Home Garden Plant Diversity and Local Knowledge of Plant Species Supporting Biocultural Resilience in a Coastal Village of Northeastern Bali

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Abstract

Home gardens in the coastal–island landscape of northeastern Bali play a vital role in sustaining local livelihoods, biodiversity, and traditional ecological knowledge. This study analyzed the diversity and cultural significance of home garden plants in Dukuh Village, a coastal community situated on the northeastern slope of Mount Agung, Bali. Field surveys and semi-structured interviews (n = 9) were conducted in three hamlets differing in elevation and proximity to the coast. A total of 115 plant species across 47 families were recorded, including many species with multiple livelihoods and ritual uses. Ritual plants such as *Cocos nucifera* (used for offerings and temple decorations), *Cordyline fruticosa* (used in purification rituals), and *Plumeria* sp. (used for daily offerings) demonstrate the integration of home gardens with Balinese Hindu practices. Multipurpose species such as *Gliricidia sepium* and *Indigofera* sp. are used for livestock forage during the dry season, supporting household resilience amid changing climate conditions. Home gardens thus complement coastal livelihoods, including cashew and lontar palm cultivation, as well as small-scale tourism, while reinforcing cultural identity through the use of traditional plants. Despite the small sample size, the findings highlight how home gardens function as socio-ecological systems that link biodiversity, livelihood security, and biocultural knowledge in island communities.

Keywords

biocultural diversity, climate adaptation, coastal livelihoods, home gardens, Balinese Hindu rituals, traditional knowledge

1. Introduction

Balinese life society is inseparable from its local wisdom. The *Nyegara Gunung* philosophy is a local wisdom related to conservation activities used in Bali. This activity aims to integrate conservation from upstream (mountains) to downstream (sea). This philosophy serves as the primary foundation for the social forestry program in Dukuh Village, Karangasem. This concept is implemented concretely through collaboration between Dukuh Village (mountains) and Tulamben Village (coastal). Through *the Nyegara Gunung* approach, forest management in Dukuh Village (upstream) is integrated with marine ecosystem management in Tulamben Village (downstream), to create a healthy and sustainable ecosystem from mountains to sea (Anonim, 2022).

Dukuh Village, located in Kubu District, Karangasem Regency, has a unique geographical location in a mountainous region and forms part of the upstream ecosystem. Dukuh Village, located upstream of Tulamben near Mount Agung, is an arid area during the dry season, so the majority of the community has to buy water for their daily needs (Mahardika et al, 2022).

Forest conservation in Dukuh Village is crucial for maintaining water availability, which also impacts the marine ecosystem in Tulamben. This concept ensures that upstream conservation actions will benefit downstream areas. The social forestry program in Dukuh Village goes beyond physical forest management by planting various tree species to restore biodiversity and the ecological function of forests previously damaged by fires and logging. It also integrates the cultural and philosophical values of *Nyegara Gunung* (mountain state) to create holistic and sustainable conservation (Anonim, 2022).

Besides forests, a common land use in Dukuh Village settlements is home gardens, which have the potential to preserve biodiversity and maintain hydrology in the upstream area. However, information regarding plant species and their role in community life remains limited.

Home gardens are the open spaces around the house, which are also defined as an agroforestry system that is rich in various species of perennial and annual crops with a multisrata vertical structure and often combined with livestock (Kaswanto et al., 2016). Home garden (or *pekarangan* in Indonesia) is the oldest land use system management. This system is considered to have significant implications for local livelihoods, biodiversity conservation, and sustainable development because of the diversity of flora and fauna (Luo et al., 2024). Home gardens have been used throughout the world as an important additional source of food to improve household food security and nutritional diversity (Saediman et al., 2021). In Bali, particularly in Dukuh Village located on the northeastern coastal slope of Mount Agung, these gardens play a vital role in linking upland agriculture with coastal livelihoods. The village lies within a coastal–island transition zone, where people depend on terrestrial and marine resources. Many households combine farming with cashew, lontar palm, and small-scale tourism or trade along the nearby coast.

Climate change is a change of climate attributed directly or indirectly to human activity that alters the composition of the global atmosphere and natural climate variability observed in comparable time periods. Climate change causes floods, droughts, heat waves, cyclones, wildfires, and rising sea levels (Field et al., 2014). Climate change impacts on livestock will include effects on forage and feed, direct impacts of changes in temperature and water availability on animals, and indirect effects via livestock disease (Porter et al., 2014). In Balinese culture, home gardens reflect traditional ecological knowledge grounded in the Hindu philosophy of *Tri Hita Karana*—harmonious relationships among humans, nature, and the divine.

Species selection is not only determined by ecological suitability but also by religious and cultural significance. Understanding the plant diversity and cultural use of home gardens in this coastal context is essential for developing climate-adaptive, culturally rooted conservation strategies.

This study aims to (1) document home garden plant diversity, (2) analyze their functional and cultural uses, and (3) examine their contribution to coastal and island livelihoods under changing climate conditions. This study helps policymakers scientifically understand the dynamics of home garden plants and related local knowledge, especially the potency of home gardens, to ensure their livelihood is maintained due to climate change. This study fills a research gap by investigating home garden plants in Dukuh villages.

2. Methods

2.1 Study area

The research was conducted in Dukuh Village, Karangasem Regency, northeastern Bali (256–660 m a.s.l.), during December 2022 (Figure 1). The area lies on the volcanic slope of Mount Agung, about 5 km from the coast, and is characterized by a dryland ecosystem with limited freshwater availability. The elevation ranges from 256-660 m asl, with an average annual temperature of 26.91 °C. The total area of Dukuh Village is 234.72 km² and has a resident population of approximately 88.631 people. Most inhabitants belong to the Balinese Hindu community. We selected three hamlets: Buana Kusuma, Bahel, and Pandan Sari. Buana Kusuma and Pandan Sari hamlets are located near the forest, while Bahel is in the middle of the village.

