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## Lexical Metaphors in Minak Pengalun: An Ecolinguistic Study of Karonese Culture and Traditional Medicine

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# Lexical Metaphors in *Minak Pengalun*: An Ecolinguistic Study of Karonese Culture and Traditional Medicine

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## Abstract

*This study discusses the lexical metaphors of Karonese traditional medicine, with special attention to their cultural and ecological signification, in the form of minak pengalun healing oil. A qualitative ecolinguistic approach was utilized in which data were collected by interviewing traditional healers, analysing texts on traditional medicine, and observing healing rituals. The research will make an effort to reveal the forms and functions of these metaphors and explore how they reflect the broader cultural and ecological contexts of the Karonese. Findings have shown that metaphors in plant parts, such as roots, leaves, and fruits, encapsulate both spiritual and ecological dimensions. Roots are dominant as metaphors for stability and ancestral wisdom, showing their foundational role in Karonese medicine and their ecological function in soil stabilization. Leaves are symbolic of vitality and renewal, expressed in their role within energy cycles and protection. Fruits and seeds will stand for growth and sustenance, connected with their ecological role in biodiversity and cultural values of prosperity. Such metaphors will be vehicles for the perpetuation of Karonese traditional knowledge, linking physical healing with spiritual harmony and ecological balance. They emphasize the holistic understanding of health in Karonese, anchored in the interrelationship of humans, culture, and nature. The study concludes that these metaphors are not only crucial for cultural preservation but also for raising ecological awareness, providing an insight into sustainable practices, and the integration of traditional and modern approaches to healthcare.*

**Keywords:** Metaphors; Traditional Medicine; Karonese Culture; Ecolinguistics; Minak pengalun

## 1. Introduction

Ecolinguistics provides a valuable lens for exploring the intricate connections between language, ecology, and culture. This interdisciplinary field highlights how language both reflects and influences human interactions with the environment, emphasizing the critical role of linguistic expressions in shaping ecological perspectives and behaviours (Stibbe, 2015). Ecolinguistics, on the other hand, emphasizes the fact that language is not only a tool of communication but also one of the major means by which human beings conceptualize their relationship with the world (Awny, 2023; Chau et al., 2022; Kravchenko, 2016). The metaphor, in particular, becomes central in this framework since it acts as a cognitive tool that bridges abstract concepts and lived experiences, thus influencing how individuals and communities perceive their relationship with nature (Lakoff, George; Johnsen, 2003).

The metaphor draws on an ecolinguistic perspective, in which metaphors are not only stylistic flourishes but are instead embedded in the cognitive and cultural schema of a community (Deng & Jiang, 2023; Kövecses, 2015, 2018). In using metaphors, communities inscribe value, ecological knowledge, and cultural belief into language, making these concepts concrete and accessible to thought and communication (Moats, 2020; Thibodeau et al., 2019; Tianying & Bogoyavlenskaya, 2023). For instance, metaphorical expressions often draw on elements of the natural world, such as plants, animals, and landscapes, to convey ideas of growth, healing, and resilience (Dillehay, 2024; Donovan et al., 2024; Santosa et al., 2022). This dual role of metaphors as linguistic and cultural artefacts' allows them to act as conduits for transmitting intergenerational knowledge and sustaining the ecological wisdom of a community (Prodanovska-poposka, 2024; Zhang & Li, 2024)

The relationship between metaphors and culture is deep-seated, since culture itself is constructed and communicated through language. Metaphors help define cultural identity by embedding shared beliefs, traditions, and worldviews into everyday discourse (Ibarretxe-Antuñano, 2013; Yu, 2008). Traditions, as cultural expressions, often come with metaphorical meaning, reflecting the values and practices of a community in relation to their environment (Obad Livingstone Banda et al., 2024; Tektigul et al., 2023). Among the Karonese people, traditional practices such as medicinal healing depict this connection very well. This is not only a very practical approach to health care, but *minak pengalun*-healing oil is also an important cultural tradition steeped in metaphorical language that represents the Karonese way of understanding health, nature, and spirituality.

