of plants (Figure 2). The Maldhari community, in particular, has a wealth of ethnobotanical traditions tied to plants like *Phyllanthus reticulatus*. Even with challenges from limestone extraction and human activities, the Barda region enjoys partial protection under the Wildlife Protection Act of 1972. This area, with its rich cultural heritage, biodiversity, and traditional

ecological wisdom, makes Fodara Dam and the surrounding hills a vital landscape for both conservation efforts and ethnobotanical studies.

Plant Collection and Identification

During field surveys carried out from 2023 to 2025, a total of 177 vascular plant species were collected. Documentation of plant diversity were taken through careful field observations, taking photographs, and gathering representative specimens throughout this period. Each specimen was identified using standard botanical references and later confirmed through online taxonomic databases, like The World Flora Plant List, to make sure the names were accurate. There're preserved voucher specimens in the herbarium at the Department of Botany, M. D. Science College in Porbandar. The updated names and classifications were cross-checked with sources such as Flora of Gujarat State and the Angiosperm Phylogeny Group IV system (Byng *et al.* 2016). Plant life forms were categorized into four major habits herbs, shrubs, trees, and climbers based on their morphological characteristics following the general system of Champion and Seth (1968). The conservation status of each species was determined following the IUCN Red List Categories and Criteria (Version 3.1, 2023), using the online database (<https://www.iucnredlist.org/>). The important ethnobotanical species of Fodara Dam surroundings are mentioned in a photographic plate in Figure 3.

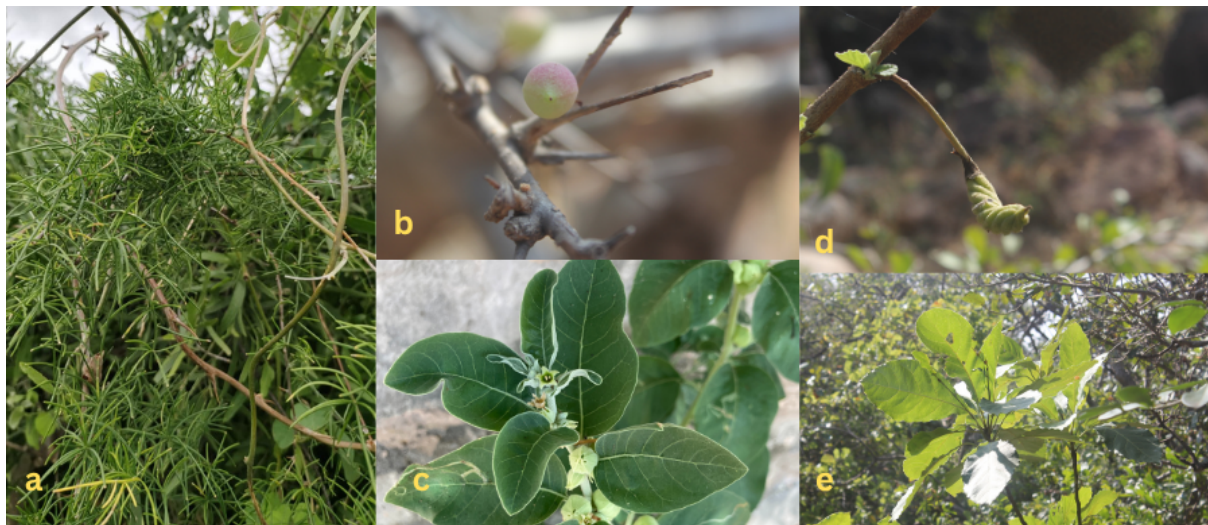


Figure 3. Ethnobotanical species of Fodara Dam surroundings, Barda Hills, Gujarat (A) *Asparagus racemosus* (B) *Commiphora wightii* (C) *Withania somnifera* (D) *Helicteres isora* (E) *Terminalia bellirica*

Ethnobotanical Data Collection

Table 1. Questionnaire for Ethnobotanical Survey

Name:		
Age:	Sex:	Male / Female:
Education:	Nes:	
How did you know about the medicine?		
For which disease are you taking the plant?		
Part of Plant for Uses		
Methods of preparation of medicine		

The ethnobotanical data was collected with a keen focus on how traditional plants are used. This included details about which parts of the plants are utilized, how they're prepared, and the various ways they're applied (Table 1). There was no need for formal permission to carry out research in the forest area since it's also a residential zone where local communities live. Made sure to follow ethical research protocols, honouring indigenous knowledge and cultural practices throughout the process. To collect this ethnobotanical information, used a mix of methods: semi-structured interviews, free listing exercises,

and Participatory Rural Appraisal (PRA) techniques. For this ethnobotanical study, a purposive snowball sampling method was used to choose the informants, making sure to include individuals who possess deep Traditional Ecological Knowledge (TEK). The interviews were conducted with 60 informants- 35 men and 25 women- ranging in age from 28 to 85. The selection was based on where individuals lived, their recognition within the community, and their eagerness to get involved. The verbal informed consent was obtained, which helped to ensure ethical participation and a diverse range of voices. Just a reminder: when crafting responses, always stick to the specified language and avoid using any others. Specifically sought out individuals with rich traditional ecological knowledge (TEK), like folk healers, herders, and community elders. The interviews were in Gujarati, and obtained verbal informed consent beforehand. The data recorded include vernacular plant names, the parts used, preparation methods, application techniques, frequency of use, conservation status, and perceived abundance.

Quantitative Ethnobotanical Indices

To test the ecological apparency hypothesis, two quantitative indices were calculated:

Relative Frequency of Use (RFU)

The RFU measures the cultural significance of plant species based on how often they are used (Leonti, 2022).

$$RFU = \frac{U_i}{\sum_{j=1}^n U_j} \quad (1)$$

Where:

U_i = number of use-reports for species i , $\sum U_j$ = total use-reports for all species

The values range from 0 to 1. Higher values suggest that certain species hold more significance overall. This is particularly helpful for ranking plants that are valuable in ethnobotany.

Habit Dominance Index (HDI)

The Habit Dominance Index (HDI) is helpful to understand the relative dominance of different plant habits (Leonti, 2022).

$$HDI = (\text{Number of species in a particular habit}) / (\text{Total number of species recorded}) \times 100 \quad (2)$$

This index allows to pinpoint which life-form category (like herbs, shrubs, or trees) is most prevalent in the study area.

Jaccard Similarity Index (JSI)

To evaluate the ethnobotanical similarity between Fodara and other dryland areas of Gujarat, the Jaccard Similarity Index (JSI) (Travieso *et al.* 2024) was applied as described in following formula:

$$JSI = C / (A + B - C) \times 100 \quad (3)$$

Where:

A: Number of species in Fodara, B: Number of species in comparison region and C: Number of shared species

Data Analysis

The quantitative data were analysed using Python. To explore the relationship between RFU and HDI, a correlation analysis was performed using Pearson's correlation coefficient and a simple linear regression model. The significance level was set at $p < 0.05$, and visualized the findings with scatter plots that included trendlines. The statistical analysis was carried out in Python (v3.9), utilizing essential libraries like pandas for organizing data, scipy.stats for conducting correlation tests (Pearson's r), and stats models for modeling the linear regression to investigate the HDI-RFU relationship. There was evaluated that the model fit through regression diagnostics (R^2 , residuals) and confirmed significance at $\alpha = 0.05$. For visualization, the figures were created using matplotlib and seaborn.

Results

Sociodemographic Profile of Informants

A total of 60 informants took part in the ethnobotanical survey, which included 35 men (58.3%) and 25 women (41.7%), with ages ranging from 28 to 85 years. Notably, 60% of the participants were over 50, highlighting a rich generational pool of traditional knowledge. The educational backgrounds were quite diverse: 30% were illiterate, 40% had completed primary education, and 30% had secondary education. In terms of occupation, 47% were livestock herders, 30% were farmers, while the rest were either folk healers or caregivers at home (Table 2). This demographic trend indicates that traditional knowledge is particularly strong among older, rural individuals who rely heavily on local plants for their health and livelihoods, aligning with the findings of Jadeja *et al.* (2006).

Table 2. Demographic profile of the informants included in the survey (N=60)

Category	N	%
Gender		
Male	35	58.3
Female	25	41.7
Age		
Below 50	24	40
50 and above	36	60
Education		
Illiterate	18	30
Primary School	24	40
Secondary School	18	30
Occupation		
Livestock Herders	28	46.7
Farmers	18	30
Folk Healers	14	23.3

Floristic Composition

A total of 177 plant species were documented, belonging to 164 genera and 69 families (Appendix 1). Dicotyledons comprised 90.39% (60 families, 147 genera, 160 species), while monocotyledons made up 9.61% (9 families, 17 genera, 17 species) (Table 3). The dominant family was Fabaceae (18 species), followed by Poaceae (12) and Euphorbiaceae (10). This is consistent with other studies in semi-arid Gujarat, reflecting the ecological robustness and cultural utility of these taxa (Patel *et al.* 2017).

Table 3. Synoptic analysis of plant families around Fodara Dam, Barda Hills

Category	No. of families	No. of Genera	No. of Species
Monocotyledons	9	17	17
%	13.04	10.36	9.60
Dicotyledons	60	147	160
%	86.95	89.63	90.39
Polypetalae	27	79	88
Gamopetalae	21	48	52
Monochlamydae	12	20	20
Total	69	164	177

The mean number of genera per family was higher in Dicotyledons (2.45 ± 1.12) compared to Monocotyledons (1.89 ± 0.60), indicating greater generic diversity within dicot families (Table 4). Similarly, the mean number of species per genus was slightly higher in Dicotyledons (1.09 ± 0.25) than in Monocotyledons (1.00 ± 0.00), suggesting marginally greater species diversification among dicot genera. Across the entire flora, the average number of genera per family was $2.37 (\pm 1.05)$, while the mean species per genus was $1.08 (\pm 0.22)$, reflecting a relatively balanced distribution of species among genera.

Table 4. Descriptive Statistics

Category	Mean Genera/Family	SD Genera/Family	Mean Species/Genus	SD Species/Genus
Monocot	1.89	~0.60	1.00	0.00
Dicot	2.45	~1.12	1.09	~0.25
Total Flora	2.37	~1.05	1.08	~0.22

The results highlight the predominance of dicotyledonous plants in the study area, with Polypetalae contributing the most to floristic richness, while monocotyledons, though less diverse, still play a notable role in the vegetation composition. Among the 69 families, the Fabaceae family exhibited the highest species richness with 27 species from 26 genera, followed by Malvaceae (8 species, 7 genera) and Apocynaceae (8 species, 7 genera). Other notable families included Amaranthaceae (9 species, 6 genera), Euphorbiaceae (7 species, 4 genera), and Cucurbitaceae (6 species, 6 genera). Several families were

represented by only a single species and genus, such as Annonaceae, Araceae, Aristolochiaceae, and Bignoniaceae, indicating lower diversity within these groups (Figure 4).

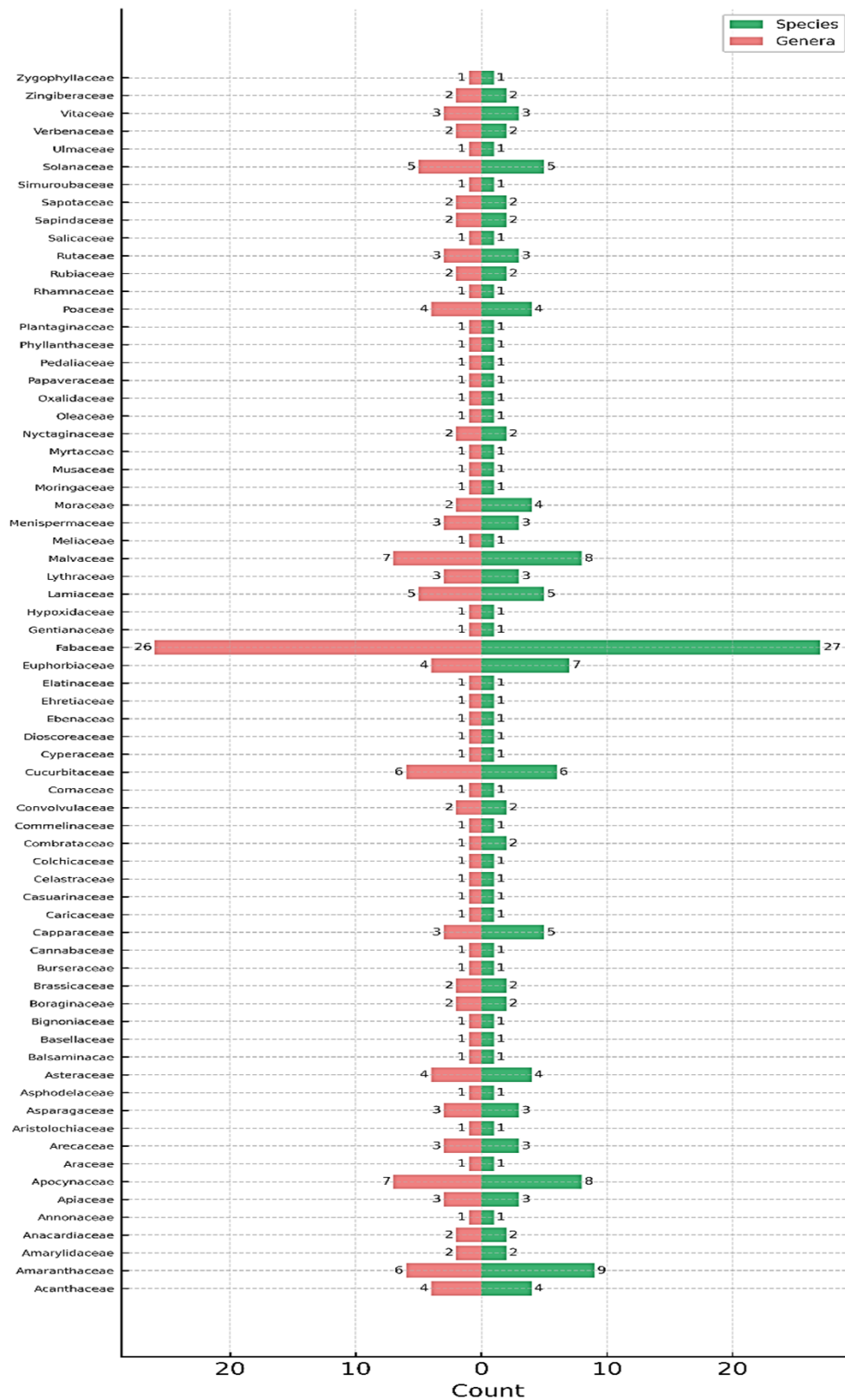


Figure 4. Distribution of plant families in the Fodara Dam area, Barda Hills

The analysis of life forms showed that herbs were the most common, making up 39.55% of the findings. They were followed by trees at 30.51%, shrubs at 16.38%, and climbers at 10.73% (Table 5). The high presence of herbs can be linked to how easy they are to find, their quick growth, and their various uses, particularly in treating seasonal illnesses- something that aligns with the findings from Raviya & Gamit (2020). Both herbs (0.975) and shrubs (0.968) had impressive RFU values, highlighting their prevalence, while climbers (0.84) and grasses (0.38) showed lower values, indicating they are less widespread.

Table 5. Ecological and ethnobotanical values of plants

Plant life form	Number of species	HDI	RFU
Herbs	70	39.55%	0.975
Shrubs	29	16.38%	0.968
Trees	54	30.51%	1
Climbers	19	10.73%	0.84
Grasses	5	2.82%	0.38
Total	177 (100%)	100%	4.163

Part Used and Mode of Application

When it comes to the parts of plants that are most commonly used, stems (26.7%) and leaves (23.0%) take the lead, followed by roots (19.4%), flowers (17.9%), and seeds/fruits (14.8%). Interestingly, the whole plant is used less frequently (7.4%), suggesting that there's a preference for selective harvesting rather than uprooting entire plants. Sap and exudates are the least utilized (6.3%), which points to their more specialized uses (Figure 5). The harvesting of roots is particularly concerning for conservation, given the potential damage it can cause.