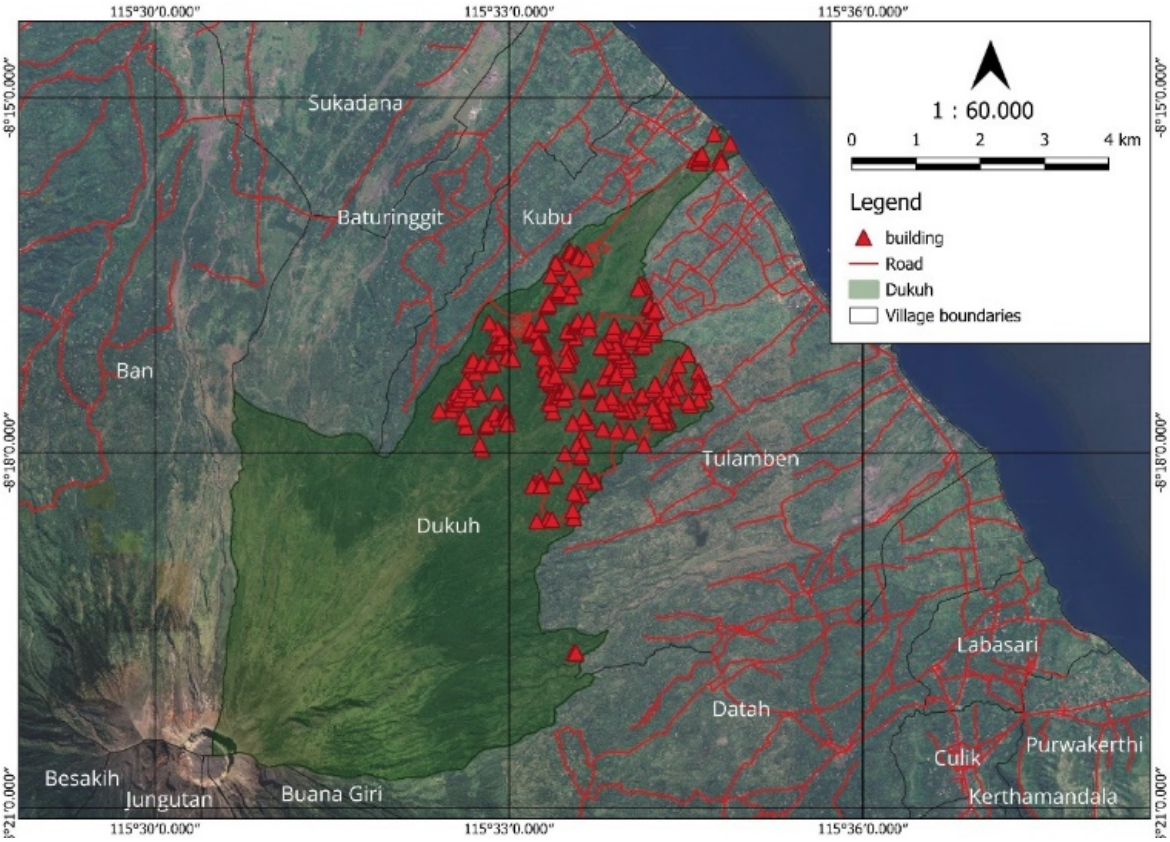

Fig 1. The map of the study area

2.2 Field survey

Nine home gardens were selected purposively to represent different elevations and distances from the coast. Each site contained two 20 × 20 m plots (Appendix 1). Plant species were recorded and identified, while local names and uses were confirmed through semi-structured interviews with adult household members (n = 9). The limited sample size reflects logistical constraints and the focus on accessible and well-maintained gardens.

2.3 Data analysis

The plants that have been identified are then tabulated, including families, vernacular names, habitus, number of individuals, and Summed Dominant Ratio (SDR). The dominant plant species were analyzed using the index of SDR (Chen et al., 2014; Rahayu et al., 2023; Whitney et al., 2018):

SDR (%) = $\frac{RD+RF}{2}$

SDR = summed dominance ratio,
RD (%) = relative density (sum of individuals of a plant species/sum of all individuals of all plant species) x 100%
RF (%) = relative frequency (frequency of certain plant species/ total frequency of all plant species) x 100%

The plant diversity index and dominance ratio were calculated in this study. The Shannon-Wienner diversity index was utilized to analyze plant diversity:

H' = $\sum_{i=1}^{s} pi \ln(pi)$

H' = Shannon-Wienner diversity index, pi = proportion of the number of individuals of a plant species (ni/N), ni = abundance of a plant species, N = total abundance of all plant species. Results of Shannon-Wienner diversity index calculation should be categorized below (Odum & Barrett, 2009), with a classification of biodiversity: High (H'>3), medium (1≤ H'≤3) and low (H'<1).

Dominance is analyzed using Simpson's Dominance Index:

C = $\sum(pi)^2$

C = Simpson dominance index, pi = proportion of the number of individuals of a plant species (ni/N). If the dominance index value (C) is close to 0, it means there are no dominant species, but if the dominance index value (C) is close to 1, it means there are dominant species. (Odum & Barrett, 2009)

The Use Value (UV) assesses the usage and abundance index of a species. The calculation formula for the Use value is expressed as follows (Hoffman and Gallaher, 2007; Phillips and Gentry, 1993):

UVs = $(\sum \mathrm{UV\ is})/(\mathrm{ni})$

UVs = Sum the informant used values for a species and divide by the total number of informants.
ni = total number of informants interviewed for species s.

The research results included plant identification, SDR calculation, diversity index, dominant index value, categories of plant function and comparison between plants in home garden and local knowledge were then analyzed descriptively.

3. Results and discussion

3.1 Home garden plants diversity

The survey recorded 115 plant species (Appendix 1), encompassing 47 families (Figure 2). This number is greater than the number of plant species growing in other villages in Indonesia, such as in the Samin Sub-Das, Central Java, with 88 species (Muliawati et al., 2018), in the Kemukiman Lueng Putu, Bandar Baru District, Pidie Jaya Regency with 79 species (Zufahmi et al., 2020), in Singai Bakar Village, Bajuin District, Tanah Laut Regency, South Kalimantan Province, 54 species (Husnawaty et al., 2022) and 79 species of plants were found in the home garden of the Antibar Village community, Mempawah Timur District, Mempawah Regency, West Kalimantan (Andriansyah et al., 2015). The environmental conditions, personal needs, local traditions, and environmental conditions, as well as their very local nature, influence the composition of home garden plants (Hadi et al., 2016). Besides, the gardens adjacent to houses provide life necessities or commercial products with knowledge passed down from generation to generation (Pilgrim et al., 2018).

The common plant families discovered in these home gardens include Fabaceae (14 species), Euphorbiaceae (6 species), Amaranthaceae (5 species), Apocynaceae (5 species), and Poaceae (5 species). Many species of Fabaceae are also used for fodder, which is suitable for the occupation of the respondent as a breeder, such as *Dalbergia latifolia (sonokeling), Gliricidia sepium (gamal),* and *Leucaena leucocephala (lamtoro).* Besides that, Fabaceae also has the ability to fix nitrogen, which enhances the soil fertility in the regosol soil in Dukuh village. This result follows (Luo et al., 2024), who mention that Fabaceae plants play a vital role in providing food to assist local communities in addressing food insecurity.

Based on our survey, tree plants constituted 35.65% of total plant habitus, followed by herbaceous (31.30%), shrub (25.22%), and climber (8.7%). This shows that the home garden consists of multistrata. The choice of trees may be influenced by economic value. Woody plants have served as income for families in Central Ethiopia (Mammo & Dereje, 2025), while the choices of trees and shrubs in China are also economically important because of the provision of shade and shelter for housing purposes (Luo et al., 2024).

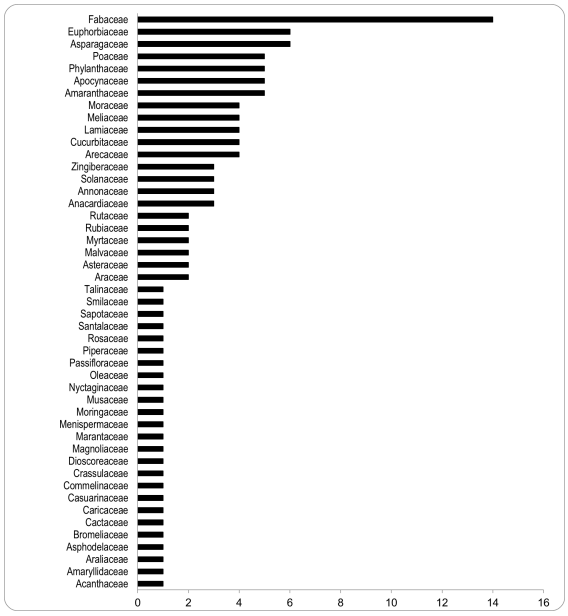

Fig 2. Number of plant families found in the home garden at Dukuh village

3.2 Homegarden Plants Diversity Index

Based on the analysis of the Shannon-Winner diversity index (H'), home garden plant diversity in Dukuh villages is in the high diversity category (H'=3.75). This shows the potency of home gardens to support community livelihoods and fulfill food needs. High species diversity can provide many uses for humans and support biodiversity (Ponton, 2021). Furthermore, the home garden is a means to meet Sustainable Development Goals 1 and 2 on no poverty and zero hunger, respectively (Abdoellah et al., 2020).