Traditional medicine, such as practiced among the Karonese, illustrates how culture and ecology are inextricably linked through language. Preparation and use of *minak pengalun* draw on ecological knowledge, using locally sourced plants and natural resources, while the metaphors associated with these practices reflect cultural narratives of harmony and interdependence (Sari et al., 2023; Tarigan & Widayati, 2021; Zai et al., 2024). Such metaphoric naming and descriptions about medicines and plants usually depict the properties of protection, curing, or strengthening attributed to natural elements and ancestor's wisdom (Dan et al., 2024; Fanisah et al., 2023; Houghton & Howes, 2024; Panjaitan et al., 2023). These illustrate ways in which metaphors can act as cultural carriers for ecological sustainability and spiritual life in traditional medicine.

The ultimate role of metaphors within such cultural traditions as Karonese medicinal healing points to their importance as both cognitive and cultural tools. Health and wellness being framed in metaphorical terms; such expressions support not only ecological knowledge but also the cultural identity of the community. By using metaphors, it provides a storyline that places human health together with environmental stewardship, thereby emphasizing the interdependence between people and their surroundings (Bellehumeur & Carignan, 2024; Raymond et al., 2013; Thibodeau et al., 2017). In this manner, metaphors are indispensable in maintaining tradition, good practice in sustainability, and a holistic understanding of the interrelationship between culture, ecology, and language (Cortazzi & Jin, 2021; Revita et al., 2024).

Metaphors have always been one of the greatest factors in human cognition for a long time, acting to help us understand or talk about the world. Classically, metaphors have been seen as simply rhetorical devices of literature and speech, aesthetic or persuasive in character. It was in the late 20th century that a cognitive turn made a forceful expansion in such understanding through a landmark study by George Lakoff and Mark Johnson in their 1980 work entitled *Metaphors We Live By* (Stibbe, 2015). They proved that metaphors are not only a part of linguistics but cognitive frameworks through which thought, communication, and perception occur. It is from this notion that this paper looks at how metaphors in the context of traditional medicine among the Karonese, in particular, using the healing oil known as *minak pengalun* can be a vehicle of cultural identity, ecological knowledge, and environmental stewardship (Zai et al., 2024). From their study, they explore the interplay between language, culture, and ecology, emphasizing the sustainable use of natural resources in traditional medicine. The traditional oil used by the Karo ethnic group in North Sumatra for medicinal purposes. Using an ecolinguistic framework, the study identifies 31 lexicons in the oil's composition, primarily from plants, with one animal and one abiotic component.

In addition, (Tarigan & Widayati, 2021) examines Minyak Karo, a traditional oil from the Karo ethnic group in North Sumatra, through biological, ideological, and sociological dimensions. his study underscores the significance of Minyak Karo as a representation of the Karo people's bio-cultural heritage, merging their linguistic, ecological, and cultural practices. The article concludes that Minyak Karo is the most important part of Karo culture, combining traditional knowledge, spiritual beliefs, and natural resources. The process of its preparation reflects the strong attachment to nature and involves ritualistic dances to call up ancestral spirits. It has been used for many generations in various health applications.

The Karonese people of North Sumatra, Indonesia, have traditionally relied on their medicine for a life of health and the cure of diseases (Manalu & Purba, 2020; Singarimbun et al., 2024). Their therapeutic practices are closely related to their natural and cultural environments. In Karonese medicine, biodiversity in North Sumatra plays an important role: plants, herbs, and oils extracted from the local landscape are transmitted across generations. Among these medicinal oils, *minak pengalun* is one of the most prominent, applied for various ailments, from muscle pains and wounds to internal health problems. Infused with local plants, each with symbolic meanings, *minak pengalun* and other oils carry deeper layers of ecological and cultural knowledge within the metaphors embedded in the Karonese language.