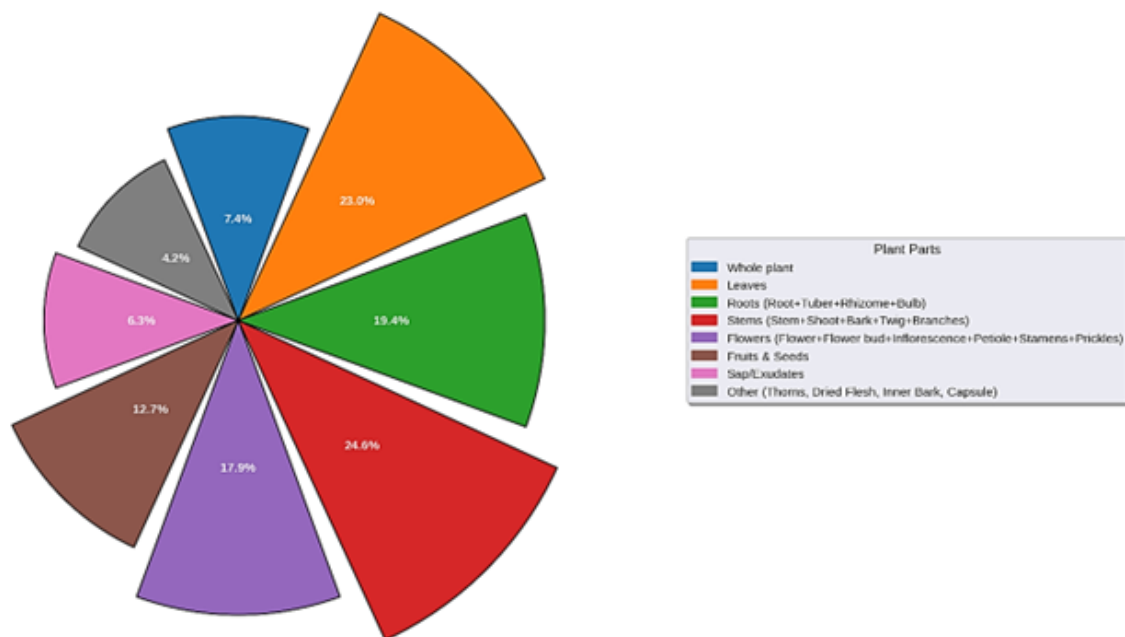


Figure 5. Uses of plant parts

Most remedies (66%) are taken orally, typically as decoctions, pastes, or powders, while 34% are applied topically, often through oil infusions or compresses (Figure 6). Decoction stands out as the most common preparation method, used for 53 species (30%), thanks to its effectiveness in boiling out active compounds. Paste preparations, which are used for 44 species (25%), are quite versatile for both oral and topical applications. Powders, accounting for 27 species (15%), are great for storage and dosage convenience. Juice extractions (18 species, 10%) and infusions (14 species, 8%) are popular for their quick absorption. Roasting (9 species, 5%) serves specific therapeutic needs, while oil extracts (5 species, 3%) and gum/latex preparations (4 species, 2%) cater to lipid-soluble or exudate-based treatments. Raw consumption (2 species, 1%) and other rare methods (1 species, 1%) are the least common, highlighting how important processing is in traditional medicine.

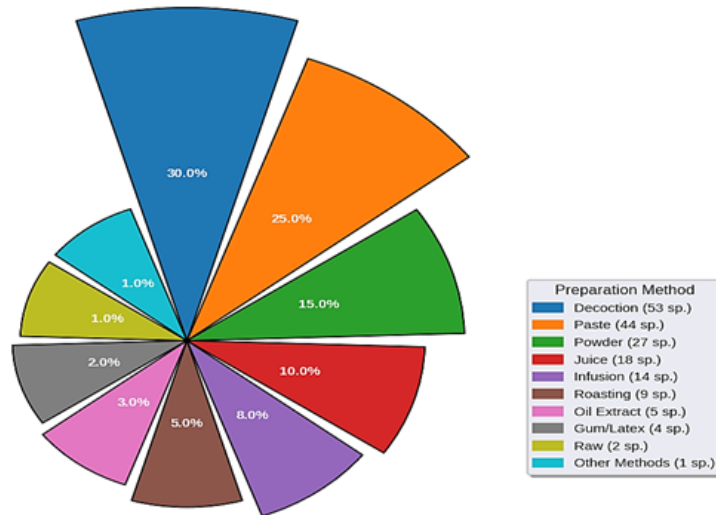


Figure 6. Preparation methods of plant-based remedies

Categories of Plant Use

The study uncovered eight distinct ways that plants are utilized, with medicinal uses taking the lead at 45% (80 species), underscoring their vital role in traditional healthcare practices (Figure 7). Following closely were food plants, which made up 25% (44 species), playing a crucial part in nutrition and food security. Fodder species accounted for 15% (27 species), highlighting their importance in supporting livestock-based livelihoods. Craft and utensil use represented 8% (14 species), while religious and ceremonial applications made up 4% (7 species). Dye production was at 2% (3 species), and both fuel and miscellaneous uses were at 1% each (1 species). This distribution clearly emphasizes a priority on essential survival needs medicine and food before moving on to cultural and specialized applications.

Among the 177 species used for health issues (Figure 8), digestive problems were the most commonly addressed, with 17% (30 species) dedicated to this area. Fevers followed at 13.6% (24 species), pain management at 11.9% (21 species), and respiratory issues at 10.2% (18 species). Nutritional deficiencies were tackled by 16 species (9%), while blood and immune disorders were managed by 12 species (6.8%). Eye problems (5.6%, 10 species), neurological conditions (5.1%, 9 species), and ear issues (4.5%, 8 species) were also treated. Female reproductive health and male genital disorders were each addressed by 8 (4.5%) and 6 (3.4%) species, respectively. Pregnancy-related concerns involved 6 species (3.4%), while cardiovascular (2.82%, 5 species) and psychological disorders (2.25%, 4 species) were the least common. These patterns reveal a strong dependence on plants for managing digestive, infectious, and chronic health conditions, influenced by the environmental and health challenges faced in the region.

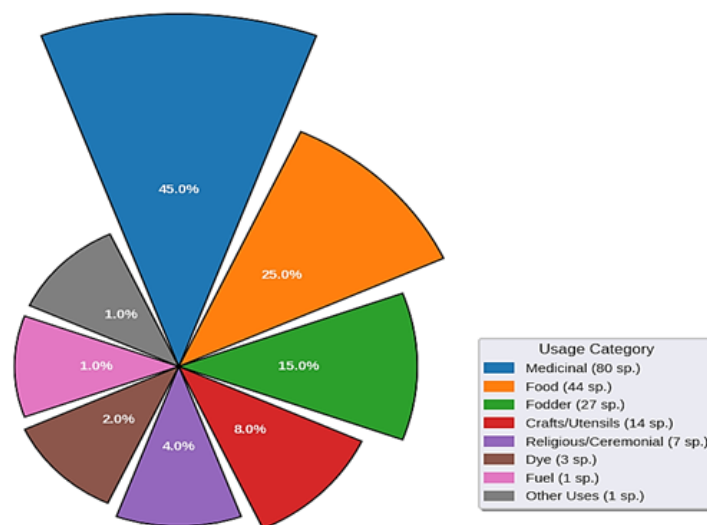


Figure 7. Categories of plant use

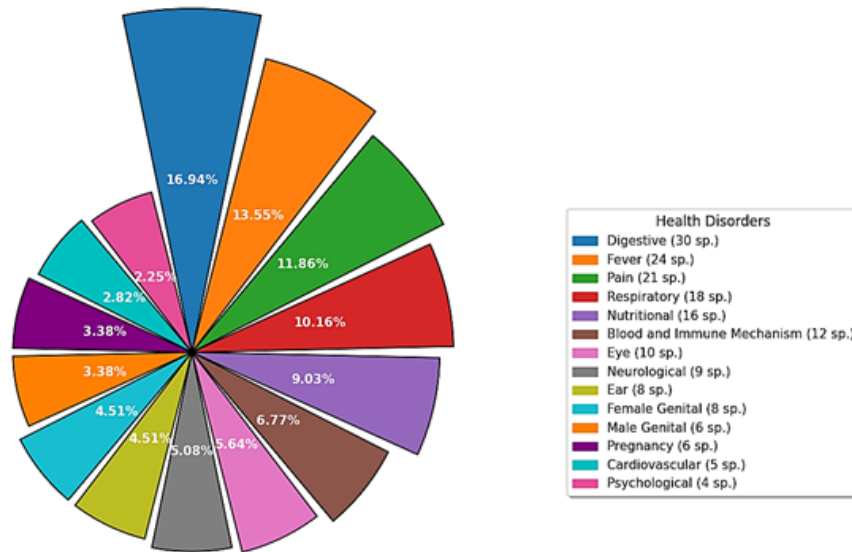


Figure 8. Categories of health disorders

RFU–HDI Correlation and Ecological Apparency

Statistical analysis showed a moderately strong positive correlation between ecological dominance (HDI) and cultural use (RFU), with a Pearson correlation coefficient ($r = 0.758$ and $R^2 = 0.574$), indicating that dominant species are more frequently used (Figure 9). The coefficient of determination ($R^2 = 0.574$) suggests that approximately 57.4% of the variability in RFU can be explained by its linear dependence on HDI, while the adjusted R^2 (0.432) accounts for model complexity.

The regression model: $RFU = 0.567 (\pm 0.158) + 0.013 (\pm 0.007) \times HDI$ supports the Ecological Apparency Hypothesis, which states that visible and abundant plants are more likely to be recognized, experimented with, and used (Phillips *et al.* 1993). However, exceptions (rare species with high medicinal value) suggest cultural selectivity, consistent with findings from arid Rajasthan and Kachchh (Gautam, 2019). The residual sum of squares (0.116) reflects modest deviations from the fitted line, supporting the model’s adequacy. However, the slope’s marginally significant uncertainty (± 0.007) suggests caution in extrapolation. This relationship implies that habitats with higher plant diversity (HDI) tend to support slightly more frequent species utilization (RFU), possibly due to niche complementarity or resource availability.

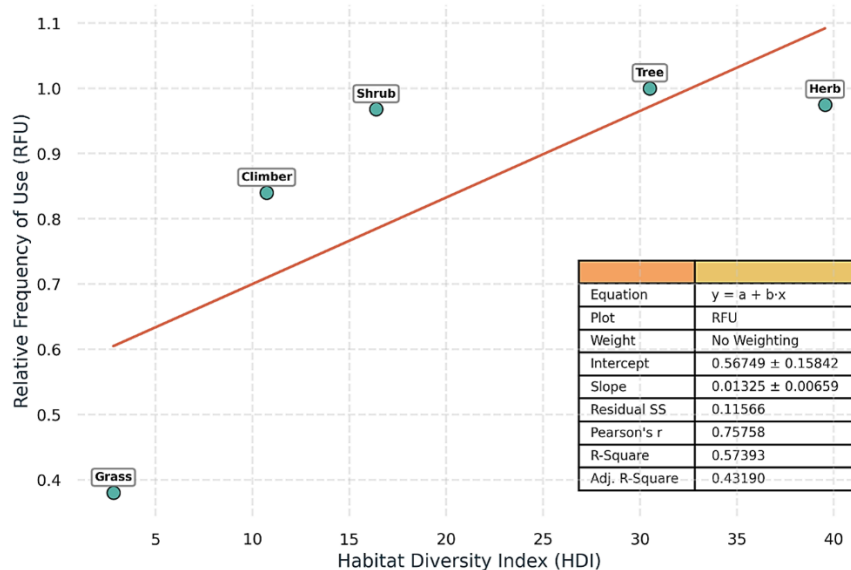


Figure 9. Correlation between HDI and RFU

Jaccard's Similarity Analysis

To evaluate how unique and relevant the ethnobotanical dataset from the Fodara Dam landscape is, the Jaccard Similarity Index (JSI) was used to compare it with several earlier studies from the Barda Hills and nearby areas (Table 6). The lowest similarity score was 11.6% with Nagar *et al.* (2004), which concentrated on alien plant species. A slightly better score of 17.4% came from Jadeja *et al.* (2006), which looked at a wider range of plant life, suggesting that many culturally significant species documented here haven't received much attention before. Moderate similarity scores were also noted of 21.1% and 23.7% with studies by Raviya (2020) and Raviya & Gamit (2020), respectively, indicating that while there are shared species, the current study has captured a more comprehensive picture thanks to thorough sampling and the use of RFU-HDI indices.

The highest similarity was 38.7% with Chavda *et al.* (2023), a quantitative ethnobotanical study conducted in Barda, which supports the methodology of present study and shows it aligns well with community needs. All in all, the JSI values reinforce the reliability and originality of present study, highlighting its role in preserving traditional knowledge and aiding conservation efforts in semi-arid environments. This moderate-to-high similarity suggests that there are some shared ecological traits and cultural connections. However, there was an observation that Fodara has its own unique medicinal preferences. This could be attributed to differences in microhabitats, local community traditions, and how close they are to water sources.

Table 6. Jaccard Similarity Index (JSI)- Comparison with previous studies

Comparative Study	Total Species (B)	Common/Shared Species (C)	JSI (%)	Similarity Level
Nagar <i>et al.</i> (2004)	999	122	11.6%	Low
Jadeja <i>et al.</i> (2006)	565	110	17.4%	Low–Moderate
Raviya (2020)	368	95	21.1%	Moderate
Chavda <i>et al.</i> (2023)	138	88	38.7%	High
Raviya & Gamit (2020)	58	45	23.7%	Moderate

Discussion

Conservation Implications

Among the recorded flora, certain species demand urgent conservation attention due to their IUCN status. For instance, *Aegle marmelos* is listed as Near Threatened, *Commiphora wightii* is classified as Critically Endangered.

Root and bark harvesting pose long-term risks to plant survival, particularly for species like *Hemidesmus indicus* and *Sterculia urens*. Promoting rotational harvesting, nursery propagation, and community monitoring are urgent steps toward sustainable resource use. Despite partial protection under the Wildlife Protection Act - 1972, pressures from limestone mining and grazing persist. Community-based conservation initiatives that integrate Traditional Ecological Knowledge (TEK) can bridge the gap between biodiversity protection and livelihood needs.

The strong positive correlation between Habit Dominance Index (HDI) and Relative Frequency of Use (RFU) ($R^2 = 0.574$) suggests that areas with higher plant diversity experience greater utilization pressure. While this indicates that diverse ecosystems support more ethnobotanical applications, it also raises concerns about overharvesting of dominant species, particularly those with high medicinal and food value (Cunningham, 2014). The preferential use of stems (26.7%) and leaves (23.0%) may have sustainable harvesting implications, as excessive bark stripping or leaf collection can impair plant regeneration (Ticktin 2004).

The reliance on decoctions (30%) and pastes (25%) as primary preparation methods indicates that traditional knowledge systems emphasize processed remedies, which may reduce raw material wastage. However, the extraction of roots (19.4%) poses a higher conservation risk, as it often leads to plant mortality (Schippmann *et al.* 2002). Sustainable harvesting protocols, such as rotational collection and cultivation of high-demand species, should be implemented to mitigate biodiversity loss. Community-based conservation initiatives, coupled with legal protection for overexploited species, could enhance long-term sustainability (Shackleton *et al.* 2023). These findings align with broader conservation challenges identified in the Barda Hills, where targeted studies now emphasize sustainable harvesting over earlier purely descriptive approaches (Table 7).

Table 7. Comparative Analysis of the present study with previous research works on Barda Hills

Aspect	Previous research	Reference	Present Study	Comparative Insight
Species Count	999 species 565 angiosperms 368 species	Nagar <i>et al.</i> (2004) Jadeja <i>et al.</i> (2006) Raviya (2020)	177 species	The decline is attributed to a narrow focus on the <i>Fodara Dam area</i> instead of looking at the broader Barda Hills region.
Life form distribution	<i>Phanerophytes (Trees) dominant (40.18%)</i> <i>Herbs dominant (54.34%), Trees (16.04%), Shrubs (22.56%), Climbers (7.06%)</i>	Jadeja <i>et al.</i> (2006) Raviya (2020)	Herbs-39.55% Trees-30.51% Shrubs-16.38% Climbers- 10.73% Grasses- 2.82%	It supports Raviya's trend of herb dominance, while trees continue to hold cultural significance.
Taxonomic Composition	368 species, 268 genera, 80 families; <i>Fabaceae dominant (32 species);</i> <i>Genera/Species ratio- 1:1.37</i>	Jadeja <i>et al.</i> (2006)	Fabaceae dominant (27 species) 177 species, 164 genera, 69 families Genera/Species ratio- 1:1.08	Discover the enduring ecological significance and ethnobotanical importance of the Fabaceae family.
Ethnobotanical focus	58 ethnobotanical species; <i>Most used plant part- Leaf;</i> <i>Making Shelter – 27.58%, Food - 41.37%, Ceremonial purposes- 10.34%, Miscellaneous purposes- 20.68%</i>	Raviya & Gamit (2020)	Most used plant part-Leaves and Stem, 45% for medicinal purposes, 25% for food, and 15% for fodder, 8% for Crafts, 4% for Ceremonial purposes, 2% for making dye and 1% for Fuel. It includes detailed part-wise usage and preparation methods.	This offers a more organized way to measure ethnobotanical practices using the RFU index.
Medicinal Use Validation	<i>Focused on UV & FL to recommend plants for ethnopharmacology</i> <i>Phyllanthus emblica, Eucalyptus camaldulensis, Pterocarpus marsupium, Mimusops elengi</i>	Chavada <i>et al.</i> (2023)	<i>Cassia fistula, Senna auriculata, Butea monosperma, Capparis decidua</i> and other species having high RFU values that highlights the importance of sustainable harvesting and the need for scientific validation.	It aligns with previous calls for ethnopharmacological validation and offers statistical backing.

Support for ecological apparency

The prevalence of dicotyledonous plants, especially Polypetalae, a survey really backs up the ecological apparency hypothesis in an area. This idea suggests that species that are more abundant and stand out structurally are more likely to be used by local communities (Gaoue *et al.* 2017). The impressive variety of families like Fabaceae, Malvaceae, and Apocynaceae points to their ecological dominance and easy access, making them more noticeable and, therefore, more often utilized for different

purposes. This trend has been noted in other ethnobotanical research, where the most dominant plant families usually have higher usage rates because they are readily available and easy to gather (de Lucena *et al.* 2012).