Although the soil fertility level is relatively low, it has been proven to support fulfilling community needs with high species diversity. The soil in Dukuh Village is Regosol, which is formed from volcanic material originating from the eruption of Mount Agung. It has a sandy soil texture and many macro pores that affect water storage and soil nutrients because they are easily leaching. Soil solum is also shallow (<50 cm), limiting the development of perennial plant roots.

3.3 Homegarden Plants Dominance Ratio

The Summed Dominant Ratio (SDR) is the sum of relative frequency and relative dominance. High SDR are plants that have a high frequency or can be recorded in many samples and have a higher number of individuals in the research location samples (Rahayu et al., 2023). Based on SDR analysis, the highest (SDR> 3,00) were found most commonly in the home garden of Dukuh village, consisting of *Anacardium occidentale* (cashew) (11.45), *Amaranthus* sp (spinach) (4.99), *Musa* sp (banana) (4.18), *Mangifera indica* (mango) (3,40), *Cocos nucifera* (coconut) (3.23), and *Plumeria* sp (frangipani) (3.03). Cashews and mangoes are highly prevalent because they are economically important plants that support livelihood. In contrast, bananas, coconuts, and frangipani are usually planted to support daily ceremony needs.

3.4 Local Knowledge of Dukuh village inhabitants towards Plants

Based on the results of interviews with the community in Dukuh village, there are 100 species of plants recorded, consisting of 19 species for medicine, 50 species for Hindu ceremonial plants, 6 species as starch food, 21 species for vegetables, 10 species for spices, 11 species for fruit, 7 species for building material, 12 species for cow forage, 6 species for goat forage, 5 species for pig forage and 7 species for bee forage. The Dukuh village community has more information on the use of ceremonial plants and vegetable plants in their daily life (Figure 3). This selection is presumably influenced by the religion/ belief of the community, which is the majority Hindu, and personal preference to choose vegetables to support their daily needs.

In daily Hindu religious ceremonies, people offer *canang* (woven trays made of *lontar* or coconut leaves filled with flowers, incense, holy water, and *rarapan*—simple offerings in the form of food or drink). These *canang* are then placed in sacred places, such as a *pelinggih* (a shrine), or in the house terrace. After that, the canang is sprinkled with holy water (*tirta*) and *diayap* (a movement of the fingers while reciting a *mantra*). Although no specific plant species are required, flowering plants are most commonly used, including *Cananga odorata, Plumeria* sp., *Michelia alba*, *Gardenia jasminoides*, *Erythrina* sp., *Nerium oleander,* and *Nymphaea* sp. The Balinese Hindu community believes that colors symbolize their Gods. Yellow flowers symbolize Mahadeva, black symbolizes Lord Vishnu, white symbolizes Lord Shiva, and red symbolizes Lord Brahma (Ristanto et al., 2020). In addition to daily ceremonial needs, flowers are used for other religious ceremonies, such as prayer, making tirta, preparing water for Kumkuman (fragrant water), and decoration for sacred dances (Darma et al., 2021). The other plant parts used in Hindu-Balinese religious rituals, such as leaves, tubers, stems, bark, fruits, and seeds, are also utilized as complementary materials in Hindu-Balinese ritual offerings. The plants used in Hindu religious ceremonies in the home garden are listed in Appendix 1.

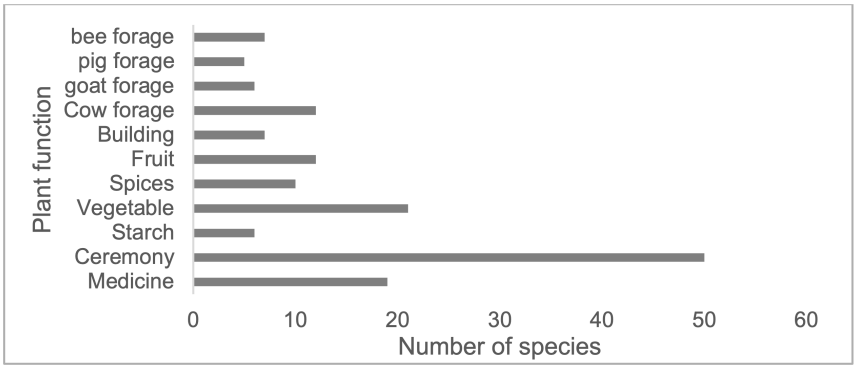

Fig 3. Plant utilization by the local knowledge of the Dukuh village community

Meanwhile, the highest use value based on the interview is *Cocos nucifera* (3.9 %), *Musa paradisiaca/ pisang sabe* (3.9 %), *Artocarpus heterophylla/* jackfruit (2.6%), *Azadirachta indica/ intaran* (2.6%), and *Santalum album/ cendana* (2.6%). These plants have the highest use value because they also have more than one plant function (multipurpose plants) (Appendix 2). *Cocos nucifera* (coconut) has various functions, including medicinal uses, ceremonial purposes, spices, construction materials, pig feed, and bee forage. *Musa paradisiaca* (*pisang sabe*) has a function as medicine, a ceremony, a vegetable, a fruit, cattle forage, and pig forage. *Santalum album* (*cendana*) has the function as a vegetable, cattle forage, goat forage, pig forage, and *Artocarphus heterophyllus* (jackfruit) has the function as a vegetable, fruit, and building, cattle forage. The crop combinations found in home gardens are strongly influenced by the specific needs and preferences of the household, as well as nutritional complementarity with other major food sources, alongside ecological and socioeconomic factors (Abdoellah et al., 2020).

Based on local knowledge, the largest proportion of plant species belongs to the Fabaceae family, comprising 10 species, followed by the Euphorbiaceae family, which includes four plant species (Figure 4). Several species of Fabaceae are grown because they have more than one function. The function of vegetables such as *undis* (*Cajanus cajan*), *komak* (*Lablab purpureus*), red beans (*Phaseolus vulgaris*), *tuwi* (*Sesbania grandiflora*) and *asam* (*Tamarindus indica*). The function of ceremony plants such as *kemerakan* (*Caesalpinia pulcherrima*), *dadap* (*Erythrina subumbrans*), red beans (*Phaseolus vulgaris*) and the function as forage cattle such as *sonokeling* (*Dalbergia latifolia*), *gamal* (*Gliricida sepium*), and *lamtoro* (*Leucaena leucocephala*).

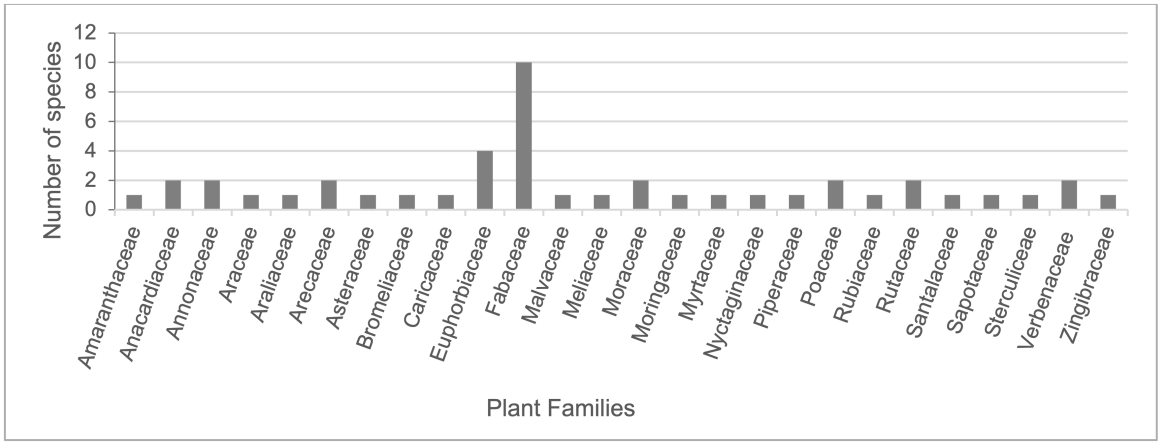

Fig 4. The plant family of local knowledge of the Dukuh village community from the interview