In Karonese culture, language is not simply a medium of communication but also a vessel for carrying ecological wisdom and cultural heritage (Tarigan et al., 2024). Many names of medicinal oils, plants, and healing techniques are metaphorical, reflecting the interconnection between health, the environment, and Karonese identity. Oils like *Minyak Cap Harimau*, or Tiger-Branded Oil, and *Minyak Patah Tulang*, or Bone-Setting Oil, draw on metaphors between the healing properties of the oils and animals or physical conditions. These are more than ornamental; these metaphors lie at the heart of communicating the efficacy of the oil and resonate with both the physical and spiritual dimensions of Karonese medicine.

The traditional medicine of Karonese, so far, has been researched mainly in its ethnobotanical issues like identification of medicinal plants, their use and methods of preparation, while with a minimum interest to linguistic and symbolic aspects of such practices. While such researches seldom mention the cultural and ecological significance of traditional healing, none of these really investigate how such contexts are encoded in the language, particularly through metaphorical expressions which often reflect deeper interconnections between health, nature, and cultural identity. This gap is critical because the metaphors in traditional

medicine not only come to show how the Karonese conceptualize health and the environment but also serve as a lens toward understanding their cultural and ecological worldview. To date, no study has systematically analysed the forms and functions of lexical metaphors in Karonese traditional medicine or examined how these metaphors embody the interplay of cultural and ecological contexts. In addressing this knowledge gap, the present paper intends to reveal the symbolic and linguistic richness of traditional Karonese medicine by offering new perspectives on how language, culture, and ecology are linked.

This study explores the forms and functions of lexical metaphors in Karonese traditional medicine and examines how these metaphors reflect the cultural and ecological context of the Karonese people. These questions offer insights into the role metaphors play in Karonese medicine and their significance in preserving cultural and ecological diversity. The first research question is concerned with the forms and functions of lexical metaphors in Karonese medicine. In this respect, metaphorical language is deeply entwined with the representation of medicinal practices, especially naming oils, plants, and rituals. Such metaphors serve both practical and symbolic purposes in that they encapsulate the healing properties of natural elements and reflect cultural beliefs concerning health and well-being. For example, *Minyak Cap Harimau* (Tiger-Branded Oil) represents strength, agility, and resilience, which are ascribed to the oil's effects. The metaphor of the tiger is that the oil imparts to the user the vitality and strength of the animal. In the same vein, *Minyak Patah Tulang* (Bone-Setting Oil) uses a metaphor directly related to its medicinal purpose, which illustrates how Karonese metaphors reinforce both linguistic and medicinal knowledge. By identifying these metaphors, the study shows how the Karonese conceptualize health and healing in metaphorical frameworks that bridge the physical and spiritual aspects of medicine.

The second research question seeks to find out how these metaphors reveal the broader cultural and ecological context of the Karonese. Indeed, the Karonese stand in intimate relationship with the immediate natural environment, which reflects in their traditional medicine too: plants, herbs, and oils used in the course of healing rituals are obtained directly from the landscape, while metaphors that describe such flora often refer to their ecological and cultural importance. Many of them are native plants to North Sumatra, and through generations have been used symbolically as a means of dependence by the Karonese people on nature for health and well-being. In traditional medicine, metaphors bridge language to ecology in expressing the conviction that human health is inseparable from the health of the environment. These metaphors describe not only the medicinal properties of natural elements but also contribute to the passing of ecological knowledge from generation to generation, reinforcing cultural continuity, and raising environmental awareness.

In other words, metaphors have been found to play an important, if not vital, role in Karonese traditional medicine, especially in the ritual use of *minak pengalun* and other healing oils. With regard to the forms and functions that the lexical metaphors take, this study underlines, from a cultural and ecological point of view, the deep connections between language, culture, and the natural world in traditional medicine. In this case, with modernization and environmental changes at stake for the Karonese people, maintaining their metaphors and traditional medicinal knowledge is a task entailing their cultural and ecological resiliency.