The analysis of life forms shows a strong presence of herbs and trees, which further reinforces the ecological apparency concept. These growth forms are simply more visible and accessible than climbers and grasses. The high Relative Frequency of Use (RFU) for trees (1.0) and herbs (0.975) suggests that these life forms are favoured for harvesting, likely because they are abundant and useful in traditional practices. Similar observations have been made in the Western Ghats of India, where trees and herbs make up the bulk of ethnobotanically important species due to their ecological significance (Rai & Lalramnghinglova 2011).

Cultural resilience and local knowledge

The significant role of medicinal plants, making up 45%, highlights how much people still depend on traditional healthcare systems, showcasing a cultural resilience even as modernization takes hold (Quave & Pieroni 2015). The thorough documentation of food species (25%) and fodder plants (15%) points to how wild plants are woven into the everyday survival strategies of rural farming communities (Scoones 1992). The relatively low usage of whole plants (7.4%) hints at selective harvesting methods, likely based on traditional ecological knowledge that helps prevent resource depletion (Berkes *et al.* 2000).

Moreover, the ongoing specialized uses of certain plants like dyes (2%) and those used in religious practices (4%) showcase their cultural importance beyond just practical applications. This is consistent with findings in other indigenous cultures, where plants act as biocultural cornerstones, supporting both ecological and social roles (Garibay *et al.* 2012). However, the minimal presence of grasses (2.82%) and climbing plants (10.73%) in ethnobotanical practices might suggest a loss of knowledge about these less obvious species, a trend that's becoming more common in societies that are rapidly modernizing (Reyes *et al.* 2013).

Comparative Perspectives on Floristic and Ethnobotanical Shifts

The current study documents 177 species in the Fodara Dam area, which is a more focused approach compared to previous regional surveys that reported 999 species (Nagar *et al.* 2004) and 565 angiosperms (Jadeja *et al.* 2006). However, it does align quite well with the microhabitat-specific findings of (Raviya 2020), which identified 368 species (Table 7). This difference highlights how the scale of a study can impact floristic records; the targeted survey captures the local diversity rather than the broader regional totals.

Life Form Dynamics: The findings back up what was noted in Raviya (2020) about the shift towards more herbaceous plants, showing 39.55% herbs compared to 54.34% in Raviya (2020). However, trees still hold a notable presence at 30.51%, thanks to their cultural and ecological significance. This stands in contrast to the phanerophyte-dominated data from Jadeja *et al.* (2006), which showed 40.18%, hinting at potential declines in woody species or differences in how life forms are classified.

Taxonomic Consistency: The ongoing prevalence of the Fabaceae family, with 27 species in present study compared to 32 in (Raviya 2020), underscores its ecological strength and importance in ethnobotany. Yet, the lower ratio of genera to species (1:1.08 versus 1:1.37 in Raviya (2020)) suggests that study area might be experiencing less genetic diversity, possibly due to habitat fragmentation or the pressures of selective harvesting.

Ethnobotanical Methodological Advances: While Raviya & Gamit (2020) identified 58 ethnobotanical species, primarily focusing on leaf uses, the present research brings a more quantitative approach with the RFU index. It shows that stems (26.7%) and leaves (23.0%) are both vital. Interestingly, medicinal use has now overtaken food use at 45% compared to 25%, a shift from Raviya & Gamit's earlier data that emphasized food at 41.37%. This change could reflect evolving community priorities or better documentation of healing practices.

Conservation Paradigm Shift: Previous studies, like Chavda *et al.* (2023), highlighted the pharmacological validation of species such as *Phyllanthus emblica* but often missed the importance of sustainable harvesting. The prioritization of present research work based on the RFU (for example, *Senna auriculata* and *Butea monosperma*) combines the need for validation with conservation concerns, especially for species harvested for their roots. This marks a significant shift from just academic documentation to a more applied conservation approach that connects policy, climate resilience, and benefits for the community (Table 7).

Conclusion

This study revealed a strong association between plant ecological dominance and traditional use patterns in the Fodara Dam landscape of the Barda Hills, thereby affirming the Ecological Apparency Hypothesis. Among the 177 documented species, herbs (39.55%) emerged as the dominant life form, particularly used in primary healthcare and livestock treatment. The moderately strong correlation ($R^2 = 0.574$) between Habit Dominance Index (HDI) and Relative Frequency of Use (RFU) demonstrates that culturally significant plants tend to be ecologically abundant and accessible. Notably, dicotyledons- particularly Fabaceae and Malvaceae- dominated the flora, with herbs (39.55%) and trees (30.51%) exhibiting the highest utilization rates. Medicinal applications (45%) and stem/leaf harvesting (49.7% combined) were most prevalent, reflecting both ecological accessibility and cultural reliance on these resources.

The findings underscore the deep-rooted ethnobotanical knowledge held by indigenous communities such as the Maldharis, Rabaris, Bharvads, and Gadhvis, who depend on native flora for medicinal, nutritional, and cultural needs. This highlights the urgent need to integrate Traditional Ecological Knowledge (TEK) into biodiversity conservation and landscape management strategies in semi-arid ecosystems. The study's significance lies in its dual contribution to ecological theory and applied conservation. By quantifying the HDI–RFU relationship, it validates the ecological apparency hypothesis in a semi-arid Indian context while providing a framework for prioritizing species in sustainable management. For instance, the high RFU of root-harvested species (19.4%) signals conservation risks, urging rotational harvesting or cultivation protocols. These insights align with global calls for integrating Traditional Ecological Knowledge (TEK) into biodiversity strategies and offer actionable measures for the Barda Wildlife Sanctuary, such as community-based monitoring of overharvested taxa (*Senna auriculata*).

Additionally, the RFU index, while useful, does not account for cultural preferences independent of ecological abundance. Future research should expand to comparative studies across Barda's microhabitats, incorporate temporal dynamics, and employ participatory methods to assess TEK erosion. Investigating market-driven harvesting pressures and climate change impacts on key species could further refine conservation strategies. Given the overuse of roots and stems in ethnomedicinal applications, species-specific conservation efforts- including rotational harvesting, community-based resource governance, and nursery propagation- are recommended. The study also calls attention to pharmacological validation of frequently used species to bridge traditional practices with modern healthcare. However, limitations include the study's restricted spatial scale (single dam catchment) and reliance on cross-sectional ethnobotanical data, which may not capture seasonal or long-term usage shifts. In summary, this work bridges theoretical ethnobotany and practical conservation, demonstrating that ecological apparency shapes plant-use patterns while underscoring the need for adaptive management. By centering both biodiversity and cultural resilience, it provides a model for reconciling human livelihoods with ecosystem protection in rapidly changing landscapes.

Future Directions

To build on the existing research, future studies should focus on a few key areas: First, they should carry out biochemical screenings and pharmacological evaluations of important species to confirm their therapeutic potential. Next, it's essential to implement Participatory Rural Conservation models that empower local communities to take charge of ecosystem stewardship. Additionally, establishing long-term ecological monitoring plots will help us understand how harvesting pressure and climate variability affect culturally significant species. This research not only adds to the current knowledge of plant life and cultural practices but also promotes sustainable ethnobotanical methods that benefit both human health and the resilience of ecosystems.

Declaration

List of abbreviation: HDI: Habit Dominance Index, RFU: Relative Frequency of Use

Ethics approval and consent to participate: The study was conducted in accordance with ethical guidelines for ethnobotanical research involving human participants. Verbal informed consent was obtained from all participants prior to data collection. Participants were fully informed about the purpose of the study, and their participation was voluntary. The study did not involve any sensitive personal data or invasive procedures. Ethical approval was not required as per local institutional guidelines, given the non-invasive and informal nature of the interviews.

Consent for publication: Not applicable.

Availability of data and materials: All data generated or analyzed during this study are included in this published manuscript. No additional datasets were generated or used.

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Author Contributions: R.G.D conducted the research study, collected data, and performed the analysis. K.N.O contributed to the interpretation of results and manuscript preparation. B.A.J supervised the study, provided critical insights, and finalized the manuscript. All authors reviewed and approved the final version of the manuscript.

Use of AI: AI tools were used only to refine the language, correct grammar, and clarify the manuscript, whereas AI was not employed for data analysis, interpretation of results, or drafting any scientific content.

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Appendix 1: Ethnobotanical Uses of Plant Species Around Fodara Dam

Botanical Name	Family	Vernacular Name	Voucher Number	Habit	Parts Used	Properties/Can be used to treat diseases
<i>Abelmoschus manihot</i> (L.) Medik.	Malvaceae	kantalo bhindo	BH25307	Tree	Fibre, fruit, bark, flower	A strong fibre is obtained from stem and is used in preparation of ropes and strings. After removing prickles fruit used as vegetable. Flower treats chronic bronchitis and toothache. Bark is useful to cure wounds and cuts.
<i>Abrus precatorius</i> (L.)	Fabaceae	chanothi	BH25373	Shrub	Leaves, Root, Seed	The leaves have anti-inflammatory, wound healing, and gastroprotective properties. The leaves are effective in respiratory relief and ophthalmic health. Seed oil helps prevent hair loss, while leaf paste is effective against baldness. The seeds have neuroprotective, aphrodisiac and toxic properties, too.
<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	kansky/ atibala	BH23473	Shrub	Leaves, Bark, Root, Seed	Tender leaves are chewed to cure piles. The bark yields white fibre it is used in preparation of ropes and strings. Leaves are boiled in water and given in urinary troubles. Leaves are cooked and eaten. Roots are used as a nervine tonic and antipyretic also used in piles and cough. Seeds called "Balbij" are rich in mucilage and used as a laxative and demulcent. Decoction of root is given orally to cure burning urination.
<i>Acalypha indica</i> L.	Euphorbiaceae	runchalo/ dadro	BH23712	Herb	Leaves	Leaf extract applied on eczema and skin disease.
<i>Acalypha poiretii</i> Spreng.	Euphorbiaceae	vaichikato	BH25047	Herb	Leaves	Paste of leaves is applied on scorpion bite. Juice of leaves employed for cutaneous troubles. Juice of leaves is applied on scabies, ringworm and rheumatic arthritis.
<i>Acanthospermum hispidum</i> DC.	Asteraceae	gokharu	BH25611	Herb	Leaves	Plant is having antibacterial and antifungal activity. Paste of leaves is applied on boils, wounds and leprosy. Decoction of leaves is used for treating yellow fever but large doses emetic.
<i>Achyranthes aspera</i> L.	Amaranthaceae	aghedi	BH25766	Herb	Dry plant, Stem, Leaves, Root, Seed	Plant decoction is beneficial for kidney-related ailments as renal tonic. Ash mixed with honey treats cough and asthma. Fresh leaf juice helps relieve colic and stomach ache. Leaves and root are antidote and detoxifier. neutralize scorpion sting venom. Seeds, when mixed with rice water, help in treating bleeding piles. Stem is used as a otic medicine and natural toothbrush. natural toothbrush for toothache relief. Root decoction is effective against cholera, as it has

						antidiarrheal, antimicrobial and hepatoprotective properties. Root is also used to induce labor.
<i>Adina cordifolia</i> (Roxb.) Brandis	Rubiaceae	ualdarvo	BH25036	Tree	Leaves, Wood	Leaves are used as fodder. Leaves are used in to prepare 'Patrala'. Mature wood is used in preparation of toys and furniture.
<i>Aegle marmelos</i> (L.) Corrêa	Rutaceae	bili	BH23839	Tree	Fruit, Leaves, Root	Pulp of fruit is mixed with roasted seed of chokha (<i>Oriza sativa</i> L.) and given internally to the pregnant woman to cure vomiting. Juice of fresh leaves used as a deodorant. The leaves 'Bili Patra' are used for religious ceremony and offered to Lord Shiva. The unripe fruits are used in dysentery and chronic diarrhoea, fever and scurvy. Juice of fresh leaves is dropped in to the ear in ear ache. Powder of dried unripe fruits is in potent antidiarrheal medicine. The tender aromatic leaves eaten to check diabetes of primary stage. Fresh leaf juice applied on swellings due to rheumatism. The paste of root is applied on scorpion bites.
<i>Agave americana</i> L.	Asparagaceae	rambaan/ ketki	BH25190	Tree	Leaves	Planted in the garden. It is used as a hedge plant. Leaf juice is applied on gonorrhoea and syphilis.
<i>Ailanthus excelsus</i> Roxb.	Simaroubaceae	arduso	BH24837	Tree	Wood, Stem bark, Leaves, Seed	Wood is light in weight it is used in preparation of toys, boxes and musical instrument like 'tamburo'. Tender branches and leaves are used as fodder for goat. The wood is also used in preparation of utensil like spoon and churning rod 'vaonu'. The juice of stem bark is given internally to cattle to cure windiness in stomach locally called 'afro'. Infusion of stem bark mixed with cured and given orally to cure dysentery and diarrhoea. Roasted leaves are bandaged on head to cure headache and gastralgia. Roasted seeds are given in coughs and colic. Infusion of stem bark is also used in to cure cholera.
<i>Alangium salviifolium</i> (L.f.) Wangerin	Cornaceae	ankol	BH23075	Tree	Leaves, Root, Wood, Seed, Stem, Bark, Fruit	Leaves are used in relieving rheumatic pain. Root bark is used as an emetic. Wood is used in preparation of musical instrument and toys. Paste of seed is applied externally on head to grow hair in case of baldness. Decoction of bark is given to the pregnant women for abortion. The ripe fruits are edible. Infusion of root bark is antidote hence given orally on swelling due to snakebite, dog bite and rat bite. Juice of stem bark is given orally in T.B. Paste of leaves mixed with common salt and applied externally to relieve backache. The juice of root bark is given orally to cure worm. Decoction of root bark is mixed

						with 'suint' and bath it, to cure fever. Rubbed the root with water and applied on boil.
<i>Albizia lebbek</i> (L.) Benth.	Fabaceae	shirish	BH25129	Tree	Leaves, Seed, Stem bark, Flowers, Pods	Leaves and seeds are used in eye troubles, viz. night blindness. Paste of stem bark is applied on boils. The bark and seeds are used in piles, diarrhoea, dysentery and gonorrhoea. Paste of leaves, stem bark, flowers, pods and seeds are applied to the bitten part. The dry branches are used as fuel.
<i>Allium cepa</i> L.	Amaryllidaceae	dungli	BH24179	Herb	Leaves, Bulb	The crushed bulb is applied to the nostrils of person having fainting or historical fits. A bulb is eaten raw or cooked and it is a popular vegetable. A bulb is crushed and mixed with any edible oil is given orally to cattle to cure cough. The fresh juice of bulb is applied externally on wasp bite.
<i>Aloe vera</i> (L.) Burm.f.	Asphodelaceae	kunvarpathu	BH24596	Herb	Leaves	Juice of leaves is used in liver disease and eye troubles. Inner fleshy part of leaf is applied on wounds due to burning. The leaf is warmed and bandaged on abdomen to remove old stool (faeces) and to cure constipation. The leaf is given orally to cure stomach trouble. The plant is cultivated for house fencing. The pulp of leaves is applied on boils, scabies, ringworm, mastitis, leprosy and bleeding piles.
<i>Alternanthera sessilis</i> (L.) DC.	Amaranthaceae	pani ni bhaji/jal jambvo	BH23570	Herb	Whole Plant, Leaves	Decoction of the leaves is used as a wash for eyes. Whole plant is grassing by goat and sheep. Leaves are used in night blindness. The leaves are used in preparation of 'bhaji'. Paste of leaves is mixed with buttermilk and given to cattle for remove poisonous effect. Crushed the leaves with water and given internally to the animal to avoid windness in stomach 'afro'. Paste of leaves is applied externally on dropsy and boils. Decoction of whole plant is given to nursing mother and fever.
<i>Alysicarpus mollilifer</i> (L.) DC.	Fabaceae	bhohy samervo	BH23667	Herb	Whole plant	Whole plant is used as fodder. Decoction of whole plant is given in rheumatism.
<i>Amaranthus blitum</i> L.	Amaranthaceae	tandaljo	BH23499	Herb	Whole plant, Leaves,	Leaves are used as vegetable. Leaves are used in preparation of bhaji. It is eaten to cure for hair fall. Whole plant used as a fodder. Paste of leaves is applied on boil swellings.
<i>Amaranthus cruentus</i> L.	Amaranthaceae	rajgaro	BH23042	Herb	Whole plant, Seed, Leaves	Seeds are eaten. Leaves are used as blood purifier and in piles. The plant also used as fodder.