3.5 Analysis of differences in local knowledge with the species found in the home garden

Based on the results of interviews and plant inventory, it was found that there was a difference in the number and function of plants, as determined by local community knowledge, compared to those found in the home garden (Table 1). From the results of the interviews, as many as 100 species of plants are known to the public. Meanwhile, from the inventory results in the community's home garden, the home garden collected 115 plant species. However, not all species of plants in the home garden are known to have potential by the community, and not all the species of plants whose potential is known by the community are planted in the home garden. Only about 39% or as many as 45 plant species in the home garden have the potential to be known and utilized by the community of Dukuh village. It is estimated that 45 plant species are deliberately planted to help meet their daily needs. The factor that influences this is presumably related to the total area of the home garden and the preference of plant selection from the community (dietary requirement, economic value, or religion/ beliefs).

Table 1. Comparisons between the results of the plant inventory and interviews

The criteria	The number of plants from the interview (species)	The number of plants found in the home garden (species)
The number of plant species	100	45
Plant function		
Vegetable	21	12
Fruit	11	4
Spice	10	3
Starch	6	2
Medicine	19	7
Livestock forage	30	15
Building	7	7
Hindu ceremony	50	23

Furthermore, the religious/ cultural beliefs, customs, and taboos of the villagers influence the composition/ diversity of home gardens (Kumar & Nair, 2004). Presumably, the area of the home garden also determines the type of plants.

3.6 Impact of Climate Change on the Community Livelihoods

Almost everyone in Dukuh village depends on a life that interacts directly with nature. The two main plantation commodities of the Dukuh village community are cashew (*Anacardium occidentale)* and *lontar* (*Borassus flabellifer*). During the dry season, the community harvests the fruits of their garden crops, including cashews (*Anacardium occidentale)*, *lontar (Borassus flabellifer),* and mangoes (*Mangifera* spp.). Meanwhile, during the rainy season, the community initiates activities for rainfed farmers, such as planting pumpkin, beans, and tuber crops. Some of these agricultural commodities are sold and partly used to meet the needs of people's own households. The community also planted a small part of their home garden with cattle forage, such as elephant grass (*Cenchrus purpureus)*, *gamal (Gliricida sepium), Indigofera (Indigofera* sp.*),* and *sonokeling (Dalbergia latifolia)*. Some livestock the community raises include cows, goats, pigs, and chickens. In the rainy season, when there is still a stock of water from the rain, people can still harvest forage cattle. However, during the rainy season, people usually purchase forage outside Dukuh village to supplement their cattle's needs. Livestock products such as goats and cows are sold during the Islamic ceremony (Eid al-Adha). Meanwhile, pigs and chickens are usually only sold when there is an urgent need. Some are also used in Balinese Hindu ceremonies.

In 2021, the dry month (with no rain) lasted for four months, from June to September. In 2022, there were fluctuations in rain, during which the originally dry months experienced rain. Meanwhile, in 2023, the rain distribution pattern is similar to that of 2021, but it only entered the dry season in August (Figure 2). According to respondents, the rain causes the quality of the seeds to be poor (the color of the seeds becomes darker and smaller), and the production becomes low because the flowers fall off and cause them to fail to become fruit. Almost all respondents stated that the climate in Dukuh Village has shifted, causing a significant decrease in their main commodity, cashew production.

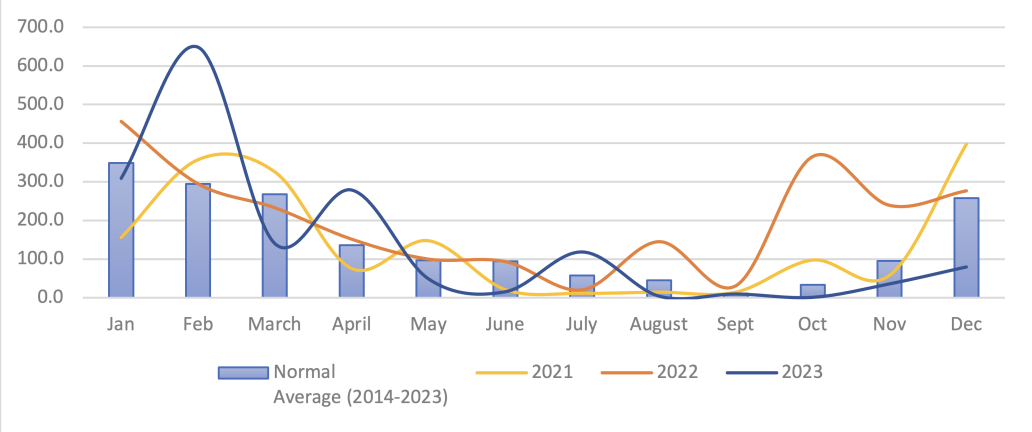

Fig 5. The climate condition in Dukuh village from 2021-2023

3.7 Homegarden Management Strategy to Climate Change

The Hindu community in Bali has a unique character that is the identity of the Hindu community in Bali (Suwena, 2018). The concept of *Tri Hita Karana* gives the mandate to maintain a harmonious relationship, namely between humans and God; humans and humans; and humans and nature. Along with the division of the Tri Mandala space, there are three main areas: the Main Mandala, where humans interact with God; the Madia Mandala, where humans interact with humans; and the Nista Mandala, where humans interact with the environment. Its existence is universal and easy to recognize and understand (Raka et al., 2017). This is done consciously to ensure that local knowledge is passed down to the next generation, including plants used in Hindu ceremonies in Bali (Surata et al., 2015).

Conservation is a very urgent necessity to develop the spirit or personality of a participatory community. A form of work that cannot be carried out alone. The activities include maintenance following the situation and conditions of the local village (Samedi, 2021). Conservation efforts are prioritized for plants with high utility index values and suitable habitats. A previous study found that the sustainability of home garden management can be achieved by involving the local community, implementing education programs, providing economic incentives, and offering training to increase land productivity (Hakim et al., 2018). Conservation priorities are based on types that support food security, have high utilization value, and are suitable for the climate conditions of Dukuh Village. Some alternative food crops that meet these criteria, such as corn, peanuts, soybeans, and sorghum, can survive with little water. During the long dry season, the people of Dukuh Village face difficulty obtaining forage stocks for their livestock. So far, the community has relied only on fodder from Gamal (Gliricidia *sepium*) leaves, *Sonokeling* (*Dalbergia latifolia*), and elephant grass *(Cenchrus purpureus)* that they plant around the garden.