## 2. Method

This research takes a qualitative, interactive approach to explore how lexical metaphors encode ecological and medicinal knowledge in Karonese traditional medicine, with a focus on *minak pengalun*, a healing oil central to Karonese culture. The study is structured around four key stages: data collection, data condensation, data display, and conclusion drawing and verification, each stage offers insight into how metaphors serve as vehicles for communicating both medicinal properties and ecological knowledge.

### 2.1. Data Collection

The first step involves gathering data through three main methods:

- Interviews with Traditional Healers (Guru Pengalun): Traditional healers are key sources of knowledge. Semi-structured interviews delve into how oils like *Minak pengalun* are prepared and applied. The metaphors used by these healers link health to spirituality and the natural environment. Additionally, unstructured conversations provide rich, contextual insights into the deeper meanings of these metaphors.
- Analysis of Karonese Medicinal Texts: Traditional medicinal knowledge is often passed down orally or through texts that contain metaphorical language. These texts are analysed to identify lexical items related to medicinal oils, focusing on how metaphors connect healing practices to nature.
- Participant Observation of Healing Rituals: Observing rituals involving *Minak pengalun* provides a real-time understanding of metaphor use. Detailed field notes capture the language, gestures, chants, and symbols employed during these rituals, offering vivid context for how metaphors function in practice.

## 2.2. Data Condensation

In this stage, the collected data is refined and organized to highlight key information:

- **Filtering Lexical Items:** Metaphor-rich lexical items related to oils and plants are identified from the interviews, texts, and observations. Priority is given to metaphors that reference natural elements like animals or weather patterns, which provide insight into both medicinal and ecological knowledge.
- **Identifying Key Metaphors:** Significant metaphors are isolated, especially those that reflect the healing properties of oils in relation to the environment. For example, metaphors comparing medicinal oils to wind or fire are analysed to understand how they shape the Karonese community's concept of health. These metaphors are then categorized based on their cultural and medicinal significance.

## 2.3. Data Display

The condensed data is systematically organized for analysis through:

- **Tables and Charts:** Lexical items and metaphors are displayed in tables, categorizing different medicinal oils, plants, and their corresponding metaphors. This structure enables easy comparison of the meanings behind each metaphor.
- **Descriptive Analysis:** Accompanying the tables is a narrative that interprets the metaphors, explaining their reflection of Karonese cultural and ecological beliefs. For instance, the metaphor of wind in *Minyak Angin* (Wind Oil) represents the oil's ability to relieve tension and restore balance, drawing parallels with the natural role of wind in clearing stagnant air.
- **Visual Representations:** Diagrams or sketches of healing rituals may be included to illustrate how metaphors are embodied in action during these ceremonies, providing further context to their cultural significance.

## 2.4. Conclusion Drawing and Verification

The final step is to interpret the data, draw conclusions, and verify them through several methods:

- **Drawing Conclusions:** The study addresses how metaphors encapsulate ecological and medicinal knowledge. For example, metaphors linking oils to natural elements like wind or fire not only communicate the oils' healing properties but also reinforce Karonese beliefs in the interconnectedness of human health and the environment.
- **Cross-Referencing with Cultural Practices:** The findings are compared with cultural practices observed during fieldwork to ensure their relevance. Metaphors identified in interviews and texts are checked against the actual language used in healing rituals to confirm their alignment with the community's understanding.
- **Verification through Ecological Practices:** The metaphors are also verified against sustainable harvesting practices and the Karonese people's ecological knowledge. For example, metaphors that describe plants as "guardians" of the forest are analysed to ensure they reflect the plants' ecological importance.

This research highlights the integral role metaphors play in Karonese traditional medicine, particularly in the use of Minak pengalun. These metaphors not only communicate medicinal properties but also encode ecological knowledge, reflecting the Karonese community's deep connection to nature and cultural continuity. By validating these findings through cross-referencing with cultural and ecological practices, the study ensures the accuracy and relevance of its conclusions to both the community and broader environmental sustainability efforts.