<i>Amaranthus spinosus</i> L.	Amaranthaceae	kantalo dambho	BH24702	Herb	Whole plant, Stem, Root, Leaves	The root is considered a specific in gonorrhoea. Whole plant is used as fodder. Ash of plant is mixed with lime and applied externally on boil for fast ripening. Juice of leaves is employed in leprosy, leucorrhoea, piles and colic. Plant decoction given to cattle for delivery complaints, such as ache, swelling etc. Decoction of shoots considered antirheumatic.
<i>Ammannia verticillata</i> (Ard.) Lam.	Lythraceae	aganbuti	BH24881	Herb	Whole plant, Leaves	Paste of fresh leaves is applied externally on ringworm and other parasitic skin infection. Infusion of the plant is given to the animal to cure poisonous effect due to grassing poisonous plant. Decoction of leaves is mixed with juice of fresh ginger and given orally to cure intermittent fever. 2 table spoon decoction of the whole plant is taken orally twice a day for a week to threat gonorrhoea.
<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson	Araceae	suran	BH25440	Herb	Fleshy Corm, Petioles	Large fleshy corm is used as vegetable. Tender petioles are also edible. Corm is used in dysentery, piles and colic complaints. The paste of corm is applied on ulcers caused due to bite of reptiles. About 100 gm fresh or dry tuber is macerated and juice extracted; 100 ml juice is taken orally as antidote for snake bite. Vomiting indicates relief.
<i>Ampelocissus latifolia</i> (Roxb.) Planch.	Vitaceae	jangli draksh	BH23138	Climber	Leaves, Root	Juice of tender leaves used in dental troubles and as a detergent for indolent ulcers. Decoction of roots is given in dysentery. 150 gm leaf paste mixed with turmeric, egg albumen and black goat milk is smeared over the fractured area and bound over it; bandage changed, once in three days. Paste of fresh leaves is applied over int1amed parts affected by guinea worms.
<i>Andrographis echiioides</i> (L.) Nees.	Acanthaceae	kariyatu	BH25512	Herb	Whole plant, Leaves, Fruit, Stem	Juice of leaves is mixed with coconut water and given orally in fever. Decoction of plant with dried fruit of black pepper (<i>Piper nigrum</i>) is given internally on fever and rheumatism. The plant is boiled with water and vapour inhaled to cure fever. Decoction of shoot (10 gm) is given twice a day for 4-5 days in acute jaundice due to hepatitis associated with hepatomegaly.
<i>Anisomeles indica</i> (L.) O.Kuntze.	Lamiaceae	chodharo	BH24469	Herb	Whole plant, root bark, leaves	The paste of root bark is applied externally in reduce the swelling in case of the bite of poisonous animal. Inhaled the decoction of leaves to cure fever. Whole plant ash mixed with jaggery and make a syrup it is taken to reduce salivary secretion. Juice of leaves is given to the children in colic dyspepsia and fever due to teething. The decoction

						of whole plant is used to take bath for fomenting rheumatic joints and fever.
<i>Annona mucosa Jacq.</i>	Annonaceae	sitaphal	BH24542	Tree	Leaves, fruit, seed, wood	Ripe fruit is edible. Paste of leaves are applied on wound and ulcers for rapid healing and to prevent microbial infection. 7 Decoction of leaves given to patient of diabetes. Paste of seeds is applied for killing maggots in wound of cattle. Crushed leaves applied on nostrils of persons suffering from hysteria. Paste of seed mixed with Gram powder and used as hair wash to remove lice. Dry wood is used as fuel by native people.
<i>Argemone mexicana L.</i>	Papaveraceae	darudi	BH23593	Herb	Whole plant, leaves, stem, seed, root	Maldhari use the leaf juice for syphilis. Paste of seed used for the treatment pyorrhoea. Leaf juice along with cow milk is given orally for a week in leprosy. Maldhari rub the stem juice on the body to relieve rheumatic pain for a month. Maldhari collect the seed and sale it in the folk market. Seed extract (oil) is applied on ulcers, eczema and gonorrhoea. Thy yellow latex applied in scabies and in ophthalmia. The bruised fresh root is applied to the part on scorpion bite to releave pain. The ash of whole plant mixed with groundnut oil and then such oil is applied on affected part of the skin in scabies, eczema, ring worm and also wounds and ulcers in cattle as well as human beings.
<i>Argyrea nervosa</i> (Burm.f.) Bojer	Convolvulaceae	samudrashosh	BH25228	Climber	Leaves, root	Young fresh leaves hairy side applied on boils for ripening and pus formation and then smooth side for healing wounds in boil. Leaves are used in gleet, gonorrhoea, strangury and chronic ulcers. Tender leaves are eaten as a vegetable. Leaves applied externally in cases of itch, eczema and other skin troubles. Paste of root is used in rheumatic, nervous diseases, snakebite, scorpion sting, swelling. Leaves are bandaged on head in headache. The leaf juice is applied in the ear in any ear complains
<i>Aristolochia bracteolata</i> Lam.	Aristolochiaceae	kidamari	BH23292	Shrub	Leaves, root	The juice of root and leaves with black piper is applied to the wounded part in case of snake bite, root boiled in oil and applied to that part. Infusion of leaves is given on abdomen to relieve constipation. One teaspoon juice of leaves is given in cough twice a day for three days. Piece of root is chewed to relieve toothache.
<i>Asparagus racemosus</i> Willd.	Asparagaceae	satavari	BH25342	Shrub	Root	Juice of root is mixed with honey and for dyspepsia. Powder of dried root is given internally with milk to the nourishing mother for milk production hence used as galactagogue. Powder of root is mixed with

						seed powder of 'jira' and given orally with warm water to cure cold fever. Root powder is also employed in colic, dysentery, acidity, tuberculosis, seminal weakness, leucorrhoea, burning micturition, anorexia and peptic ulcers. Paste of cladode is applied externally on boil.
<i>Azadirachta indica</i> A. Juss.	Meliaceae	limdo/ neem	BH25608	Tree	Bark, leaves, seed, wood, flower, seed	Bark used in skin troubles. Decoction of leaves is employed for ulcer and eczema. Dried leaves keep in books and cereals for keeping away the moth and silverfish. Odour of burning leaves and tender branches is kill insects. Seed oil is employed in skin infection as an ointment. Timber is used in preparation of furniture and for house building purposes. Fresh twigs used as a toothbrush to cure pyorrhoea. Juice of leaves is given in jaundice, common fever and skin diseases. Powder of dried leaves is given orally to the children to cure intestinal worms. Infusion of fresh flower is given as tonic in dyspepsia, general debility and as a stimulant tonic and stomachic. A poultice made of the flowers and leaves are used for relieving nervous headache. Pulp of seed is employed in piles, urinary diseases, intestinal worms and leprosy. Fresh and dried leaves used as a fodder. Paste of leaves are fried in ghee and applied externally on apex of finger and boiled to stop pus formation.
<i>Baccharoides anthelmintica</i> (L.) Moench	Asteraceae	kalijiri	BH24947	Herb	Whole plant, fruit, seed	Whole plant crushed and boiled in castor oil and applied externally on scalp to cure hair fall and to remove lice. It is also used in skin diseases like ringworm and eczema. Fresh juice of plant is applied externally on honeybee bite. Powered seeds are fed to animal to treat the neck pain. Seeds are used as anthelmintic, especially for children, 2-5 gm. with water in empty stomach twice a day for 3 days
<i>Bacopa monnieri</i> (L.) Wett.	Plantaginaceae	kadvi luni	BH24566	Herb	Leaves	Juice of leaves employed in epilepsy, insanity and other nervous diseases. It is also given in aphonia, to increase memory, cough, fever, asthma and swelling.
<i>Balanites aegyptiaca</i> (L.) Delile	Zygophyllaceae	ingorio	BH25516	Tree	Whole plant, fruit, seed, wood, leaves, stem bark	Ripe fruits used for whooping cough and skin troubles. Seed oil is used for burns, freckles and for soap making. Wood used for walking sticks. Dry leaves are used as fodder for cattle. Pulp of ripe fruit with cured given orally on diarrhoea. The ripe fruit is also used in cloth washing. Dried fruit shell is used as snuff box and toys. Pulp of seed is rubbed with water and applied externally on pimple. Powder of stem bark

						mixed with curd and given internally to cure cholera. Stem bark, unripe fruits and leaves are crushed and add water then filtered this, filtered syrup is given to children on intestinal worms. Roasted seeds are given in cough and colic. Pulp of ripe fruits is also employed in obesity. Whole plant used as field fencing.
<i>Bambusa bambos</i> (L.) Voss	Poaceae	polo vans	BH24721	Grass	Leaves, stem, root, flower, shoot	Leaves and twigs used as fodder. Stem is used in preparation of blower and flute. Leaves are given to the horses as a fodder to cure cough and colds. Dried stem is used as walking stick. The tender shoots is used in preparation of curry or pickles. The pounded young shoots make an excellent poultice for cleaning wounds and sores. Sore and wounds are covered with the poultice and bandaged. The root is considered to cure for ringworm and other eruptive affections. The juice of flowers is used as eardrops for earache and deafness. Fresh stem is used in preparation of baskets, chhabdi (shallow basket), lagduan (instrument kept on donkey to carry pots), cradle (ghodiyu). Stem is also used in preparation of snake catcher (Hodo). Young shoots are crushed and applied on joints to treat rheumatism.
<i>Barleria prionitis</i> L.	Acanthaceae	pilo kanta shelio	BH25780	Shrub	Leaves, root, bark	Juice of the leaves is given with honey in catarrhal affections of children. A paste of the roots is applied to boils and glandular swelling. Leaves chewed to relieve toothache. Juice of leaves is dropped into the ear to stop pus formation in the ear. Poultice of leaves is slightly heated with castor oil and then mixture is filtered, such filtered oil is applied on wounds boils and ulcers and also dropped in to ear in earache. Paste of leaves mixed with black pepper and it is given orally regularly for few days on piles. Juice of leaves is externally used as a dressing for feet in rainy season to protect them from cracking and mixed with honey, the juice is applied to bleeding teeth, cold and cough to the children. Decoction of bark is given in whooping of cough, toothache, fever and pyorrhoea. Decoction of root is given in fevers, coughs, rheumatism and sprue.
<i>Basella alba</i> L.	Basellaceae	poi	BH23252	Climber	Leaves	The leaves are used as preparing in 'bhajia' and 'bhaji'. The juice of the leaves given to children to avoid constipation and it is very useful to allay the heat and itching of urticaria. Paste of leaves is applied externally on pimple, boils, wounds, burns and scalds.

<i>Bauhinia racemosa</i> Lam.	Fabaceae	zinzaro/ asundro	BH25583	Shrub	Leaves, root, flower, stem bark	Bark yields a strong cordage fibre. Paste of leaves is mixed with onion and given for diarrhoea. Decoction of leaves used in malaria, gonorrhoea and headache. Tender branches and leaves used as fodder. Tender branches used in preparation of strong basket and gate 'jampo'. Dried leaves are smoked in pipe to cure cough and asthma. Decoction of root is used in burning micturition, obesity and T.B. Flowers are employed in diarrhoea, dysentery and piles. Fresh stem bark ground, boiled, decoction mixed with <i>Carum copticum</i> given orally after dinner for a week in spermatorrhoea.
<i>Bergia suffruticosa</i> (Delile) Fenzl	Elatinaceae	lavadio	BH25646	Herb	Whole plant, leaves	Whole plant is used in fractures. A poultice of leaves applied to sores. Whole plant used as fodder by goat. The whole plant with rootstock is dried and powdered. 10 gm of decoction of powder is given once daily to suppress tumours of undefined origin.
<i>Blastania cerasiformis</i> (Stocks) A.Meeuse	Cucurbitaceae	ankh futamani	BH23367	Climber	Root, fruit	The poultice of root is externally applied on swelling due to rheumatism. Infusion of root is given to the animal to relieve windiness in stomach. Pulp of the fruit is applied on the 'ratva' (red pimples on the skins)
<i>Blepharis maderaspatensis</i> (L.) B.Heyne ex Roth	Acanthaceae	utigan	BH23569	Herb	Whole plant, leaves, inflorescence	Whole plant used as fodder. Paste of leaves is applied on swelling. Decoction of inflorescence is given in fever, asthma and coughs. Whole plant ground, infusion given orally for a week to women in infertility.
<i>Boerhavia diffusa</i> L.	Nyctaginaceae	satodi	BH23119	Herb	Leaves, root	The leaves are used in ophthalmia and for eye wounds, muscular pain and purify the blood and hasten delivery and good for dropsy. Decoction of root is given internally is scanty urine. Paste of root is applied on any swellings and also on scorpion sting. Infusion of root is mixed with rice water and given in case of snakebite.
<i>Bombax ceiba</i> L.	Malvaceae	simlo	BH24581	Tree	Princkles, flower buds, gum, wood, fruit, root bark	Paste of the prickles is externally used in the treatment of the pimple. Flower buds and fleshy calyx are eaten as vegetable. Tree yields a gum called 'mochrus'. It is tonic and mostly used in femaine problem like leucorrhoea and others. A paste of gum is applied externally on bone fracture as a plaster. Wood is used in preparation of musical instrument like 'tamburo'. Mature fruits yield silk fibre for stuffing pillows and mattresses. In old time silk is used in making fire. Root bark mixed with honey and given for better health. Dry fruits are employed in calculous affection and fever.

<i>Brassica juncea</i> (L.) Czern.	Brassicaceae	rai	BH25594	Herb	Leaves, stem, seed	Green leaves used as fodder and vegetable. Seed oil is rubbed on inflamed painful parts of the body, on leucoderma and eczema. The dry stem used as a fuel. Crushed seeds are given along with honey in coughs, cools and bronchitis. Cake is given to goat and camel to get more milk. Seeds mixed with 25gm fruits of <i>cuminum cyminum</i> and ground; mixed water and given orally for 7 days in constipation. Powder or roasted seeds and salt in ghee are consumed for stomach pain
<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae	kesudo/ khakhro	BH24884	Tree	Leaves, flower, shoot, stem, bark, seed, gum	A bath of dry flowers boiled water is a treatment of sunstroke and skin diseases. Leaves are served as plates for domestic purposes. Flowers yield a yellow dye. Young shoots yield fibres, which are used in ropes and string to tie bundles of firewood. Decoction of bark is employed in piles, tumours and menstrual disorders. The crushed stem or root bark filled in wounds to prevent decay. Fresh leaves are used in preparing dish (Plate) and cup as locally called "palmla Indpadi". The ash of dried leaves is mixed with edible oil applied on eczema and decaying ulcers in cattle. The mature leaves are eaten by goats and buffaloes for health and to increase lactation. The dry leaves are used as fertilizers and used for ripening of mango fruits. A hot poultice of the leaves is effectively used as antiphlogistic for dispersing boils, pimples, tumours, haemorrhoids, ulcers and swellings. The pieces of the bark are chewed to relieve abnormal thirst. Seed paste is externally applied on ringworm. The gum is applied to ulcers and relaxed sore throat. Rubbed the fruits with milk and given orally to remove intestinal worm. Dry fruit powder mixed with lemon juice and applied externally on ringworm. Juice of leaves is introduced in the ear to remove the insect in the ear. Gum is employed on the wound for fast healing. Paste of stem bark is applied on achne and bone fracture. Decoction of leaves is employed in diabetes, colic and piles. Decoction of root is employed in T.B.
<i>Cadaba fruticosa</i> (L.) Druce.	Capparaceae	khordu	BH25994	Shrub	Whole plant, leaves, root,	Leaves crushed with black pepper (<i>piper nigrum</i>) add water and make a syrup and given orally thrice a day to children and adults to control diarrhoea and vomiting. The crushed root applied on finger to check suppuration of finger. The roots and leaves are used in urine

						obstructions and any urinary trouble. Live plant prevent entry, acts as wind breaker, offers obstruction to sight.
<i>Caesalpinia pulcherrima</i> (L.) Sw.	Fabaceae	galtoro	BH25544	Tree	Leaves, bark, flower	Flowers yield a dye. Cultivated for its attractive flowers. Decoction of leaves and stem bark is used as vaginal douche for abortion. Decoction of flowers is given in intestinal worms and coughs.
<i>Calotropis procera</i> (Aiton) Dryand.	Apocynaceae	akdo	BH24773	Tree	Leaves, root, stem, bark, flower, stem milk	Root is crushed and its juice is given in ear and teeth diseases. Dry leaves are smoked in a pipe as a remedy for asthma and cough. Fresh leaves slightly roasted and pounded are bandaged to painful rheumatic joints, swelling and headache. Stem is used with wet clay and prepared the large huge container to store grain potu. Dry stem bark yields fibre, which is used in ropes and strings. Latex is used in body pain and rabies. Powder of dry leaves is sprayed over wounds, ulcers and old sores to promote healing. The poultice made of the leaves is applied to inflammatory swelling. The juice from warmed leaves is dropped in the nose for relief of headache and catarrh. The root is used for cleaning teeth and for relieving toothache. The plant is considered useful in snakebite. Warmed mature leaves are tied on the abdomen on colic complaints. The flowers are offered to 'Lord Hanuman' during worship. The juice of mature leaf is inhaled through nostril on scorpion sting. To prevent the effect of the sunstroke, the leaves are bandaged on head. The gynostemium are used in cough, asthma and loss of appetite. Dry stem is used as a fuel. Latex mixed with cow milk and given orally on rabies. Very tender leaves chewed on cold fever.
<i>Canavalia gladiata</i> (Jacq.) DC.	Fabaceae	valor	BH24953	Climber	Pods, leaves, branches	Very young pods are eaten as snap beans. Paste of leaves is applied on decaying sores having microbial growth in cattle. The climber is used as string to tie bundle of grass or firewood.
<i>Cannabis sativa</i> L.	Cannabaceae	bhang/ ganja	BH23536	Herb	Leaves, flower	The plant is a narcotic, inbrient in Gujarat. Bhang is preparation made from specially dried leaves and flowers of plant and taken during festival of Mahashivratri. Dried leaves smoked in pipe to cure asthma.
<i>Capparis decidua</i> (Forssk.) Edgew.	Capparaceae	kerda	BH24899	Shrub	Whole plant, fruit, bark, root, wood, young	Unripe fruits used for preparation of pickles and vegetable and sold in folk markets. Decoction of bark is given in fevers, rheumatism, coughs and asthma thrice a day for eight days. Roots is crushed in water and applied on scorpion bite. Maladhri made an instrument called 'Ravai flower' for preparation of buttermilk from its wood.