During the dry season, *Gamal* (*Gliricida sepium*) and *Sonokeling* (*Dalbergia latifolia*) trees shed their leaves, while the availability of alternative feeds, such as those from elephant grass, is also very limited. So far, the community has only relied

on fodder from *Gamal* (*Gliricida sepium*) leaves, *Sonokeling* (*Dalbergia latifolia*), and elephant grass (*Cenchrus purpureus*) that they plant around the garden. Previous research has revealed that planting silvopastoral-oriented fodder plants, when planned properly and appropriately, can be a viable solution (Chaudhry et al., 2011). Programs that can be carried out include developing community capacity to survive drought by creating innovations in fodder sources. This can also create a source of high-quality grass, shrub, and fodder tree seeds that are sustainable for future rehabilitation. We recommend some plants as fodder sources, such as Indigofera and *Brachiaria humidicola* (also known as coroivia grass), as an alternative forage substitute during the dry season to improve the welfare of farmers, as they do not need to buy feed for their livestock. The nutrient content in Indigofera leaves has been qualified as fodder and green concentrate for ruminants and could be substituted for poultry (Antari et al., 2022; Nadir et al., 2024). The plant is also tolerant of drought and waterlogging and is resistant to salinity. Recent research indicates that the growth of *Indigofera* sp. is very good during the rainy season, with no significant difference in growth compared to the dry season (Arniaty et al., 2015). *Brachiaria humidicola* grass is also one of the superior types of grass, as it has a high production rate and is preferred by livestock. *Brachiaria humidicola* grass is a plant resistant to seasonal changes, tolerant of poor irrigation, and heavy grazing (Hernandez et al., 2017; Loi et al., 2019; Maia et al., 2014). Therefore, these two plants are suitable for development as cattle forage alternatives in Dukuh Village. The research focused on selecting and managing drought-tolerant plants, as well as livestock nutritional needs during the dry season, and other methods to reduce environmental degradation must also continue to be carried out.

The support of the Indonesian Conservation Foundation (KI) in helping to obtain management rights for the Dukuh village forest also indirectly contributes to supporting community income. The community can also utilize the village forest to plant fodder crops, provided they are not allowed to cut down existing trees. Thus, the Dukuh community can focus on planting their home garden with plants to support food security, while meeting the needs for fodder can be achieved by renting land in the village forest.

Home garden management efforts can still be optimized for economic, social, and ecological functions if they are associated with existing potential. Capacity-building collaboration between communities and scientific practitioners is essential to enable the exchange of traditional wisdom and modern scientific methods (Mallick et al., 2024). Several innovations in agricultural methods include applying more varied cultivation techniques such as hydroponics, aeroponics, and vertical culture. In addition, cultivation activities with a wider variety of plants can continue to be optimized as an effort to diversify various local resource-based materials. Local community knowledge regarding plant functions was obtained only from older respondents, so it needs to be improved again to ensure the existence and sustainability of local knowledge of the Dukuh Village community. The formation of associations involving the younger generation can be done so that existing local knowledge remains sustainable with support from the local government. This effort is oriented towards long-term goals, namely, to create a more independent community that meets subsistence needs in the future as a form of self-sufficiency resilience at the household level.

4. Conclusions

Home gardens in Dukuh Village represent a biocultural adaptation linking biodiversity, traditional ecological knowledge, and coastal livelihoods. The integration of ritual plants, food crops, and forage species ensures livelihood continuity and reinforces Balinese Hindu cultural identity. Despite the small sample size, this study demonstrates how island communities use home gardens to sustain food security, ritual practices, and ecological balance amid climate change.

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Appendices

Appendix 1. Plant species at the home garden in Dukuh village, Karangasem

Table 2: Plant species at the home garden in Dukuh village, Karangasem.

Appendix 2. Plant utilization based on respondent local knowledge

Table 3: Utilization of plant species in the study area.

Table 2. Plant species at the home garden in Dukuh village, Karangasem

No	Scientific name / vernacular name	Family	Number of individuals	Habitus	H'	C	RF	RD	SDR (%)
1	*Acalypha wilkesiana* Mull. Arg	Euphorbiaceae	2	shrub	0.013	5E-06	0.61	0.22	0.41
2	*Accacia mangium* Willd.	Fabaceae	1	Tree	0.007	1E-06	0.31	0.11	0.21
3	*Agave sisalana* Perrine	Agavaceae	23	herbaceous	0.091	6E-04	1.53	2.47	2.00
4	*Allamanda cathartica* L.	Apocynaceae	7	shrub	0.037	6E-05	1.23	0.75	0.99
5	*Aloe vera* (L.) Burm.f./ lidah buaya	Asphodelaceae	3	herbaceous	0.019	1E-05	0.31	0.32	0.31
6	*Alternanthera* cultivar	Amaranthaceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
7	*Alternanthera* sp./ krokot	Amaranthaceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
8	*Amaranthus* sp/ bayam hijau	Amaranthaceae	90	herbaceous	0.226	0.009	0.31	9.68	4.99
9	*Amaranthus* sp/ bayam merah	Amaranthaceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
10	*Amaryllis* sp.	Amaryllidacaeae	4	herbaceous	0.023	2E-05	0.61	0.43	0.52
11	*Amorphophallus muelleri* Blume/ porang	Araceae	14	herbaceous	0.063	2E-04	0.31	1.51	0.91
12	*Anacardium occidentale* L/ mete	Anacardiaceae	153	tree	0.297	0.027	6.44	16.45	11.45
13	*Ananas comosus* (L.) Merr./ nanas	bromeliaceae	45	herbaceous	0.147	0.002	1.23	4.84	3.03
14	*Annona muricata* L./ sirsak	Annonaceae	1	tree	0.007	1E-06	0.31	0.11	0.21
15	*Annona squamosa* L./ srikaya	Annonaceae	2	tree	0.013	5E-06	0.61	0.22	0.41
16	*Antidesma bunius* (L.) Spreng./ buni	Phyllanthaceae	1	Tree	0.007	1E-06	0.31	0.11	0.21
17	*Artemisia scoparia* Waldst. & Kit.	Asteraceae	19	herbaceous	0.079	4E-04	0.61	2.04	1.33
18	*Artocarpus heterophyllus* Lam/ jackfruit	Moraceae	4	Tree	0.023	2E-05	0.92	0.43	0.68
19	*Azadirachta indica* A.Juss/ mindi	Meliaceae	14	tree	0.063	2E-04	1.53	1.51	1.52
20	*Bambusa vulgaris* Schrad. ex J.C.Wendl/ bambu ampel	Poaceae	2	tree	0.013	5E-06	0.31	0.22	0.26
21	*Bauhinia purpurea* L.	Fabaceae	1	Tree	0.007	1E-06	0.31	0.11	0.21
22	*Benincasa hispida* (Thunb.) Cogn./ timun bligo	cucurbitaceae	4	climber	0.023	2E-05	0.92	0.43	0.68
23	Borassus flabellifer L./ lontar	Arecaceae	11	tree	0.052	1E-04	2.76	1.18	1.97
24	*Bougainvillea* sp.	Nyctaginaceae	2	shrub	0.013	5E-06	0.61	0.22	0.41
25	*Breynia androgyna* (L.) Chakrab. & N.P.Balakr./ daun katuk	phyllanthaceae	6	shrub	0.033	4E-05	0.92	0.65	0.78
26	Breynia oblonifolia Mull.Arg/ daun merr	Phylanthaceae	8	shrub	0.041	7E-05	1.53	0.86	1.20
27	*Brunfelsia uniflora* (Pohl) D.Don	Solanaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
28	*Caesalpinia pulcherrima* (L.) Sw.	Fabaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
29	*Cajanus cajan* (L.) Huth/ kacang undis	Fabaceae	2	herbaceous	0.013	5E-06	0.61	0.22	0.41
30	*Cananga odorata* (Lam.) Hook.f. & Thomson/ sandat	Annonaceae	2	tree	0.013	5E-06	0.61	0.22	0.41
31	*Capsicum frutescens* L./ cabai rawit	Solanaceae	9	herbaceous	0.045	9E-05	0.92	0.97	0.94
32	*Carica papaya* L./ pepaya	Caricaceae	7	tree	0.037	6E-05	1.23	0.75	0.99
33	*Caryota mitis* Lour.	Arecaceae	1	tree	0.007	1E-06	0.31	0.11	0.21
34	*Casuarina junghuhniana* Miq./ cemara geseng	Casuarinaceae	2	tree	0.013	5E-06	0.31	0.22	0.26
35	*Catharanthus roseus* (L.) G.Don/ tapak dara	Apocynaceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
	Total		**930**		**3.756**	**0.051**			