## 3. Result and Discussion

### 3.1. Results

In fact, Minak pengalun is the Karonese traditional healing practice that deeply connects with nature and culture in their medicines. This tradition, which has been going on for thousands of years, reflects the selection of various medicinal plants based on ecological importance, cultural significance, and efficacy as remedies. Plants such as these speak not only to the material dimensions of healing but also as powerful metaphors of resistance, cleansing, and the interdependence of life.

#### *The Forms and Functions of Lexical Metaphors in Karonese Traditional Medicine*

The healing herbs and plants in this practice are deeply embedded in the Karonese cultural and ecological fabric. As the specificities of the ingredients unfold, their literal, metaphorical, and ecological roles reveal themselves as symbols of harmony between humans and their environment.

Types of plants in the traditional medicine Karonese: a basis for lexical metaphor analysis

The plants are organized here according to their physical forms, which represent one of the symbolic and ecological necessities of traditional medicine. These forms establish the base through which lexical metaphors generate from their cultural and ecological contexts. Classifying plants based on physical forms sets a framework upon which their symbolic and ecological significance in traditional medicine can be explored. Each of the form-roots, rhizomes, leaves, fruits, flowers, woods, and bulbs-corresponds to a set of distinctive characteristics along with cultural beliefs in specific ecological roles. The forms are more than physical features; they are foundational elements that outline the meaning and function attributed to plants. These forms become much clearer, whereby it will be explained how lexical metaphors derive their sources from cultural traditions in interaction with ecological environments to which these plants are thriving, this categorization being necessary in conducting a proper analysis of these metaphors, representing the state of harmony between human beings and nature among the Karonese.

This includes 42 plants of key importance in Karonese traditional medicine, a complex system inculcated with cultural and ecological balance. In each of these practices, plant species are selected based on their physical properties but also for their symbolic and ecological significance. These plants are used in their root, rhizome, leaf, fruit, flower, wood, and bulb forms, each carrying its metaphors and meanings that reflect attachment to nature and the traditional ways of healing among the Karonese. These 42 plants will form the starting point in investigating lexical metaphors that emerge from their cultural and ecological contexts.

Table 1: Ecological Element Metaphors

No	Ingredient (Latin/English/Indonesian)	Ecological Element	Literal Meaning	Metaphorical Meaning	Ecological Significance	Healing Properties
1	Vetiveria zizanioides / Vetiver / Akar Wangi	Root	A fragrant root used for cleansing.	Foundation of life and spiritual purity.	Grows in fertile soil, foundational for ecosystems.	Cleanses negative energy and purifies spaces.
2	Bambusa vulgaris / Bamboo / Akar Bambu	Root	A strong root system that anchors bamboo plants.	Flexibility and resilience in life.	Prevents soil erosion, maintains soil structure.	Strengthens body's structure (bones, muscles).
3	Arenga pinnata / Sugar Palm / Akar Enau	Root	A detoxifying root used in traditional medicine.	Bridge between human and ecological energy.	Integral to tropical ecosystems, nutrient recycling.	Detoxifies the body, restores energy balance.
4	Imperata cylindrica / Cogon Grass / Akar Pengkih	Root	A root associated with spiritual cleansing.	Purification of the soul.	Found in nutrient-rich soils, aids other plants.	Clears negative energy, refreshes the spirit.
5	Areca catechu / Areca Palm / Akar Pinang	Root	A root known for enhancing stamina and strength.	Resilience and foundational support.	Crucial for tropical biodiversity.	Boosts energy, stamina, and supports structural health.
6	Kaempferia galanga / Aromatic Ginger / Kencur	Rhizome	An aromatic ginger used to refresh the body.	Rejuvenation and vitality.	Thrives in tropical soils, improves soil fertility.	Refreshes the body, improves digestion, reduces fatigue.
7	Curcuma aeruginosa / Black Turmeric / Temu Ireng	Rhizome	A dark ginger root used for detoxification.	Removal of impurities from the body.	Aerates soil, contributing to soil health.	Detoxifies the body, supports liver health.
8	Curcuma xanthorrhiza / Java Turmeric / Temulawak	Rhizome	A medicinal ginger that enhances vitality.	Energy and life force.	Improves soil quality through organic matter.	Strengthens immunity, increases energy levels.
9	Curcuma longa / Turmeric / Kuning Gersing	Rhizome	A yellow turmeric known for its healing properties.	Natural recovery and traditional remedies.	Enhances biodiversity, serves as a companion plant.	Treats wounds, promotes skin health, reduces inflammation.