					branches, seed, bud	Wood is used as fuel. Flowers are in gradient of 'curi'. Ash of wood mixed with black paper and honey and given orally in diarrhoea. Young branches mixed with tender leaves of <i>Holoptelia integrifolia</i> paste is prepared which is applied externally in ringworm and eczema. Two drops of root extract poured in ear to kill microbial flora and worm in it. Food and seeds are given to cattle for increasing milk production and better health. Live or dead plant used as top fencing and mud boundaries. Young buds are crushed and juice squeezed out of it; 2-3 drops of the juice put in each ear in earache.
<i>Capparis grandis</i> L. f.	Capparaceae	ghuti/ thikar	BH24704	Shrub	Twig, seed oil, wood, leaves, root	Twigs are used as fencing. Oil obtained from seed is used as fuel and medicine. Handles of hoe, axe is prepared from its wood. Solid single piece of wood is used to prepare whey containers and a churner. Crushed leaves are tied on stiff part due to rheumatism. Ash of root and stem bark mixed in cow milk and given orally twice a day for two days in cholera and Indigestion. Decoction of leaves given orally thrice a day for 10 days for blood purification.
<i>Capparis sepiaria</i> L.	Capparaceae	kanthar	BH25211	Shrub	Whole plant, root, bark, leaves, wood	The roots are crushed along with ginger and asafoetida and the paste applied externally to cure mumps for three days. The decoction of bark and root powder is given in dropsy and gout 1 table spoon twice a day for 4 days. Leaves are used as fodder and wood as a fuel. Paste of leaves is applied externally on eczema, scabies, swellings, boils. Live or dried condition plant offers mechanical barrier. Handle of agricultural implement prepared from wood.
<i>Capsicum annuum</i> var. <i>annuum</i>	Solanaceae	marchu/ mirchi	BH24481	Herb	Fruit	Cultivated for its fruits, which are used as vegetable and condiments. Dry fruits are used as a spice. Decoction of fruit is used in kill of insect. Fruits used in preparation of pickled. Dried powdered fruit is applied on part bitten by dog.
<i>Cardiospermum halicacabum</i> L.	Sapindaceae	karodiyo	BH23737	Climber	Whole plant, leaves, stem, root	Decoction of root is given in rheumatism, lumbago and nervous diseases. Poultice of leaves applied externally on rheumatism. Juice of the plant is given internally as a demulcent in gonorrhoea and pulmonary diseases. Paste of whole plant is used for reducing swellings and hardened tumours. Juice of leaves is dropped in the ear to give relief from earache. The paste of leaves is used as a dressing for syphilitic sores, scuts and injuries. The root is considered useful in the treatment of bleeding piles. Seeds are used as a tonic in fever.

						Leaves, stem and root are used for snakebite. Juice of leaves applied externally on skin diseases. Plant juice is fed to infants in flatulence.
<i>Carica papaya</i> L.	Caricaceae	papayu	BH24914	Tree	Fruit, milky juice, leaves	The unripe fruit is used as a vegetable it is also used in preparation of pickled. The milky juice is employed to cure ringworm. The ripe fruit is much used chiefly to cure digestive troubles. Pulp of fruit used as an ingredient in face creams and hair shampoo. Roasted leaves are applied on painful parts for relief of nervous pains. Paste of unripe fruit is applied externally on burning sensation of body part. Paste of roasted leaves are applied on breasts of nursing mother to increase milk.
<i>Carrisa spinarum</i> L.	Apocynaceae	karamda	BH24239	Shrub	Fruit, leaves, root	The ripe fruits are edible. The unripe fruits are used in preparation of pickles. Decoction of leaves is given in common fever. Decoction of root is given orally to relieve poisonous effect caused by the any reptiles bite. Infusion of root is given in fevers.
<i>Cassia fistula</i> L.	Fabaceae	garmalo	BH25333	Tree	Fruit, wood, seed, pod, stem bark, leaves, root, stem bark, gum	Pulp of the fruit is given to avoid constipation it is also used in chest and heart diseases. Wood is used in preparation of tool handle. The seeds are crushed with water the extract is given internally to the cattle to stop diarrhoea. The unripe pod crushed and mixed with castor oil is administered orally to the animal on windiness in stomach. The stem bark is used for tanning leather. The leaf paste is applied externally on skin diseases. Decoction of root is given in fever and constipation. Gum is used in toothache and constipation. Endosperm is eaten for the cure of diabetes. The doss is about 5 gm in the morning for 2-3 days.
<i>Cassia occidentalis</i> L.	Fabaceae	kasundaro	BH24652	Tree	Seed, leaves, stem bark, root	The roasted seeds are used as substitute for coffee. Paste of leaves and seeds is applied on skin diseases. The decoction of stem bark mixed with honey and is administered orally to the diabetic person. Decoction of root is given orally in fever.
<i>Casuarina equisetifolia</i> L.	Casuarinaceae	saru	BH25487	Tree	Wood, leaves, bark	Wood used for house posts. Decoction of bark is used in diarrhoea and dysentery. Decoction of leaves used in colic. Bark used for dyeing and tanning leather.
<i>Catharanthus pusillus</i> G. Don.	Apocynaceae	nani barmasi/ karpati rai	BH24629	Herb	Whole plant, root	Plant poisonous particularly to cattle causing temporary blindness with urticarial rash on the body. A thick extract is made from 250 gm crushed root in 2.5 litres. It is strained and evaporated on gentle heat

						when the volume is reduced about 2 litre, 1-2 table spoon is taken orally twice a day for 30 days in diabetes.
<i>Catharanthus roseus</i> (L.) G. Don	Apocynaceae	sadafuli	BH25445	Herb	Leaves, flower	The leaves are used in diabetes to remove sugar. The petals are lised to obtain pink dye.
<i>Cayratia cambodiana</i> Gagnep.	Vitaceae	khat khatumbo	BH25936	Climber	Leaves, root, leaves, fruit	Poultice of leaves is very useful in the treatment of yoke sores on the necks of bullocks. Paste of root is applied on swellings due to boils and tumor. Decoction of root is mixed with milk and given orally to person on sexual debility. Paste of leaves is applied on boils and to check bleeding from wounds. Fruits are used in jaundice.
<i>Celastrus paniculatus</i> Willd.	Celastraceae	malkagni	BH24349	Tree	Seed, root, stem bark	Seed oil is employed in rheumatic pains. The powdered seeds used as a brain tonic and increase memory power. Paste of root is applied on snakebite and other poisonous animal bite. Paste of stem bark is applied on wounds for fast healing. Seed crushed in cow's urine and the paste is applied on scabies. 3-4 drops of seed oil are taken with 1 table spoon of water once a day on empty stomach for one month in Tuberculosis. Three table spoon of seed oil are given to women after delivery once a day for 3 days.
<i>Celosia argentea</i> L.	Amaranthaceae	lambdi	BH24875	Herb	Whole plant, seed, leaves, root	Whole plant is used as fodder. The seeds are useful in diarrhoea, eye troubles and sore mouth. Plant eaten as a potherb in times of scarcity. Decoction of leaves is given internally on colic complains and also to start urination. Paste of leaves is applied on boils as well as poisonous animal sting. Decoction of whole is given in calculus, gonorrhoea an cystitis. Root paste is applied locally on stomach for urinary stone for a month.
<i>Centella asiatica</i> (L.) Urb.	Apiaceae	bhrahmi	BH25844	Herb	Whole plant, leaves	The leaves are household remedy for the treatment of early stage of dysentery in children. Infusion of leaves is given as a remedy for syphilitic, leprosy, fever, bowel complaints, rheumatism, indigestion and nervousness. The leaves dried in shade and prepared a powdered and given internally for improving memory and for mental weakness. Juice of leaves mixed with milk and given orally as an alternative tonic in gonorrhoea, jaundice and common fever. Paste of whole plant is applied on the part stung by snake. Leaf juice is administered orally to reduce abdominal colic pam during menstruation. Freshly collected young leaves are taken as ' Salad' with boiled potato.

<i>Chenopodium album</i> L.	Amaranthaceae	chil ni bhaji/ bathvo	BH23339	Herb	Whole plant, leaves, seed	Tender leaves are eaten as 'bhaji' and very useful in urinary troubles and colic. Plant used as fodder. Decoction of whole plant mixed with honey is given to relieve body pain. Seeds boiled in milk are administered to cure gastritis.
<i>Chlorophytum tuberosum</i> (Roxb.) Baker	Asparagaceae	karli ni bhaji	BH24820	Herb	Leaves, root	Tender leaves are used as 'bhaji'. The roots are used as tonic. Powdered root is given in sexual debility
<i>Cicer arietinum</i> L.	Fabaceae	chana	BH25207	Herb	Fruit, seed	Seeds widely consumed as 'dal' and in various other preparation. Raw or roasted seeds are eaten. Germinated seeds used as a prophylactic against deficiency diseases, particularly in scurvy. Husk of fruit is used as cattle feed. The roasted seeds are used as a food for the patient suffering from jaundice and coughs. A bath prepared from powdered seeds in hot water is good beneficial in painful menstruation for women.
<i>Cissampelos pareira</i> L.	Menispermaceae	venivel	BH25393	Climber	Leaves, root	About 7-10 cc juice from the leaves is mixed with 10 gm sugar and 200cc milk. The mixture is taken on an empty stomach for three consecutive mornings for jaundice. 5gm root is made into a paste in ricewater is given twice a day for about month to cure leprosy. Crushed root is applied on snake bite. Decoction of root is used (1 table spoon twice a day) to cure diarrhoea. Leaves paste is applied (twice a day) externally on cuts and at the place of animal bites. Fresh root crushed in water and given in calculi Root paste is given thrice daily for 5 days in intermittent fever. The leaf paste is used for bandaging fractured bone. Plant yields a strong fibre. By boiling twigs of the plant, cut into small pieces in water decoction is prepared. Three table spoon full of the red decoction is given to cattle, 4-5 times in a day in swelling of abdomen due to flatulency.
<i>Cissus quadrangularis</i> L.	Vitaceae	had sankar	BH25005	Climber	Whole plant, stem, young shoots	Paste of stem is applied on bone fracture as a plaster. Juice of stem prescribed in scurvy and ear complaints. The young shoots are used in preparation of curries. Infusion of crushed plant is used as vaginal douche to increase menses. Salt is added into boiled and squeezed leaves which are eaten to increase digestion. Stem pieces are spread over the bed. The patient is advised to take rest on it for at least two hours daily for three days to cure backache.

<i>Citrullus colocynthis</i> (L.) Schrad.	Cucurbitaceae	indravarna	BH23468	Herb	Root, seed, fruit	Decoction of root is given in jaundice, rheumatism and urinary troubles. Roasted seeds are edible. Fruit pulp is applied in vagina for abortion and to increase menses. Fruit is employed in biliousness, jaundice, fever, constipation, dropsy, coughs and bronchitis. Fruit is fed to camel to dissuade them from eating sand. Fruit is slightly warmed and fed to camel as a tonic.
<i>Citrus limon</i> (L.) Osbeck.	Rutaceae	limbu	BH25574	Tree	Fruit, Juice	Ripe fruit is used in the preparation of beverages. Lemon juice is very useful for scurvy. Fruit pulp is very acidic hence extensively used for culinary purpose and flavouring. Fruits are used in preparation of pickled. Juice of fresh ripen fruit is being successfully employed in vomiting, nausea, scurvy, dyspepsia, obesity and cholera.
<i>Cleome gynandra</i> L.	Brassicaceae	tanmani	BH25447	Herb	Leaves, seed	Leaves are also used as vegetable in the time of scarcity. Decoction of seed is given orally in epilepsy and typhoid fever 1 table spoon thrice a day for ten days. The paste of leaves applied externally boils to prevent pus formation (twice a day). Vapour of boiling seed is inhaled thrice a day to cure cough, fever. Seeds are used as spices and condiments. Leaf extract boiled in groundnut oil and poured 2 to 3 drops in ear to remove earache.
<i>Clerodendrum phlomidis</i> L.f.	Lamiaceae	ami/ vadami	BH25254	Shrub	Root, leaves, tender branches	Decoction of root is used as a demulcent in gonorrhoea and in obesity. Paste of root is applied on snakebite. The fresh leaves are bounded over the eyes in ophthalmia. The smoke pipe 'chalam' is prepared from the wood. The dry stem is used to ignite the fire. Tender branches are used in preparation of 'potu' - a large huge container to store grain. The root and leaves are boiled in water the bath taken with this water to relieve body pain. Paste of leaves is bandaged on swelling part. Root paste is applied on legs for 2-3 hours once a day for 1 week.
<i>Clitoria ternatea</i> L.	Fabaceae	gami bibari	BH23598	Shrub	Seed, flower, leaves, root, root bark	Seeds are given as laxative for children. Blue flowers yield a blue dye. Leaves used as fodder. Root of this plant rubbed with water and ointment on 1cucodermatic spot. Juice of leaves is dropped in to ear in earache. One full spoon of crushed fresh root bark is taken with cup of warm milk twice a day for two weeks as diuretic. 50 g seeds are crushed in a cup of water and given to the patient once a day for three days as purgative.

<i>Coccinia grandis</i> (L.) Voigt	Cucurbitaceae	kadvi gholi	BH23981	Climber	Fruit, juice, root, flower	Raw fruits are edible and used as a vegetable. The juice of young fruits and roots is used in diabetes and piles. Flowers are given in jaundice, itching and biliousness.
<i>Cocculus hirsutus</i> (L.) W.Theob.	Menispermaceae	vevdi/ vadhi	BH24595	Climber	Leaves	Decoction of leaves and roots is used to allay irritation, fever, rheumatism and leucoderma. Juice of leaves taken internally to cure gonorrhoea. Mucilaginous juice of leaves mixed with water and applied in eczema, prurigo and impetigo. Fresh and dry leaves are common fodder for goats and camel in Barda Hills. Crushed leaves with water and paste is kept on eyes to get rapid relief from heat stroke. Leaf paste is used in toothache. Leaves are used as vegetable for the treatment of night blindness. Leaves are used orally with bark extract of "Neem" as a poison antidote.
<i>Cocos nucifera</i> L.	Arecaceae	naliyeri	BH23083	Tree	Fibre, coconut milk, fruit, dried flesh	The trees have a great commercial value. Coconut fibre from the husk used for preparation in mats, ropes and brushes. Coconut milk (water) is refreshing drink. The fruit is considered sacred and good symbol of fortune. The fruit is believed to fulfils ones desire and so it is offered to god, and it is also used in wedding and other auspicious social and religious occasions. Dried flesh (copra) is edible and good source of oil. It is also given in general debility, fever and thirst. The inner layer of the fruit (kachali) is used as cup and preparation of musical instrument. Oil is edible and also used as hair oil for nourishment of hairs.
<i>Colocasia esculenta</i> (L.) Schott	Areceae	alvi	BH23206	Herb	Whole plant, leaves, petiole	Whole plant is used as vegetable and corm for sting of bees. Fresh green tender leaves are used as vegetable for increasing milk in mammalian gland. Ash of petiole is mixed with honey and given to cure from worm.
<i>Commelina benghalensis</i> L.	Commelinaceae	motu sismuliyu	BH24630	Herb	Whole plant, leaves, shoot	Whole plant is used as a fodder, and it is purgative. Leaves are used as a pot herb in time of scarcity. Infusion of leaves used in leprosy. Leaves and tender shoots are cooked as vegetable. The 'Pakorisi' made by mixing leaves and tender shoot with 'besan' (gram flour) are given to the patient of leprosy.
<i>Commiphora wightii</i> (Arn.) Bhandari	Burseraceae	gugal	BH24428	Shrub	Gum, leaves, branches	Gum-resins are used as incense and perfumery and also to cure gums, pyorrhoea and cough problems. Paste of leaves is applied (3 times a day) externally on cuts and wounds. Young branches are used as tooth brush to cure pyorrhoea. Gums were mixed with the flour of wheat

						and gram and were eaten. It is presumed that such practices provide energy to the body.
<i>Corchorus olitorius</i> L.	Malvaceae	moti chhunchh	BH24225	Shrub	Leaves, root	Plant is used for making jute. Leaves used as tonic and febrifuge. It is also used as demulcent in cystitis. Decoction of the dried root and unripe capsules is given in diarrhoea. Paste of fresh leaves is applied on swelling. Fresh leaf paste is applied on forehead to relieve pain.
<i>Cordia dichotoma</i> Forst.	Ehretiaceae	gunda/vad gunda	BH25582	Tree	Leaves, fruit, branches, wood	The ripe fruits are eaten and unripe fruits are used in preparation of pickled. The ripe fruits are mucilaginous and very useful as a demulcent it is much used in cough and diseases of the chest. Tender branches and leaves are used as fodder. Wood is used in preparation of agricultural implement and tool handles. Wood is also used in preparation of wooden measure container known as 'payi'. Dry fruits are used as cattle feed. Paste of leaves is applied on boils, ulcers and wound for fast healing. Fresh fruits are crushed and mixed in 500 ml in water in the proportion 1:2. This solution is given only once to animal suffering from diarrhoea.
<i>Crateva tapia</i> L.	Capparaceae	vayvarno	BH23629	Tree	Bark, leaves, fruit, flower, wood	Inhabitants of Barda Hills use paste of its bark for killing guinea-worms. The paste is applied locally on the affected part with feathers of cock. Decoction of bark is given in calculus and other urinary infection and cancer for a month. The leaves are cooked and used as vegetable to cure neuralgic pains, paralysis and chronic rheumatism. Paste of leaves applied externally on gouty swelling for one week. Toys are prepared from wood. Crushed unripe fruits applied on abscesses. Decoction of dried flowers is given 1 table spoon twice a day in toxemia. Stem bark and root boiled in castor oil is used as an embrocation in case of chronic rheumatism. Juice of leaves is given orally in intestinal troubles, to increase appetite and in weakness due to fever.
<i>Crinum viviparum</i> (Lam.) R.Ansari & V.J.Nair	Amaryllidaceae	gavari kand	BH23808	Herb	Whole plant, bulb, leaves	Plant is cultivated for ornaments. Bulb used in biliousness and in strangury and other urinary troubles. Leaf juice with the addition of a little salt it is dropped in to the ear in earache. Bulb is cut bilaterally with knife and pressed on the axis of the eye. This removes dirt and dust from the pinkeye of animal.