No	Scientific name / vernacular name	Family	Number of individuals	Habitus	H'	C	RF	RD	SDR (%)
36	*Cenchrus purpureus* (Schumach.) Morrone/ elephant grass	Poaceae	14	herbaceous	0.063	2E-04	2.15	1.51	1.83
37	*Citrus* sp./ jeruk	Rutaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
38	*Citrus* × *amblycarpa* (Hassk.) Ochse/ jeruk limo	Rutaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
39	*Clerodendrum paniculatum* L./ kembang pagoda	Lamiaceae	12	shrub	0.056	2E-04	1.53	1.29	1.41
40	*Cnidoscolus aconitifolius* (Mill.) I.M.Johnst./ papaya jepang	Euphorbiaceae	12	shrub	0.056	2E-04	1.23	1.29	1.26
41	*Cocos nucifera* L./ kelapa	Arecaceae	23	tree	0.091	6E-04	3.99	2.47	3.23
42	*Codiaeum variegatum* (L.) Rumph. ex A.Juss./ puring	Euphorbiaceae	7	shrub	0.037	6E-05	0.92	0.75	0.84
43	*Cordyline fruticosa* (L.) A.Chev.	Asparagaceae	6	shrub	0.033	4E-05	1.23	0.65	0.94
44	*Cucumis sativus* L./ timun	Cucurbitaceae	1	climber	0.007	1E-06	0.31	0.11	0.21
45	*Curcuma domestica* Valeton/ kunyit kuning	Zingiberaceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
46	*Curcuma caesia* Roxb/ kunyit hitam	Zingiberacea	6	herbaceous	0.033	4E-05	0.31	0.65	0.48
47	*Curcuma zedoaria* (Christm.) Roscoe/ kunyit putih	Zingiberacea	5	herbaceous	0.028	3E-05	0.61	0.54	0.58
48	*Cyathula cultivar*	Amaranthaceae	16	herbaceous	0.07	3E-04	0.00	1.72	0.86
49	*Cyclea barbata* Miers*/ daluman*	Menispermaceae	1	climber	0.007	1E-06	0.31	0.11	0.21
50	*Cymbopogon citratus* (DC.) Stapf/ sereh	Poaceae	3	herbaceous	0.019	1E-05	0.31	0.32	0.31
51	*Dalbergia latifolia Roxb/ sonokeling*	Fabaceae	8	tree	0.041	7E-05	1.23	0.86	1.04
52	*Didymocheton gaudichaudianus* A.Juss.	Meliaceae	2	tree	0.013	5E-06	0.31	0.22	0.26
53	*Dieffenbachia* sp.	Araceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
54	*Dioscorea bulbifera* L./ mubu	Dioscoreaceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
55	*Dioscorea* sp.	Dioscoreaceae	1	herbaceous	0.007	1E-06	0.61	0.11	0.36
56	*Dracaena angustifolia* (Medik.) Roxb./ kayu sugih	Asparagaceae	5	shrub	0.028	3E-05	1.23	0.54	0.88
57	*Dracaena fragrans* (L.) Ker Gawl./ hanjuang	Asparagaceae	5	shrub	0.028	3E-05	0.61	0.54	0.58
58	*Dracaena* sp.	Asparagaceae	1	herbaceous	0.007	1E-06	0.00	0.11	0.05
59	*Dracaena trifasciata* (Prain) Mabb*./ lidah mertua*	Asparagaceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
60	*Erythrina* sp./ dadap	Fabaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
61	*Erythrina subumbrans* (Hassk.) Merr*./ dadap tis*	Fabaceae	3	shrub	0.019	1E-05	0.92	0.32	0.62
62	*Euphorbia* sp.	Euphorbiaceae	2	shrub	0.013	5E-06	0.31	0.22	0.26
63	*Ficus benjamina* L*./ beringin*	moraceae	3	tree	0.019	1E-05	0.31	0.32	0.31
64	*Ficus* sp. / bunut	Moraceae	1	tree	0.007	1E-06	0.31	0.11	0.21
65	*Ficus variegata* Blume/ ara	Moraceae	4	tree	0.023	2E-05	0.31	0.43	0.37
66	*Gardenia jasminoides* J. Ellis/ jempiring	Rubiaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
67	*Gliricidia sepium* (Jacq.)Kunth/ gamal	Fabaceae	28	tree	0.105	9E-04	2.45	3.01	2.73
68	*Gmelina arborea* Roxb. ex Sm/ jati belanda	Lamiaceae	21	tree	0.086	5E-04	2.45	2.26	2.36
69	*Hibiscus rosa sinensis* Linn./ kembang sepatu	Malvaceae	5	shrub	0.028	3E-05	1.23	0.54	0.88
70	*Indigofera suffruticosa* Mill*./ tarum*	Fabaceae	3	shrub	0.019	1E-05	0.61	0.32	0.47
71	*Ixora javanica* (Blume) DC./ soka	Rubiaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
72	*Justicia gendarussa* Burm.f.	Acanthaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
	Total		**930**		**3.756**	**0.051**			