No	Ingredient (Latin/English/Indonesian)	Ecological Element	Literal Meaning	Metaphorical Meaning	Ecological Significance	Healing Properties
10	<i>Alstonia scholaris</i> / Dita Bark / Bahing	Root	A root used to neutralize toxins.	Expulsion of physical and spiritual harm.	Grows in high-altitude areas, stabilizes soil.	Acts as an antidote for toxins, cleanses the body.
11	<i>Eupatorium odoratum</i> / Kapal-kapal Leaf / Daun Kapal-kapal	Leaf	A leaf used for protection against spiritual harm.	Represents defense and safety.	Thrives in wild tropical environments.	Protects against spiritual and physical threats.
12	<i>Pogostemon cablin</i> / Patchouli / Daun Nilam	Leaf	A leaf used to enhance spiritual energy.	Connects human energy with ecological power.	Grows in shaded, moist tropical areas.	Enhances spiritual vitality and balance.
13	<i>Antiaris toxicaria</i> / Ipuh Leaf / Daun Ipuh	Leaf	A leaf used to shield against negative energies.	Acts as a spiritual barrier.	Found near rivers in tropical forests.	Provides spiritual protection and balance.
14	<i>Lantana camara</i> / Temblekan Leaf / Daun Temblekan	Leaf	A leaf used for healing physical and spiritual wounds.	Reflects recovery and renewal.	Common in tropical environments, enhances biodiversity.	Heals wounds and soothes inflammation.
15	<i>Cocos nucifera</i> / Coconut / Kelapa Hijau	Fruit	A coconut used as a base ingredient for the oil.	Represents blessings and spiritual sustenance.	Highly versatile plant in tropical ecosystems.	Supports purification, acts as a medium for blessings.
16	<i>Cuminum cyminum</i> / Cumin / Jintan	Seed	A seed used to protect against negative influences.	Represents spiritual security.	Thrives in well-drained, fertile soils.	Boosts digestion, protects against negative energies.
17	<i>Syzygium aromaticum</i> / Clove / Biji Cengkeh	Seed	A seed providing warmth and pain relief.	Symbolizes comfort and familial harmony.	Requires a tropical, moist environment to thrive.	Improves circulation, relieves pain, and calms the body.
18	<i>Myristica fragrans</i> / Nutmeg / Buah Pala	Fruit	A fruit known for its soothing properties.	Represents calmness and emotional balance.	Grows in tropical rainforests, contributes to biodiversity.	Soothes the mind, reduces stress and anxiety.
19	<i>Impatiens platypetala</i> / Sacred Flower / Bunga Pancur	Flower	A sacred flower found in specific natural habitats.	Symbolizes sacredness and natural beauty.	Found in unique ecosystems, highlights ecological balance.	Used in rituals to promote spiritual purity.
20	<i>Impatiens Platypetala</i> Lindl/ Harmony Flower / Bunga Sapa	Flower	A flower used to balance energy.	Reflects harmony between humans and nature.	Grows in wild environments, supports pollination.	Improves circulation, restores energetic balance.
21	<i>Pomacea canaliculata</i> / Snail Flower / Bunga Keong	Flower	A flower used for purification and aroma.	Represents cleanliness and clarity.	Grows in damp areas, supports biodiversity.	Purifies oils, improves emotional clarity.
22	<i>Citrus hystrix</i> / Kaffir Lime / Jeruk Purut	Fruit	A fruit providing fresh aroma and mental calmness.	Symbolizes happiness and harmony.	Thrives in tropical, moist environments.	Soothes emotions, cleanses spaces, uplifts mood.
23	<i>Curcuma longa</i> / Turmeric / Kunyit	Rhizome	A rhizome known for healing wounds and cleansing.	Represents transformation and recovery.	Improves soil health, supports biodiversity.	Treats wounds, supports skin health, and detoxifies.