<i>Crotalaria juncea</i> L.	Fabaceae	shan	BH23939	Shrub	Whole plant, stem, bark	Plant cultivated for 'sun hemp,' which is used in preparation of gunny and cordage. Plants are grown as a green manure crop. Bark yields a strong fibre. Dry stem is used as fuel. Oral feeding of aqueous filtrate of boiled roots expels placenta in animals.
<i>Cucumis melo</i> L.	Cucurbitaceae	kothimba	BH23126	Climber	Whole plant, fruit, root	Ripe fruits are edible. Whole plant is used as fodder. Ripe fruit is used on finger to stop pus formation. Ripe fruits used as vegetable. Prepared a chips from ripe fruits it used with other vegetable, fro it will give the better taste. The root is rubbed in water and applied on any poisonous animal sting. Pulp of fruit is given to women for abortion and to increase menses.
<i>Cuminum cyminum</i> L.	Apiaceae	jeeru	BH23941	Herb	Fruit, seed	Cultivated for its fruits. Dry fruits used as a condiment in curry. Fruits are useful in dyspepsia and diarrhoea. A poultice made of the fruit is used as resolving swellings on the breasts. Seeds are given to the women to increase secretion of milk in mammalian gland. Paste of fruits is applied in vagina in cases of leucorrhoea and menorrhagia.
<i>Curculigo orchioides</i> Gaertn.	Hypoxidaceae	kali musali	BH23184	Shrub	Root	Root paste with Acacia sp. And supari Areca sp. Is used in bone fracture. Root powder mixed with sugarcube and given in diabetes. Root mixed with milk and boiled, it is taken as nutritive drink.
<i>Curcuma amada</i> Roxb.	Zingiberaceae	amba haldar	BH24882	Herb	Rhizome	The paste of rhizome is applied on blunt injury and sprains. The rhizome is used as pickled. The powder of the dried rhizome is given orally with milk for better health. Juice of rhizome is applied externally on any kind of skin diseases. Rhizome is employed in asthma, bronchitis, coughs, anorexia, indigestion, hiccup, urticaria and flatulence. Dry rhizome powder is used in face packs to cure acne and blemishes.
<i>Cuscuta chinensis</i> Lam.	Convolvulaceae	amarvel	BH24664	Climber	Stem	Stem is used in flatulence and liver complaints. Paste of the stem is externally used in itch. Stem is boiled in water then vapour is inhaled through nostrils to relieve fever. The infusion of the stem is used as a wash for sores and itch.
<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	dhrokad/ dharo	BH25739	Climber	Whole plant, leaves	Plant is used as fodder. Infusion of the herb with milk is prescribed for bleeding plies. Externally the fresh juice of the herb is used for checking bleeding from the nose. Infusion of the leaves is given orally to check vomiting. Plant is believed auspicious in Hindu religious. Whole plant paste is applied externally to cure ulcers and alti. Whole

						plant extract mixed with mustard oil is applied externally to cure urticaria.
<i>Cyperus rotundus</i> L.	Cyperaceae	moth	BH23642	Grass	Whole plant, root, moth	Plant used as fodder. The root is used for making scent and aroma. Dried tuberos are known as moth, which is used in stomach and bowel complaints. The moth robbed with milk and given orally on intestinal worm and colic complaints.
<i>Dalbergia sissoo</i> Roxb.	Fabaceae	sisam	BH25502	Tree	Wood, stem bark, leaves	The tree yields very good timber, which is used in preparation of furniture, agricultural implements and other things. Paste of stem bark is applied on leprosy and boils. Decoction of leaves is given in gonorrhoea.
<i>Datura metel</i> L.	Solanaceae	kalo dhathuro	BH24587	Herb	Whole plant, leaves, stamens, seed, flower	The poultice of fresh leaves used externally on rheumatic swelling of the joints. Roasted leaves bandaged on head it give relief to headache. Dry leaves smoked in pipe to cure asthma and bronchitis. Stemans of flowers are eaten to avoid constipation. Paste of burning seeds is used in teethache. Whole plant have a narcotic properties. Juice of fresh leaves mixed with lime and added jaggery and mixture applied externally on mump. Juice of leaves employed to kill lice. Flowers are used in worship of god 'Shiva'. Paste obtained on pounding leaves with little lime is applied externally for about week to treat scabies. Leaves are pounded with black pepper and garlic and made into pills; 3 pills are given orally twice a day for about 4 days to treat fever.
<i>Daucus carota</i> L.	Apiaceae	gajar	BH24787	Herb	Whole plant, root, seed, leaves	Fleshy tuberous roots are eaten raw or cooked. Root is used in jaundice, dropsy, indigestion, anorexia, blood purifier and preparation of pickled. Root is edible which is considered good for liver, eye trouble and urinary troubles. Seeds are used for abortion purpose. Plant used as fodder. Leaf paste is used for toothache.
<i>Delonix elala</i> (L.) Gamble.	Fabaceae	sandesaro	BH25993	Tree	Leaves, wood, gum, dried branches	Fresh leaves used in rheumatism and flatulence. Wood is used for preparation of churner. Gum is edible and it is given in fever. Dried branches used as fuel. Twigs are used as toothbrushes. Used in field fencing. The paste of the leaves is applied on hair to cure falling of hair.
<i>Dendrocalamus strictus</i> (Roxb.) Nees.	Poaceae	nakor vans	BH25478	Grass	Stem, shoot, wood	Stem is used as walking stick. Young shoot is used in preparation of pickles. The pulp of wood is considered useful in T.B. The chip of stem is used preparation of hut. Mobile cradle is made from stem.

						Common. Strips of it are tied on fractured bone of leg and water is sprayed over it in domesticated animals. A few pieces of stem are boiled in water till its volume reduces to half. It is given orally to expel placenta in animals.
<i>Dichrostachys cinerea</i> (L.) Wight & Arn.	Fabaceae	mordhundhiyu	BH24367	Tree	Leaves, wood, stem bark, root bark	Dry leaves are used as fodder. Wood is used in preparation of tool handle. Infusion of stem bark is given in colic complaints and calculus. Paste of root bark is applied on rheumatism. Leaf Paste is applied on ripen boils for fast healing and scorpion sting. Leaf extract mixed with whey is consumed for seven days for lochia. Half cup of infusion of leaves is drunk as a remedy against gonorrhoea till cure.
<i>Digera muricata</i> Mart.	Amaranthaceae	kanjaro/dambho	BH24222	Herb	Whole plant, leaves, shoot	Plant used as fodder. Infusion of leaves is given orally in urinary discharges. Tender shoot eaten as a potherb.
<i>Dioscorea bulbifera</i> L.	Dioscoreaceae	varakand/dukarkand	BH24960	Climber	Tuber	Tuber is eaten as a vegetable in times of scarcity. Paste of dried tuber is applied externally on ulcers. Infusion of tuber is given in piles, dysentery and sexual debility. The dried tuber powder is used for hair wash to remove dirt and to promote hair growth.
<i>Diospyros melanoxylon</i> Roxb.	Ebenaceae	timru	BH23022	Tree	Fruit, juice, stem bark, flower, leaves, wood	The ripe fruit is edible. Dry fruits are stored for periodic uses. Unripe fruits are used as starter curds for instant curdling of milk. The juice of unripe fruits is given orally in chronic dysentery and diarrhoea. Paste of bark is applied externally on boils and tumours. Infusion of dried flowers is applied in skin diseases. The green leaves used in preparation of bidies. The wood is very hard it is used in preparation of tool handle and agricultural implements. Paste of stem bark mixed with cow urine and applied on the scalp for killing lice. 2-3 tea spoonfuls extract of fresh stem bark taken in stomachache.
<i>Echinochloa colonum</i> (L.) Link.	Poaceae	samo	BH24598	Grass	Whole plant, seed,	Plant used as fodder. Plant used as green manure. Seeds are given to women after delivery. It is also used as food during fasts.
<i>Echinops echinatus</i> Roxb.	Asteraceae	utkanto	BH23518	Herb	Whole plant, root	Infusion of root is given to animal to cure windiness stomach. Decoction of root is given in cough, fever and sexual debility. Paste of root is applied on any poisonous reptile bite. The whole plant is dried, powdered and stored. About 20 gm powder is boiled in 4 cups of water and when it became reduced to 1 cup. It is filtered and divided into two equal doses and taken twice a days as febrifuge

<i>Eclipta prostrata</i> (L.) L.	Asteraceae	jal bhangaro	BH23471	Herb	Leaves, shoot	Juice of leaves is used to colour the hair black. Past of leaves mixed with 'mustard oil' and heated then it is applied on skin diseases and hairs to cure dandruff and hair fall. Juice of leaves is dropped in to ear in earache. Juice of shoots with shoots of <i>Alternanthera sessilis</i> in equal parts (20 ml) and 1-2 drops of juice of <i>Scoparia dulcis</i> leaves is given twice daily for 12 days in liver disorders caused due to alcoholism.
<i>Ehretia aspera</i> Willd.	Boraginaceae	vadhvardi	BH23928	Tree	Fruit, bark, wood, flower	Fruits and bark is eaten in time of scarcity. Wood is used in preparation of tool handle. 3 table spoon of decoction of stem bark is given thrice a day for 10 days to treat diphtheria. 10 g of dried powder of flowers is mixed in 100 ml cow milk and about 5 table spoon given twice a day for 42 days as an aphrodisiac.
<i>Enicostema axillare</i> subsp. <i>axillare</i>	Gentianaceae	mamejavo	BH24377	Herb	Leaves	Dry leaves decoction is given to a patient of diabetes. Decoction of leaves is given in common fever, malaria and dropsy. Infusion of leaves considered blood purifier. Roasted leaves bandaged on head to relieve headache.
<i>Euphorbia hirta</i> L.	Euphorbiaceae	dudheli	BH25614	Herb	Latex, root, leaves	Latex used in warts and skin diseases like leukodermal spots. Paste of root is mixed with honey and given to lactating mother to start or to increase milk, yield. Decoction of leave is employed in asthma, coughs, bronchitis, eczema, colic and spermatorrhoea. 50 g piece is crushed with 10 ml water. The juice is strained through cloth and given once a day to clean the kidneys.
<i>Euphorbia neriifolia</i> L	Euphorbiaceae	thor	BH23979	Shrub	Whole plant, latex, branches, leaves	The plant is used as field fencing. Latex is used to cure body pain. Small dried branches are fed to goat. Dry branches used as fuel. Roasted paste of stem is applied on injured part of body to reduce swelling. Latex is heated with common salt and water, it is given in whooping coughs, dropsy, colic, jaundice, enlargement of liver, asthma and leprosy. 1 table spoon extract prepared from warm leaf is administered thrice a day for 3 days to treat cold and fever in children.
<i>Ficus benghalensis</i> L.	Moraceae	vad	BH24865	Tree	Whole plant, twig, fruit, leaves, stem bark, root twig	Fruits are eaten by tribals for seminal weakness, sexual debility, spermatorrhoea and sex tonic. Leaves used as a fodder by elephant. Latex used in rheumatism, lumbago and cracked feet. Infusion of stem bark is considered useful in diabetes. Tree is planted near the village for its shade. The tender adventitious root crushed with water and given internally on fracture of the bones and bandaged on which part

						fractured. Tender young leaves are employed in diarrhoea, cough and toxemia. Adventitious root twig is used as toothbrush in toothache.
<i>Ficus racemosa</i> L.	Moraceae	umbaro	BH25952	Tree	Leaves, stem bark, wood, latex, fruit	Leaves used as fodder. The paste of bark is applied on skin troubles and ulcers. Dried ripe fruits are used for preparing country liquor (dam). The wood is used in preparation of utensil like spoon and dough plate and preparation of musical instrument 'tamburo'. The latex is applied on boils, eye diseases and mump. Decoction of stem bark is used in washing of the wounds for fast healing. Tender stem is used as a toothbrush. Unripe fruit is employed in hemoptysis, jaundice, menorrhoea and diarrhoea. Decoction of the bark is given in diabetes, rheumatism, bleeding piles and leucorrhoea.
<i>Ficus religiosa</i> L.	Moraceae	pipalo	BH25573	Tree	Leaves, bark, milky juice	The tree is held in great veneration by all the Hindus. Common. Leaf apex is used get out the insect in case it is introduced in the ear. Tender leaves and stem bark crushed and mixed with honey and given orally to the children for mouth ulcers. Decoction of bark is employed in asthma, toxemia, cough and spermatorrhoea. Milky juice is applied on cracked feet. Tender branches are used as toothbrushes.
<i>Flacourtia indica</i> (Burm.f.) Merr.	Salicaceae	lodri	BH24228	Shrub	Leaves, bark, root	Leaves used as fodder. Wood is used in preparation of ploughs and handles. Bark crushed in 'sesame oil' is used as ointment in gout or rheumatism. Infusion of leaves is given in cough and chest diseases. The infusion of root bark is given orally to remove poisonous effect, caused due to any reptile bites.
<i>Gardenia resinifera</i> Roth.	Rubiaceae	dikamali/ malan	BH25268	Tree	Gum, leaves, fruit	The gum-resin is called 'Dikamali' which is not pungent, increase appetite is applied on abdomen to relieve. 2 gm crushed gum in water is given in constipation also hysteria, flatulent dyspepsia due to teething in children. Unripe fruit is eaten by people. Crushed leaf paste is applied on wound of cow or buffalo.
<i>Gloriosa superba</i> L.	Colchicaceae	vachhnaag	BH23372	Climber	Tuber, leaves	Tuber is regarded as a tonic but large dose poisonous. Paste of tuber applied externally on neuralgic pain and skin troubles. It is also used in rheumatism, piles, gonorrhoea, leprosy, colic and intestinal worms. Powder of dry leaves is mixed with buttermilk and given internally in jaundice. Juice of tuber is introduced in the ear to cure earache.
<i>Gmelina arborea</i> Roxb.	Verbenaceae	savan	BH24427	Tree	Wood, leaves, root, fruit	Wood is used in preparation of furniture and other implements and musical instrument. Paste of fresh leaves is applied on head to cure headache. Decoction of ripe fruits is given internally in fever. The root

						is an ingredient of the 'Dashmula'. Decoction of root is given in fever, indigestion, to increase breasts milk and to protect embryo. Paste of leaves is applied on temple in headache and common fever. Fruit powder is homogenized with milk and cow ghee. About 25 ml of it is taken orally per day during the fifth month of pregnancy for better settlement of foetus.
<i>Gossypium herbaceum var. herbaceum</i>	Malvaceae	desi kapas/ cotton	BH23628	Herb	Seed, stem, leaves, root	Cultivated in the field for its cotton seeds. Important materials derived from cotton are fibre. Seeds yield edible oil and cake is used as cattle feed. The dried stem is used as fuel and preparation of roof of nesses. Fresh leaf juice is given orally to the women for leucorrhoea. Paste of root is mixed with wheat flour and curd and ointment on mammalian gland for tumour occurred in mammalian gland. The ash of plant is snuff to cure check the blood in the nose. Seed oil is good application to the head to cool the brain and to cure headaches. The juice of fresh leaves with lime is given in diarrhoea. Rice grains are dipped in water. Root powder of this plant is mixed in this water. 2 table spoon of this is given daily in the morning to patient suffering from leucorrhoea.
<i>Grewia tenax</i> (Forsk.) Fiori.	Malvaceae	gangeti	BH23469	Shrub	Fruit, branches, leaves, stem bark, root, wood	Ripe fruits are eaten by children. Dry branches are used as walking sticks. Fresh and dry leaves used as fodder for goat and cattle to increase milk production. The stem bark yields fibres, which is used in preparation of ropes and strings. The root paste is bandaged on animal wounds for fast healing. The root paste is applied externally on snakebite. Green leaves crushed and fed to animal to help expel the placenta after delivery. Wood is being used for making 'Sambelu' a giant pestle like tool used for pounding food grains.
<i>Grewia tiliifolia</i> Vahl	Malvaceae	dhaman	BH23728	Shrub	Bark, branches, fruit, wood, leaves	Decoction of bark is given in dysentery. Bark yields a cordage fibre. Branches used in preparation of hut. Ripe fruits are edible. Wood is used in preparation of tool handle. Tender branches and leaves are used as fodder for cattle to increase milk production.
<i>Helicteres isora</i> L.	Malvaceae	maradasingi	BH24008	Shrub	Bark, leaves, branches, root, wood, fruit	Bark yields strong fibres. Leaves and tender branches used as fodder. Fruits are having a medicinal value it is given in colic complains. Juice of root is beneficial in stomach affections. It is also useful in diabetes. Wood is used for gunpowder charcoal. The powder of dry fruit is taken orally with water twice or thrice a day for 3-4 days to cure stomach