No	Scientific name / vernacular name	Family	Number of individuals	Habitus	H'	C	RF	RD	SDR (%)
73	*Kalanchoe pinnata* (Lam.) Pers /cocor bebek	Crassulaceae	3	herbaceous	0.019	1E-05	0.61	0.32	0.47
74	*Lablab purpureus* (L.) Sweet/ *kacang komak*	Fabaceae	2	herbaceous	0.013	5E-06	0.61	0.22	0.41
75	*Lannea coromandelica* L./ santen	Anacardiaceae	10	tree	0.049	1E-04	1.53	1.08	1.30
76	*Leucaena leucocephala* (Lam.) de Wit/ *lamtoro*	Fabaceae	4	tree	0.023	2E-05	0.92	0.43	0.68
77	*Ligustrum glomeratum* Blume/ padi-padi	Oleaceae	1	tree	0.007	1E-06	0.31	0.11	0.21
78	*Magnolia champaca* (L.) Baill. ex Pierre	Magnoliaceae	2	tree	0.013	5E-06	0.31	0.22	0.26
79	*Mangifera indica* L./ mangga	Anacardiaceae	29	tree	0.108	1E-03	3.68	3.12	3.40
80	*Manihot esculenta* Crantz/ singkong	Euphorbiaceae	16	shrub	0.07	3E-04	3.07	1.72	2.39
81	*Manilkara kauki* (L.) Dubard/ *sawo*	Sapotaceae	1	tree	0.007	1E-06	0.31	0.11	0.21
82	*Marantha* sp.	Maranthaceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
83	*Melochia umbellata* (houtt.) Stapf./ bentenu	Meliaceae	15	tree	0.067	3E-04	3.07	1.61	2.34
84	*Momordica balsamina* L./ pare	Cucurbitaceae	9	climber	0.045	9E-05	2.15	0.97	1.56
85	*Moringa oleifera* Lam./ kelor	Moringaceae	3	tree	0.019	1E-05	0.61	0.32	0.47
86	*Musa* sp./ pisang	Musaceae	52	tree	0.161	0.003	2.76	5.59	4.18
87	*Passiflora edulis* Sims / *pasi*	Passifloraceae	1	climber	0.007	1E-06	0.31	0.11	0.21
88	*Phaseolus vulgaris* L. / kacang merah	Fabaceae	2	herbaceous	0.013	5E-06	0.61	0.22	0.41
89	*Phyllanthus* sp.	Phyllanthaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
90	*Piper* sp./ sirih	Piperaceae	3	climber	0.019	1E-05	0.92	0.32	0.62
91	*Plukenetia volubilis* L./ sacca inci	Euphorbiaceae	9	climber	0.045	9E-05	0.92	0.97	0.94
92	*Plumeria pudica* Jacq./ *Frangipani japan*	Apocynaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
93	*Plumeria rubra* L./ yellow frangipani	Apocynaceae	1	tree	0.007	1E-06	0.31	0.11	0.21
94	*Plumeria* sp./ frangipani	Apocynaceae	25	tree	0.097	7E-04	3.37	2.69	3.03
95	*Psidium guajava* L./ jambu batu	Myrtaceae	2	tree	0.013	5E-06	0.92	0.22	0.57
96	*Rosa* sp./ mawar	Rosaceae	2	herbaceous	0.013	5E-06	0.61	0.22	0.41
97	*Roystonea regia* (Kunth) O.F.Cook/ palem raja	Arecaceae	1	tree	0.007	1E-06	0.31	0.11	0.21
98	*Saccharum officinarum* L./ tebu	Poaceae	5	shrub	0.028	3E-05	0.92	0.54	0.73
99	*Santalum album* L./ cendana	Santalaceae	8	tree	0.041	7E-05	1.23	0.86	1.04
100	*Schefflera* sp./ kayu tulak	Araliaceae	3	shrub	0.019	1E-05	0.61	0.32	0.47
101	*Selenicereus monacanthus* (Lem.) D.R.Hunt/ *buah naga*	cactaceae	2	climber	0.013	5E-06	0.61	0.22	0.41
102	*Sesbania grandiflora* (L.) Poir. / *turi*	Fabaceae	2	tree	0.013	5E-06	0.61	0.22	0.41
103	*Sicyos edulis* Jacq./ *labu jepang*	cucurbitaceae	2	climber	0.013	5E-06	0.31	0.22	0.26
104	*Smilax* sp./ banah	Smilacaceae	1	climber	0.007	1E-06	0.31	0.11	0.21
105	*Solanum torvum* Sw./ takokak	Solanaceae	2	herbaceous	0.013	5E-06	0.61	0.22	0.41
106	*Strobilanthes crispa*/ kejibeling	Acanthaceae	1	shrub	0.007	1E-06	0.31	0.11	0.21
107	*Swietenia mahagoni* (L.) Jacq./ mahoni	Meliaceae	2	tree	0.013	5E-06	0.31	0.22	0.26
108	*Syzygium aqueum* (Burm.f.) Alston/ *jambu air*	Myrtaceae	5	tree	0.028	3E-05	1.23	0.54	0.88
109	*Tagetes erecta* L./ gemitir	Asteraceae	2	herbaceous	0.013	5E-06	0.31	0.22	0.26
110	*Talinum paniculatum* (Jacq.) Gaertn./ ginseng	Talinaceae	1	herbaceous	0.007	1E-06	0.31	0.11	0.21
	Total		**930**		**3.756**	**0.051**			

No	Scientific name / vernacular name	Family	Number of individuals	Habitus	H'	C	RF	RD	SDR (%)
111	*Tamarindus indica* L./ asem	Fabaceae	1	tree	0.007	1E-06	0.31	0.11	0.21
112	*Tectona grandis* L.f./ *jati*	lamiaceae	2	tree	0.013	5E-06	0.61	0.22	0.41
113	*Tradescantia spathaceae* Sw. / adam hawa	Commelinacaea	22	herbaceous	0.089	6E-04	0.61	2.37	1.49
114	*Urena lobata* L.	Malvaceae	9	shrub	0.045	9E-05	0.92	0.97	0.94
115	*Zea mays* L./ jagung	Poaceae	10	herbaceous	0.049	1E-04	1.53	1.08	1.30
	Total		**930**		**3.756**	**0.051**			

Table 3. Utilization of plant species in the study area

No	Scientific name / vernacular name	Suku	Utilization										Total	FR
			M	C	St	V	Sp	F	BM	CF	GF	PF	BF		
1	*Alstonia scolaris/* pole	Apocinaceae	1											1	0.006
2	*Antidesma bunius* L. Spreng/ boni	Euphorbiaceae						1	1					2	0.013
3	*Acorus calamus* L./ jangu	Zingiberaceae	1											1	0.006
4	*Aleurites moluccanus* (L.) Willd./ tingkih	Euphorbiaceae		1										1	0.006
5	*Allium cepa* L./ Bawang merah	Amaryllidaceae	1				1							2	0.013
6	*Allium sativum* L./ kesuna	Amaryllidaceae	1				1							2	0.013
7	*Alpinia* galanga / isen	Singiberaceae					1							1	0.006
8	*Amaranthus spinosus* L./ bayem	Amaranthaceae				1								1	0.006
9	*Amorphophallus sp/ ketil bara*	Araceae			1									1	0.006
10	*Anacardium occidentale/* mente	Anacardiaceae						1		1			1	3	0.019
11	*Ananas comosus* (Linn) Merr/ nanas	Bromeliaceae		1										1	0.006
12	*Annona muricata* L./ sirsak	Annonaceae	1											1	0.006
13	*Areca catecu/* buah kinang	Arecaceae		1										1	0.006
14	*Artocarpus heterophyllus* Lamk./ jackfruit	Moraceae				1		1	1	1				4	0.026
15	*Azadirachta indica* A. Juss./ intaran	Meliaceae		1					1	1	1			4	0.026
16	*Baccaurea racemosa* (Reinw. Ex Bl.) M.A./ kepundung	Euphorbiaceae		1										1	0.006
17	*Borassus flabellifer* L./ ental	Arecaceae		1						1			1	3	0.019
18	*Bougainvillea spectabilis/* kembang kertas	Nyctaginaceae		1									1	2	0.013
19	*Caesalpinia pulcherrima* (L.) Swartz/ kemerakan	Fabacaeae		1										1	0.006
20	*Cajanus cajan* (L.) Huth. / kacang undis	Fabaceae		1		1								2	0.013
21	*Cananga odorata* (Lam.) Hook.f. & Thomson/ sandat	Annonaceae		1										1	0.006
22	*Capsicum annuum* L./ tabia	Solanaceae					1							1	0.006
23	*Carica papaya* L./ gedang	Caricaceae				1		1			1			3	0.019
24	*Citrus × amblycarpa* (Hassk.) Ochse/ jeruk limo	Rutaceae					1							1	0.006
25	*Citrus aurantifolia* (Christm.) Swingle/ jeruk lengis	Rutaceae	1											1	0.006
26	*Citrus* sp./ semaga	Rutaceae		1										1	0.006
27	*Cnidoscolus aconitifolius* (Mill.) I.M.Johnst./ daun propil	Euphorbiaceae				1								1	0.006
28	*Cocos nucifera L./* kelapa	Arecaceae	1	1			1		1			1	1	6	0.039
29	*Codiaeum variegatum* (L.) A.Juss./ puring	Euphorbiaceae		1										1	0.006
30	*Colocasia esculenta* (L.) Schott/ keladi	Araceae			1							1		2	0.013
31	*Colubrina asiatica* (L.) Brongn./ daun pepe	Rhamnaceae				1								1	0.006
32	*Commelina sp./ daun dakdak*	Commelinaceae				1								1	0.006
33	*Cordyline terminalis/* andong gadang	Asparagaceae		1										1	0.006
34	*Cordyline terminalis bicolor/* andong bang	Asparagaceae		1										1	0.006
35	*Cucurbita moschata* Duchesne ex Poir./ waluh	Cucurbitaceae				1								1	0.006
36	*Curcuma domestica* Val./ kunyit	Zingibraceae	1				1							2	0.013
Total			**19**	**50**	**6**	**21**	**10**	**11**	**7**	**12**	**6**	**5**	**7**	**154**	**1**