No	Ingredient (Latin/English/Indonesian)	Ecological Element	Literal Meaning	Metaphorical Meaning	Ecological Significance	Healing Properties
24	<i>Imperata cylindrica</i> / Cogon Grass / Alang- Alang	Grass	Grass used for spiritual and physical protection.	Represents resilience and protection.	Prevents soil erosion, supports dry ecosystems.	Shields against negative energies and external harm.
25	<i>Allium cepa</i> / Red Onion / Bawang Merah	Bulb	A bulb used for protection from disease.	Represents strength and defense.	Grows in nutrient-rich soil, enhances soil health.	Improves immunity, cleanses negative energy.
26	<i>Allium sativum</i> / Garlic / Bawang Putih	Bulb	A bulb used for cleansing and energy protection.	Represents purification and renewal.	Improves soil quality, controls pests naturally.	Detoxifies the body, protects against spiritual harm.
27	<i>Rosmarinus officinalis</i> / Rosemary / Rosmery	Herb	An herb used for refreshing and energizing.	Symbolizes renewal and vitality.	Supports pollinators, thrives in well-drained soil.	Boosts mental clarity, refreshes energy levels.
28	<i>Avicennia</i> spp / Flame Leaf / Daun Jambar Api	Leaf	A leaf that strengthens energy and vitality.	Represents courage and perseverance.	Grows in fertile land, supports ecological diversity.	Strengthens energy, revitalizes physical strength.
29	<i>Vitis gracilis</i> BL/ Tiger Claw / Gagatan Harimau	Bark	A bark associated with strength and bravery.	Represents untamed natural power.	Grows in wild ecosystems, symbolizes ecological strength.	Enhances bravery, strengthens physical resilience.
30	<i>Caesalpinia sappan</i> / Sappanwood / Kayu Secang	Wood	A wood used for protection and health enhancement.	Represents robust health and stability.	Supports soil stabilization, enhances forest ecosystems.	Boosts physical health, protects against harm.
31	<i>Curcuma longa</i> / Dried Turmeric Peel / Kulit Kunyit Kering	Rhizome	The dried peel of turmeric used for strengthening health.	Represents resilience and longevity.	Enhances soil health, prevents erosion.	Boosts immunity and promotes overall health.
32	<i>Curcuma longa</i> / Turmeric / Kunyit	Rhizome	A rhizome known for cleansing and healing wounds.	Represents recovery and transformation.	Supports biodiversity and soil fertility.	Treats wounds, detoxifies, and promotes healing.
33	<i>Piper nigrum</i> / Black Pepper / Lada	Fruit	A fruit used for warmth and protection.	Represents defense against adversity.	Thrives in tropical soils, supports biodiversity.	Boosts metabolism, provides warmth and energy.
34	<i>Alpinia galanga</i> / Galangal / Lengkuas	Rhizome	A rhizome providing warmth and vitality.	Represents emotional and spiritual warmth.	Thrives in tropical conditions, improves soil health.	Strengthens the immune system, provides energy.
35	<i>Zingiber purpureum</i> Roxb / Panglai Leaf / Panglai	Leaf	A leaf used to boost courage and vitality.	Represents resilience and inner strength.	Grows in fertile tropical environments.	Enhances energy, improves physical and emotional resilience.
36	<i>Areca catechu</i> / Betel Nut / Pinang	Fruit	A fruit that strengthens physical health and stamina.	Represents steadfastness and endurance.	A vital crop in tropical ecosystems.	Boosts stamina, supports bone health.