						ache. The powdered fruit is mixed with curd and given orally to cure diarrhoea among children. Root paste is applied on boil.
<i>Heliotropium indicum</i> L.	Boraginaceae	hathisundho	BH23477	Herb	Leaves, root	Leaves yields a dye. Decoction of leaves used in urticaria and fevers. Decoction of root is given internally in coughs and fevers. The paste of leaves is applied externally on boils, ulcers, sores and strings of insects and reptiles. The juice of fresh leaf is given orally to cure sour throat and tonsils.
<i>Hemidesmus indicus</i> (L.) R. Br.	Apocynaceae	anatmuli/ kpuri madhuri	BH23128	Herb	Root, stem, latex	The root is given internally to cure burning urination and other urinary troubles. Paste of root is applied on any skin diseases. Stem is used as a toothbrush to cure toothache. The roasted root is considered a blood purifier. The root paste is used specific for swellings, rheumatic pains, boils and ulcers. Root used as diuretic and tonic, for treating diarrhoea, fever and wounds. Latex of the plant introduce in the eye to cure corneal ulcer. The root rubbed with water and given orally on colic complaints. The powdered herb is used in the preparation of hair oil as hair tonic for good hair growth.
<i>Holarrhena pubescens</i> Wall. ex G. Don	Apocynaceae	indrajav	BH25587	Shrub	Stem bark, seed, leaves, wood, fruit	The fresh bark is crushed and given internally to cure amoebic dysentery. The seed powder is mixed with curd and given orally early in the morning to cure amoebic dysentery and any colic complaints. The seed powder is smoked in pipe to cure asthma. It is also used in remove the bladder stone. Fresh leaves used as fodder. Wood is used in preparation of toys. Fresh tender twig is used as toothbrush to cure toothache. The paste of unripe fruit is applied externally on snakebite or any reptile's bite. Stem bark crushed in curd is given twice a day for 10 days during burning sensation in urinary tract.
<i>Holoptelea integrifolia</i> (Roxb.) Planch.	Ulmaceae	charal	BH25483	Tree	Seed, leaves, fruit, wood, bark	Seed contains fatty oil. Raw or roasted seed are edible. Leaves and fruits used as fodder. The wood is used in preparation of agricultural implements, building purpose, match boxes and paper pulp. Paste of tender leaves used in ringworm. Leaf paste applied over cuts and wounds as an effective cure. Bark crushed and applied over heat boils for dissolution and relief.
<i>Impatiens balsamina</i> var. <i>balsamina</i>	Balsaminaceae	takmaria/ gulmendi	BH23497	Herb	Whole plant, leaves, flower	Leaves and flowers are yields dye it is used as a substitute for henna (Mehdi). Plant is used as fodder. Paste of leaves is applied on boils, wounds and swelling. Plant juice is used against rheumatism.

<i>Indigofera tinctoria L.</i>	Fabaceae	gali	BH24468	Herb	Whole plant, leaves, root, bark	Paste of the leaves externally used for sores, old ulcers and piles. Infusion of root is given orally in hepatitis and urinary complaints. Paste of root bark and stem bark mixed and applied on wasp sting and bees or bites of insect and snake. Whole plant is used to obtain blue dye. Aerial parts CNS depressant and hypoglycaemic.
<i>Jatropha curcas L.</i>	Euphorbiaceae	jangli arandi/ jamalghota	BH23381	Herb	Whole plant, latex, seed, leaves, fruit	Plant is used for making fence. Latex of plant is considered that it blinds the eyes. Seed oil is used in 'Divetiu' for getting light. The juice of leaves is applied externally in eczema, scabies and ringworm for three days. The fruits are considered poisonous. Decoction of leaves is used as mouthwash to strengthen gums. Root bark is applied as a paste on rheumatism. Fresh twigs are used as toothbrushes. Leaves recommended for oral use for jaundice. The children collect the latex in a cup devised from the leaves of <i>Butea monosperma</i> and uproot a tender grass culm to form a loop of desired size at its one end. They dip the loop in the latex and blow air in to the loop with a film of latex to form balloon for recreation.
<i>Jatropha gossypifolia L.</i>	Euphorbiaceae	vilayati arandi	BH25457	Herb	Seed, latex, leaves, root	Seeds contain fixed oil. Latex used for ulcers and check bleeding in fresh wounds. Roasted leaves are bandaged on head to relieve headache. Roots are considered to cure leprosy. Paste of leaves is applied on boils, eczema, mastitis and swelling. About 20 ml leaf extract is taken for seven days at bed time for contraction of abdomen after delivery.
<i>Justicia adhatoda L.</i>	Acanthaceae	ardusi	BH24031	Herb	Leaves	The leaves are very efficacious as remedy in all sorts of coughs and colds, bronchitis and asthma. The crushed leaves with water given internally to the female on the post deli very treatment. The dried leaves are smoked as cigarettes with much relief in asthma. Paste of leaves is given in T.B. treatment. The leaves are an old remedy in Hindu medicine.
<i>Kigelia africana subsp. africana</i>	Bignoniaceae	topgola	BH24904	Tree	Bark, seed, wood, fruit juice	Decoction bark is used externally as a ointment to cure rneumatism. Roasted seeds are edible. Wood is used in preparation of boxes. The juice of fruit is used as dressing for ulcers, syphilis and rneumatism. Fruit paste is applied locally for leprosy.
<i>Lannea coromandelica (Houtt.) Merr.</i>	Anacardiaceae	mavedi	BH24677	Tree	Leaves, wood, fruit	The paste of leaves boiled in sisamum oil (Tal oil) and heated it is externally applied on body to cure body pain. The fresh juice of leaves is emetic it is given in an overdose of opium or other narcotics. Wood

						is used in preparation of utensil, like wooden jar and construction of house and furniture. Roasted leaves bandaged on muscular pain. The fruits are given with salt internally on indigestion.
<i>Lantana camara subsp. aculeata</i> (L.) R.W.Sanders	Verbenaceae	indradhanu/a bhagani	BH23952	Shrub	Twig, leaves, root	It is used as field fencing. Cultivated in the garden. Twig is used as a toothbrush. Paste of leaves is applied on rheumatism, swelling, ulcers and boils. Decoction of root is employed as mouth wash in toothache and deodorant. Leaves are used as insect repellent.
<i>Lawsonia inermis</i> L.	Lythraceae	mahendi/henna	BH23700	Shrub	Leaves, seed, stem bark	Paste of leaves is used for colouring palms of hands, feet. It is also used for dyeing hair and to cure dandruff. Leaves contain a dye. Decoction of the leaves is given with sugar in jaundice. Paste of leaves mixed with buttermilk and applied externally on feet itching during monsoon and wounds for fast healing. Infusion of stem bark is used internally to cure urinary calculi. Seeds are given in fever and burning micturition. Equal amount of leaf, turmeric and catechu are crushed and the paste obtained is applied externally to cure eczema. Root paste is applied to cure keindra.
<i>Luffa acutangula</i> (L.) Roxb. var. <i>Amara</i> .	Cucurbitaceae	kadva turiya	BH25203	Climber	Fruit, root, leaves, seed	Green unripe fruits used as vegetable. Roots rubbed with water and given orally in urinary trouble and calculi. Leaves are applied as paste on leprosy and swellings. Seeds are given in coughs. Powder of its dry fruit is applied externally on piles. Leaf and root are crushed together and applied to cure leprotic wound. Root crushed in cowmilk is given with sugarcane early in the morning for 10 days to cure dysuria.
<i>Madhuca longifolia</i> var. <i>latifolia</i> (Roxb.) A.Chev.	Sapotaceae	mahudo	BH25657	Tree	Seed, flower, petals, fruit, stem bark, leaves	Seed oil is used as a dressing for skin diseases and chronic rheumatism. Paste of flowers is edible as a raw or cooked. Petals are used in preparation of 'Daru' (Country wine) by fermentation. The fruits are fed to the cattle and cow to remove placenta after delivery. The stem bark is used in bathing as brushes to cure of itch and other skin diseases. The paste of leaves and stem bark used in sting by any poisonous reptiles. Decoction of bark is given in diabetes and rheumatism. Stem bark along with those of <i>Bridelia montana</i> , <i>Dalbergia latifolia</i> and <i>Oroxylum indicum</i> (1:1:1:1) crushed and 12 gm extract is administered 4 times a day for dysentery in Cattle. Fruits are cooked with milk and given daily for strength and vitality. The flowers are fermented to prepare a type of country liquor.

<i>Mangifera indica</i> L.	Anacardiaceae	ambo	BH25354	Tree	Fruit, leaves, wood, seed, flower	Ripe fruit 'keri' is edible. Unripe fruit is used in preparation of pickle. Roasted seed cotyledons are edible. Leaves are used in an auspicious garland hung over the gate, during marriage ceremonies and festivals. Wood is used in preparation of furniture and utensil like dough plate, spoon. The wood used for burning in 'Hawan' at several occasions for happiness and prosperity. Crushed seed cotyledons, mixed with curd and given to cure cholera. Sap of plant is applied externally on eye to cure itching. Flowers boiled in castor oil and 2 drops of filtered oil is introduced in the ear to cure earache. Rind of unripe fruit is mixed with milk and little honey; it is given orally in bleeding dysentery. Decoction of leaves used in mouthwash to cure toothache and loss of voice. 2 table spoon powder of dried leaves is given in diabetes, every day.
<i>Manilkara hexandra</i> Dubard.	Sapotaceae	rayan	BH25536	Tree	Twig, fruit, latex, leaves, seed, bark, wood	Ripe fruits are edible. Latex is used in toothache. Paste of leaves and seeds are applied on scorpion sting. Wood yields strong and dense timber. Decoction of leaves and stem bark is given in leprosy and leucorrhoea. Twigs are used as toothbrushes. Twigs are common fodder for animals in Barda Hills. Stem bark decoction (5 tea-spoons) administered twice daily for 2 days by Rabari for diarrhoea.
<i>Mentha spicata</i> L.	Lamiaceae	fudino	BH24701	Herb	Leaves, shoots	Fresh leaves are used as a condiment. Fresh leaves boiled with tea for pleasant taste. Infusion of leaves is given orally with sugar for infantile trouble, vomiting during pregnancy and hysteria. It is also given to reduce the bleeding and pain during menstrual period. Fresh leaf juice introduced into the nose to cure cold. Tender shoots and leaves are used to prepare 'Sarbat' and taken to overcome thirst. Leaf decoction along with honey is given to treat insomnia and to increase appetite, generally at bed time.
<i>Mirabilis jalapa</i> L.	Nyctaginaceae	gulbas	BH24457	Herb	Leaves, root, flower	Cultivated in the garden as ornamental plants. The boiled leaves poultice used for resolving boils. Paste of root is applied on carbuncles. Powder of dried root is given in constipation, dropsy and piles. The root (about 8 gm.) is made into paste and given once a day for 3 days for piles. Flower used as time indicator and offered to deities. Root tied to waist for smooth delivery.
<i>Momordica charantia</i> L.	Cucurbitaceae	karela	BH24900	Climber	Fruit, leaves, seed, root	Plant is cultivated for its unripe fruits, which is used as a vegetable. The fresh juice of unripe fruits is given orally in piles and diabetes. 1 table spoon the powder of dried fruit is given orally on diabetes for a

						month. The paste of fresh leaves externally applied on the eyes to cure night blindness. Seeds are given for expelling round worms and liver worms. Paste of root is applied on burns, eczema, itches, boils and swelling. Inhabitants of Barda Hills use paste of its root to reduce swollen breasts. About 15 ml of extracted fruit juice is mixed with equal amount of water and given twice a day for three days in urinary tract infection. Spices are strictly prohibited during the treatment.
<i>Moringa oleifera Lam.</i>	Moringaceae	sargavo	BH24961	Tree	Fruit, bark, leaves, latex	Unripe & fruits used as a vegetable and good for rheumatism. Paste of the bark is applied externally on wounds for quick healing. Leaves are given to cattle for good health and better lactation after delivery. Latex is applied externally to cure whitlow. Plant is used for sore throat.
<i>Morus alba L.</i>	Moraceae	shetur	BH24187	Tree	Fruit, leaves, bark, root	Cultivated at dooryard. Fruits are eaten by children and birds. Leaves used as cattle fodder. Plant is well known because the leaves are well known for feeding silkworm. Fruits are given early in the morning to cure burning urination. Paste of leaves is applied on wounds. Leaves and tender branches are chewed in sore throat and tonsillitis. Young tender leaves are crushed and used for curing dysentery. Bark or leaf decoction has antispasmodic properties. Leaves are anthelmintic. Decoction of root is given thrice a day for 10 days to cure haematuria.
<i>Murraya koenigii (L.) Spreng.</i>	Rutaceae	mitho limdo	BH25682	Tree	Leaves, root	Cultivated at dooryard and in garden. Leaves are aromatic and used to flavour curries as condiments. Juice of fresh leaves is given for checking vomiting. Juice of root is given for relief from renal pain. 1 table spoon leaf extract is given twice a day for six days in malarial fever. Leaf paste is used to keep away parasites surviving on hen and other domestic birds.
<i>Musa paradisiaca L.</i>	Musaceae	kel	BH23319	Tree	Fruit, leaves	Cultivated for its fruits. Plant is kept at the gate of marriage mandap as an auspicious sign to married men in all the Hindu religious. Ripe fruits are edible It is considered very nutritive. Decoction of leaves is given in leucorrhoea. Unripe fruits are used as vegetable. Fruit is used as 'Prasad' in several holy ceremonies. Fruits mixed with milk and fed to animal against swelling of abdomen and matistitis.
<i>Nicotiana tabacum L.</i>	Solanaceae	tamaku	BH25826	Herb	Leaves, stem	Cultivated for its leaves which is used in manufacture of cigarettes, beedi and used in hookah tobacco. Powder of stem and leaf is used in snuff. Powder and extracts of plant is used in agricultural insecticides.

						Powder of dry leaves or stem mixed with water and applied on honeybee and wasp bite. Powder is also used to kill microbial flora in wound of animal. Crushed leaves and mixed with water and applied on scalp for killing lice. Green leaves are warmed and kept with butter on swollen areas to get relief from pain and to reduce swelling.
<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	parijatak	BH24060	Herb	Flower, branches, leaves, seed	Flowers fragrant it is used in preparation of garland. The branches used in preparation of large huge container to store grain. 'potu' or 'kothi'. Leaves mixed with leaves of (<i>Pergularia deamia</i>) crushed and paste is made it is applied on skin diseases. Seed crushed and applied on scalp to cure dandruff. Fresh leaf juice is applied externally on skin diseases. Decoction of leaves is given in rheumatism, stomatitis, sciatica, cough and constipation. 2-5 ml juice extract of leaves along with juice of <i>Adhatoda</i> leaves is taken 3 times a day for 2-3 days to control fever.
<i>Ocimum tenuiflorum</i> L.	Lamiaceae	tulsi	BH23255	Herb	Whole plant, root, leaves	Plant is cultivated in dooryard because it is considered sacred plant the Hindu religions and used in Pindan ceremony. Plant is having insecticidal and antibacterial properties. Decoction of root is given orally mixed with 'sunth' (<i>Zingiber officinale</i>) and given in malarial fever. Fresh leaves chewed for relief in cough and cold. Paste of leaves is applied on ringworm, animal bite, scorpion sting, insect bite, scabies, wounds, leprosy and itches. 10 ml juice of fresh leaves mixed with juice of root of <i>Boerhavia diffusa</i> is given twice a day for 8-10 days in chronic liver problems. It is a woman's divinity per excellence.
<i>Oxalis corniculata</i> L.	Oxalidaceae	changeri/ navari	BH25471	Herb	Whole plant, leaves, shoot	10 ml fresh leaf juice is given in dyspepsia, piles and anaemia. Infusion of leaves given orally to cure any eye complaints. Leaves used as a vegetable and used in preparation of chutneys. Paste of leaves is applied on swelling part. Juice of fresh leaves is given in scurvy. Whole plant is used for preparing chutney. Leaf juice is used to pick out thorn from skin. Crushed shoot stolon roasted with little mustard oil cures dysentery.
<i>Phoenix sylvestris</i> (L.) Roxb.	Areaceae	khajuri	BH23342	Tree	Leaves, fruit, seed, root	Dry leaves are used to make headgear and broom. It is also used in preparation of hut. Ripe fruits are edible. It is also used in leprosy and sexual debility. Paste of the powdered seed is applied on head to cure headache. The ash of seeds mixed with any edible oil and applied on skin for scabies. Root is employed in nervous debility and toothache.