No	Scientific name / vernacular name	Suku	Utilization										Total	FR
			M	C	St	V	Sp	F	BM	CF	GF	PF	BF		
37	*Curcuma* sp./ temu agung	Zingiberaceae		1										1	0.006
38	*Cynodon dactylon* (L.)Pers./ padang lepas	Poaceae		1										1	0.006
39	*Dalbergia latifolia* Roxb./ sonokeling	Fabacaceae							1	1	1			3	0.019
40	*Dioscorea sp./ ubi awung/ mubu*	Dioscoreaceae			1									1	0.006
41	*Dolichos* sp / komak	Fabaceae				1								1	0.006
42	*Durio zibethinus* Murr./ duren	Bombacaeae		1										1	0.006
43	*Erythrina hypaphorus* Boerl./ dadap tis	Fabaceae	1	1										2	0.013
44	*Erythrina subumbrans* (Hassk) Merr./ Dadap	Fabaceae		1										1	0.006
45	*Ficus benjamina* L./ beringin	Moraceae		1										1	0.006
46	*Foeniculum vulgare Mill./* adas	Apiaceae	1											1	0.006
47	*Garcinia mangostana* Linn/. manggis	Clusiaceae		1				1						2	0.013
48	*Gardenia jasminoides* Ellis/ jempiring	Rubiaceae		1										1	0.006
49	*Gigantochloa* sp./ tiing sudamala	Poaceae		1										1	0.006
50	*Gigantocloa apus* (Bl.) ex Schult.f.) Kurz/ tiing tali	Poaceae		1										1	0.006
51	*Gliricidia sepium;* Walp.,/ gamal	Fabacaceae								1	1			2	0.013
52	*Gmelina arborea/* jati putih	Verbenaceae							1	1				2	0.013
53	*Gossypium herbaceousccum* L./ kapas	Malvaceae		1										1	0.006
54	*Hibiscus rosa-sinensis* L./ pucuk	Malvaceae		1										1	0.006
55	*Impatiens balsamina* L./ pacah	Lamiaceae		1										1	0.006
56	*Imperata cylindrata* / ambengan	Poaceae		1										1	0.006
57	*Ipomoea batatas* Lamarck/ sele bun	Convolvulaceae			1							1		2	0.013
58	*Kaempferia galanga* (Linn.)/ cekuh	Zingibraceae	1				1							2	0.013
59	*Lablab purpureus* (L.) Sweet/ kacang komak	Fabaceae				1								1	0.006
60	*Leucaena leucocephala* (Lamk.) de Wit./ lamtoro	Fabaceae								1	1		1	3	0.019
61	*Mangifera indica* L./ poh	Anacardiaceae		1				1					1	3	0.019
62	*Mangifera spp./ p*oh santen, poh dodol, poh amplem	Anacardiaceae						1						1	0.006
63	*Manihot uttilissima* Mull.Arg/ kesele sawi	Euphobiaceae			1	1								2	0.013
64	*Manilkara zapota* (L.) P. Royen/ sabo	Sapotaceae		1				1						2	0.013
65	*Melochia umbellata/* bentenu	Sterculiceae								1				1	0.006
66	*Michelia alba* DC./ cempaka putih	Magnoliaceae		1										1	0.006
67	*Moringa oleifera* Lam./ kelor	Moringaceae	1	1		1								3	0.019
68	*Musa paradisiaca* L./ pisang sabe)	Musaceae	1	1		1		1		1		1		6	0.039
69	*Nephelium lappaceum* L./ buluan	Sapindaceae						1					1	2	0.013
70	*Nerium oleander* L./ kenyeri	Apocynaceae		1										1	0.006
71	*Nymphaea* sp./ tunjung	Nymphayaceae		1										1	0.006
72	*Oryza sativa* L.f./ padi	Poaceaae	1											1	0.006
73	*Paederia foetida* L./ kesimbukan	Rubiaceae	1											1	0.006
74	*Pandanus* sp./ pandan meduwi	Pandanaceae		1										1	0.006
Total			**19**	**50**	**6**	**21**	**10**	**11**	**7**	**12**	**6**	**5**	**7**	**154**	**1**

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No	Scientific name / vernacular name	Suku	Utilization											Total	FR
			M	C	St	V	Sp	F	BM	CF	GF	PF	BF		
75	*Pangium edule* Reinw. Ex Blume/ pange	Achariaceae		1										1	0.006
76	*Pennisetum purpureum*/ padang gajah	Poaceae								1				1	0.006
77	*Phaseolus vulgaris* L./ kacang merah	Fabacaceae		1										1	0.006
78	*Phyllanthus buxyfolius* Reinw/ kayu sisih	Phyllanthaceae		1										1	0.006
79	*Piper bettle* L./ base	Piperaceae	1	1										2	0.013
80	*Piper nigrum* L./ mica	Piperaceae					1							1	0.006
81	*Plumeria alba* L./ jepun	Apocinaceae		1		1								2	0.013
82	*Psidium guajava* L./ sotong	Myrtaceae	1	1										2	0.013
83	*Punica granatum* L. / delima	Punicaceae		1										1	0.006
84	*Saccharum officinarum* L./ tebu cemeng	Poaeae		1										1	0.006
85	*Salacca edulis* Reinw/ salak	Arecaceae		1										1	0.006
86	*Santalum album* L/ cendana*	Santalaceae				1				1	1	1		4	0.026
87	*Sauropus androgynous/* kayu manis	Euphorbiaceae	1			1								2	0.013
88	*Schefflera elliptica* (Blume)/ kayu tulak	Araliaceae		1										1	0.006
89	*Schleichera oleosa* Merr/ kosambi/ kecacil	Sapindaceae				1								1	0.006
90	*Sechium edule* (Jacq.) Swartz./ jepang	Cucurbitaceae				1								1	0.006
91	*Sesbania grandiflora* (L.) Pers./ tuwi	Fabaceae				1								1	0.006
92	*Solanum melongena* L./ terong ungu	Solanaceae				1								1	0.006
93	*Syzygium aromaticum* (L.) Merr.&Perry/ cengkeh	Myrtaceae	1											1	0.006
94	*Syzygium cumini* /juwet	Myrtacaeae						1						1	0.006
95	*Tagetes erecta* L./ gumitir	Asteraceae		1										1	0.006
96	*Tamarindus indica* L./ asam	Fabaceae				1								1	0.006
97	*Tectona grandis* L/ jati	Verbenaceae							1					1	0.006
98	*Vigna radiate*/ kacang hijau	Fabacaceae		1										1	0.006
99	Zea mays L./ jagung	Poaceae			1									1	0.006
100	*Zingiber officinale* Roscoe/ jahe	Zingibraceae		1			1							2	0.013
Total			**19**	**50**	**6**	**21**	**10**	**11**	**7**	**12**	**6**	**5**	**7**	**154**	**1**

Notes: M=Medicine; C=Ceremony; St=Starch; V=Vegetable; Sp=Spices; F=Fruit; BM=Building material, CF=Cow fodder, GF=Goat fodder, PF=Pig fodder, BF=Bee fodder