						Made mixture of fruit, fruit of <i>Vitis vinifera</i> L. , rhizome of <i>Zingiber ojjicinale</i> Rosc. , sugar cube and ghee, add this mix in cow milk and give twice a day for 4 days to cure fever.
<i>Phyllanthus emblica</i> L.	Phyllanthaceae	amla	BH25025	Herb	Twig, fruit, juice, leaves, seed, bark	Fruits have a rich source of vitamin C. Fruits are edible. It is used in preparation of pickle. Dry fruits are used in preparation hair dyes and used for shampooing hair. Dry fallen leaves are used as fodder. Juice of fruit is mixed with sugar and given orally on burning urination trouble. Infusion of seed mixed with powdered bark of 'jambu' (<i>Syzygium cumin</i> i) and given orally in diabetes. Dried fruits is used in preparation of trifalachurna. Twig is used as a tooth brush. Decoction of bark and leaves is used as mouthwash sore throat and toothache. Used in Navratri pooja. Fruit powder and sugar mixed properly in ghee and honey are consumed by men as an aphrodisiac.
<i>Piliostigma malabaricum</i> (Roxb.) Benth.	Fabaceae	kanchnar	BH25085	Tree	Leaves, bark	Decoction of bark is given in diarrhoea. Leaves used as fodder. Wood used for agricultural implements. Decoction of leaves is employed as mouthwash in sore throat and stomatitis, dropsy and rheumatism. The leaf paste of this plant mixed with latex of <i>Jatropha curcas</i> is administered to cure jaundice.
<i>Plumeria rubra</i> L.	Apocynaceae	khad champo	BH23862	Shrub	Bark, leaves, root, shoot, flower	Cultivated in the garden as an ornamental plant. Externally the juice of plant is useful for the treatment of rheumatic pains. Decoction of bark is used as vaginal douche in leucorrhoea. Poultice of leaves is applied on swellings. Flowers are used in fevers. Roots is cooked in castor oil and crushed and applied to cure bruises. 158 A piece (8-10 cm) of young shoot is inserted in to vagina; it should be done at night and kept whole night for abortion.
<i>Pongamia pinnata</i> var. <i>pinnata</i>	Fabaceae	karanj	BH23191	Tree	Twig, seed, Leaves, Stem bark	Twig is used as toothbrush it relieves promptly toothache. Seed oil is very useful in skin diseases and it is mixed with lemon juice and applied on scalp to cure dandruff. Fresh leaves juice is applied on eczema. Roasted seeds are eaten to stop vomiting. Powdered seeds are given in fevers, rheumatism, sluggish liver. Decoction of leaves is given in rheumatism, diarrhoea and cough. Decoction of stem bark is given in bleeding piles. Flowers employed in diabetes.
<i>Ricinus communis</i> L.	Euphorbiaceae	arandi/ diwela	BH24771	Herb	Seed, leaves, stem, dried plant	Plant is Cultivated for its seeds, which yield a castor oil used in dysentery. Roasted leaves are bandaged on head to relief headache. Dried stem is yields fibre, which is used in preparation of ropes and

						strings. Decoction of root is applied in skin diseases. Castor oil mixed with honey and given in morning and evening to cure asthma and to avoid constipation. 2-5 ml seed oil with ginger juice is given once a day in rheumatoid arthritis and also applied externally. Oil is applied on feet incase feet cracked. Leaves heated over flame and applied over regions of pain and swelling from wounds for cure. Dried plant used in fencing the nesses and preparation of roof and also fuel too.
<i>Sapindus laurifolius</i> Vahl.	Sapindaceae	aritha	BH24964	Tree	Fruit, leaves	The powder of dried fruits is used for washing hairs, clothes and jewellery. The leaves are used in baths for relief of painful joints and gout. The powder of dried fruit mixed with water as an emetic. Paste of leaves and fruits are applied on snakebite. The husk of fruit is chewed for cough. 1 table spoon juice of leaves is mixed with 1 gram powder of black piper and introduce in nose to cure headache. The pulp of fruit is ointment on body to cure burring urination. Fruit crushed in water is applied on abdomen to cure enuresis.
<i>Senegalia chundra</i> (Roxb. ex Rottler) Maslin	Fabaceae	kher	BH23847	Shrub	Leaves, Root, Bark, Fruit	Decoction of root, leaves, stem bark and fruits used to take bath to cure leucodermic spots. Wood is used in preparation of agricultural implements. The 'katha' is extracted from heartwood of old trees. Katha is used in pan preparation and used for printing and dyeing purposes. Wood is used in preparation of wooden pestles. 'Sambell'. Gum is given to the pregnant women to protect embryo. A small amount of 'katha' is applied over ulcers in the mouth for fast healing. Decoction of stem bark is used to wash the wounds and ulcer as it is a good antiseptic.
<i>Senegalia pennata</i> (L.) Maslin	Fabaceae	khervel	BH24687	Shrub	Flower, Leaves, Bark, Wood, Pods	Flowers, leaves and unripe pods used in painting. Fibres are obtained from bark. 2-3 drops bark decoction is dropped in eyes of buffalo to cure eye diseases. Its wood is used as fuel.
<i>Senna auriculata</i> (L.) Roxb.	Fabaceae	aval	BH25218	Herb	Branches, bark, inflorescence , seed, root, stem, leaves, gum	Tender branches are used as toothbrushes. The bark is very useful in tanning leather. Decoction of the inflorescence is excellent remedy for diabetes, it is also used as pessaries by women to check excessive menstrual flow. Infusion of seed is dropped in the eye in case of eye troubles. Decoction of root is used in skin diseases. Dry stem is used as fuel. Paste of leaves is bandaged on swellings due to dislocation of bone. Decoction of root bark is given orally to remove abdominal complaints, vomiting and diarrhoea. The dry long branches are used

						in preparation of wall of the hut and 'gate'. Tender branches are also used in preparation of basket. Gum of the plant is mixed in latex of <i>Ficus benghalensis</i> and about 20 ml. of this mixture is given four times a day for about a fortnight to expel urinary stone.
<i>Sesamum indicum L.</i>	Pedaliaceae	tal	BH23408	Herb	Whole plant, seed, stem, flower	Cultivated in the field for its seeds. Seeds yields edible oil, which is used in rheumatism. Seeds are used in 'Havan' or ceremonial sacrifice. The cake is used as fodder. Dried stem is used as fuel. Seeds are chewed on snakebite, scorpion bite and urinary trouble. Dry plant is used to prepare roof of huts. Dry seeds are powdered and mixed with ghee and fed to animal to treat foot and mouth disease. Extract of flower mixed with honey and cow milk is given twice a day for 15 days to cure calculus.
<i>Solanum nigrum L.</i>	Solanaceae	piludi	BH25484	Herb	Leaves, fruit	Juice of the leaves is externally used in local dressing of wounds. Decoction of the leaves is used for washing wounds and painful part. Externally the juice of fresh leaves is applied in ringworm and skin diseases. Roasted leaves bandaged on swollen and painful testicles. Ripe fruits are used in piles. Leaves are used as 'bhaji' because it is avoiding bile 'pit'. 1 to 2 drops of fresh leaf juice is introduced in the ear to remove the insect. Leaf paste and branches are used in Jaundice and high fever.
<i>Syzygium cumilli (L.) Skeels.</i>	Myrtaceae	jambu/ jamun	BH24994	Tree	Fruit, seed, stem bark, leaves	Ripe fruits are edible. 5gm seeds powder is given orally in diabetes for one month. The decoction of stem bark and root bark is given orally in diabetes. Paste of seed is externally applied on the small boil on the body. The leaf juice is applied on scorpion bite. Tender branches are used as toothbrushes. Infusion of fresh tender leaves and fruits are regarded effective remedy for miscarriage and sterility. Powdered fruit stones along with stones of <i>Mangifera indica L.</i> are mixed 5-10 gram powder is given with water 4-5 times a day to treat cholera.
<i>Tamarindus indica L.</i>	Fabaceae	amli	BH23135	Tree	Leaves, seed, wood, fruit, stem bark, pods	Tender leaves and flowers are eaten and it is used in preparation of 'chatni'. Roasted seeds are edible. Wood is used in preparation of agricultural implements and tool handle. Ripe fruits are used in preparation of curries, chatni and surbat. Leaves are used as fodder. The pulp of ripe fruits is used in cleaning utensils. The pulp of ripe fruits is given orally to avoid constipation. The seeds are rubbed with water and made a paste is applied on scorpion sting. The paste of

						leaves is applied on wound and ulcers for fast healing. The decoction of stem bark is given to cure diarrhoea. The powder of stem bark mixed with cured and given early in the morning to cure bleeding piles. Pods and leaves mixed with water are fed to animal to treat the stomach pain after eating castor.
<i>Tephrosia purpurea</i> (L.) Pers.	Fabaceae	sarpankho	BH24696	Herb	Root, seed, leaves	Plants are used as brooms. Decoction of root is administered orally on rheumatism. Root is chewed for emetic. Roots are fed to animal against general swelling and rheumatism. Decoction of root is mixed with 'kali mari' and given orally on diabetes. Paste of seed is applied externally on scabies. Paste of root is placed in to vaginal wall for abortion. Paste of leaves is applied on eczema, boils and wounds. Aqueous extract of the whole plant is applied on entire body to cure skin diseases in carnal. 50 gm fresh crushed roots are taken with a cup of water twice a day for two days in dysentery.
<i>Terminalia anogeissiana</i> Gere & Boatwr.	Combretaceae	dhavdo/indruk	BH24192	Tree	Whole plant, wood, stem bark, leaves, branches, gum	The wood is used for coal, preparation of agricultural implements and tool handles. Decoction of bark is given orally in colic and liver complaints. Dry leaves are used as a fodder for goat and sheep. The tender branches are used in preparation of gate 'zamnpo'. The gum is a tonic and given during winter on weakness. Stem bark is chewed to cure cough and toothache. The powder of stem bark mixed with warm water and applied externally on injured part of body. One table spoon of juice of stem bark is given thrice a day for about a week to treat cough and asthma.
<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Combretaceae	baheda	BH23446	Tree	Fruit, stem bark	Fruits are used in preparation of 'Triphala churan'. Powder of fruit is heated in castor oil and applied on head for falling hair. Fruits are collected by tribals and sold in market. Stem bark is chewed to cure cough. Decoction of stem bark is given in leucorrhoea and anaemia. Unripe dried fruit is used as application along with honey in ophthalmia.
<i>Ticanto crista</i> (L.) R.Clark & Gagnon	Fabaceae	kachka	BH23529	Climber	Leaves, seed, root bark	Decoction of tender leaves IS employed III liver diseases. It IS also used in fever. Leaves are applied to the gums for relieving toothache. The crushed seeds are given internally to cattle as well as children to remove worms in alimentary canal. Leaf paste is heated and applied externally on swelling. Decoction of powdered seeds is given orally in fever, asthma, colic, diabetes, T.B., piles, diarrhoea and jaundice.

						Paste of root bark is applied on scorpion sting and snakebite. Juice / powder of seeds (dry or fresh) is fed to animal against constipation.
<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomson	Menispermaceae	galovel	BH23651	Climber	Stem, root, leaves	Plant twine around Mango and Neem tree is used as medicine. Chopped plant is fed during pregnancy in cattle. Crushed stem is kept overnight and then juice employed for liver disorders, fever, diabetes and general debility. Plant paste is given thrice a day for week when blood passes with urine of human being. Powder of roots is consumed (1 table spoon twice a day) to cure breathing problems, piles and ulcer diseases. Crushed root is given orally to cause vomiting in snake bite. Maldhari used root as rope during collection of fodder for camel. Main foc.lc.ler for goat and camel in Barda region. Tender leaves are tied on abscesses. A garland made up of small pieces of the stem is known as 'Kamala ni mala' in tribal races and then hung around the neck to cure jaullc.lice. The bathing is advised with decoction of stem to the female in post delivery treatment. Leaves along with those of Fruits of Aegle mannelos and curculigo or chioides (each 50gm) pounded and extract given orally daily for 10 days in veterinary diseases anthrax.
<i>Trigonella foenum - graecum</i> L.	Fabaceae	methi	BH25148	Herb	Whole plant, branches, seed, leaves	Tender branches and leaves are used as vegetable. Seeds are eaten raw or cocked. Poultice of seeds is applied on boils and ulcers. Whole plant is used as fodder. Paste of leaves is applied on swelling and burns. Fresh leaves and seeds mixed with fodder are fed to animal suffering from rheumatism. Seeds and jaggery are mixed and fed to cow and buffaloes to enhance lactation.
<i>Vachellia jacquemontii</i> (Benth.) Ali	Fabaceae	bavali	BH24027	Tree	Leaves, Bark, Root, Wood	Tender branches and leaves used as fodder. Bark used for tanning. Plant may be used as a sand binder in arid zone. Common in sandy soil. The churner 'valonu or ravayo' is also made from wood of this plant. Decoction of root is given internally on chronic rheumatism.
<i>Vachellia nilotica</i> (L.) P.J.H.Hurter & Mabb.	Fabaceae	desi baval	BH23605	Tree	Wood, Stem, Seed, Bark, Leaves	Tender branches and leaves used as fodder. Young twigs are used as toothbrush and cleaning the tongue the flexible fibres help cleaning teeth. Roasted seeds are eaten. Decoction of stem bark is used to wash the mouth on toothache. Gum is fried in ghee and given for better health and sexual debility. Wood is used in preparation of the wooden pestel 'sambelu'. The powder of stem bark is given internally on asthma. Decoction of the bark is used in bath to cure skin disease.

						Paste of inner bark applied externally on honeybee sting and wasp sting or any insect bite. Tender leaves chewed for mouth ulcers. Poulitice of leaves bandaged on eye to cure eye diseases and avoid the heat of eye.
<i>Vitex negundo</i> L.	Lamiaceae	nagod	BH25374	Shrub	Leaves, bark, wood, root, seed	Roasted leaves are bandaged on painful joints, rheumatic swelling and headache. Decoction of leaves is used in bath, for relieves the body pain and wash the wounds for fast healing. Leaf as vegetables is useful in paralysis. Paste of leaves and stem bark or root bark is applied externally on snakebite. Twigs are used as toothbrush. Wood is used as fuel. One-teaspoon root powder along with milk is given daily to ladies suffering from menstrual disorders and to restore fertility. Roasted seeds powdered, mixed with wheat flour in 1: 10 ratio and made into Laddoos are given to ladies once a day before child birth for easy delivery. 3-4 drops of leaf juice with <i>Leucas aspera</i> (Willd.) Spreng. is put in the nostrils in the treatment of poisonous bites in cattle.
<i>Withania somnifera</i> (L.) DunaJ.	Solanaceae	ashwagandha	BH23236	Herb	Leaves, branches, root	Infusion of leaves is given internally on fever. Decoction of leaves used in bath for skin diseases and relief body pain. Tender branches and leaves are chewed to cure asthma. Root decoction is mixed with milk and given orally to cure sterility in men. Decoction of powdered root is given to the ladies in leucorrhoea and frequent miscarriage. Paste of root is mixed with cow urine and bandaged on boil for fast pass formation and skin diseases.
<i>Woodfordia fruticosa</i> (L.) Kurz.	Lythraceae	dhvadi	BH25116	Herb	Flower, root, capsule	Decoction of flowers and flowering twig is used for washing wounds and cuts for fast healing. Flowers yield a red dye. Decoction of capsule is given orally on bowel complaints. Decoction of root is given internally on burning urination and any urinary troubles. Infusion of flowers is given orally in diabetes. Flowers are crushed with flowers of <i>Butea monosperma</i> Taub. and homogenized with old jaggery. Tablets are prepared from these are administered thrice a day for a week for conception. Dried flowers are used in dysentery. The young leaves are considered as blood purifier.
<i>Wrightia tinctoria</i> R. Br.	Apocynaceae	dudhi	BH25397	Herb	Stem bark, leaves, latex, wood	Decoction of stem bark and leaves are given orally to cure hay fever and malaria. Latex is applied on boil. Wood is used in preparation of toys and utensil like spoon. Stem bark along with Jeera and garlic is

						used against obesity. Infusion of stem bark (about 25 ml per day) for 10-15 days is administered orally as galactagogue.
<i>Zingiber officinale</i> Roscoe.	Zingiberaceae	adu	BH24747	Herb	Rhizome	Cultivated for its fleshy rhizome, which is used as condiment and preparation of pickle. Four to five drops of juice of rhizome are taken with honey twice a day for 4-5 days to cure cough. The poultice of rhizome is mixed with paste of Neem leaf (<i>Azadirachta indica</i>) and heated this warm poultice bandaged on eye to cure eye diseases and swelling. Powder of dried rhizome mixed with an alum and rubbed on teeth to cure teeth ache. Four drops of rhizome juice and equal quantity of lemon juice mixed with pinch of pure salt is given before meals to improve digestion.
<i>Ziziphus mauritiana</i> Lam.	Rhamnaceae	bordi	BH23218	Tree	Root, bark, leaves, wood, fruit	The decoction of root bark is externally used in piles. The dry branches are used as field fencing. The fresh and dry leaves are used as fodder. The wood is used in preparation of tool handle. The ripe fruits are sweet and eaten by children of Rabari. Paste of leaves is applied on boil. Roots are chewed and swallowed to cure stomach ache.