No	Ingredient (Latin/English/Indonesian)	Ecological Element	Literal Meaning	Metaphorical Meaning	Ecological Significance	Healing Properties
37	Curcuma aeruginosa / Black Turmeric / Temu Ireng	Rhizome	A rhizome used for detoxification.	Represents cleansing and renewal.	Improves soil aeration and fertility.	Detoxifies the body, supports organ health.
38	Curcuma xanthorrhiza / Java Turmeric / Temulawak	Rhizome	A rhizome that enhances vitality and immunity.	Represents vitality and life energy.	Improves soil organic content, supports ecosystems.	Strengthens immunity, enhances vitality.
39	Curcuma longa / Yellow Turmeric / Kuning Gersing	Rhizome	A turmeric variant used for healing wounds.	Represents natural recovery and healing.	Enhances biodiversity, serves as a medicinal plant.	Treats wounds, supports skin health.
40	Alstonia scholaris / Dita Bark / Bahing	Bark	A bark used to neutralize toxins.	Represents removal of harm.	Grows in high-altitude forests, stabilizes soil.	Neutralizes toxins, cleanses the body.
41	Aleurites moluccanus / Candlenut / Kemiri	Seed	A seed used for binding and harmony.	Represents unity and cohesion.	Contributes to soil stability, improves fertility.	Strengthens hair, supports healing processes.
42	Coriandrum sativum / Coriander / Jera (Ketumbar)	Seed	A seed that protects and enhances well-being.	Represents safeguarding and nourishment.	Grows in well-drained soil, supports agriculture.	Improves digestion, protects from diseases.

Data in this study, therefore, classifies the 42 plants and their symbolic, ecological, and medicinal significance, which are carefully collected from both documented sources and in-depth interviews. Such documented data finds basic knowledge on the roles, which these plants have traditionally played in Karonese traditional medicine through history and across cultures. Complementing this, the interview data captures the lived experiences and insights of local practitioners and community members, offering a rich, first-person perspective on the meanings and functions of these plants. This dual approach will make certain that the lexical metaphors are understood comprehensively in relation to both cultural traditions and ecological contexts.

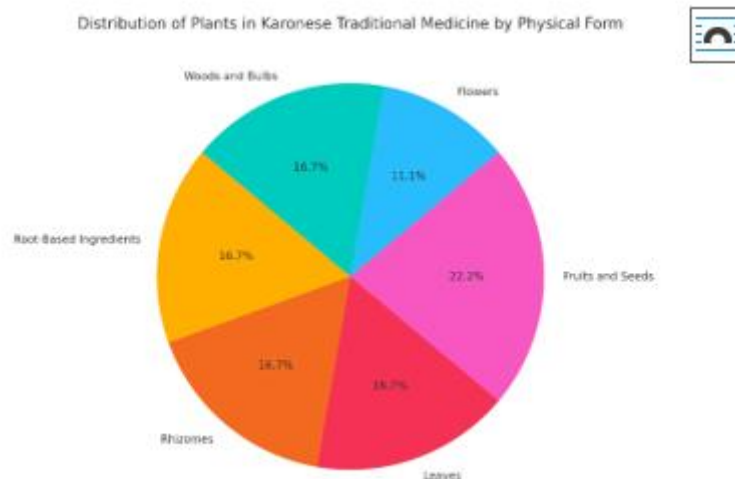


Figure 1. The Distribution of Plants in Karonese Traditional Medicine

The pie chart represents the physical form distribution of 42 plants in Karonese traditional medicine. These six categories, namely Root-Based Ingredients, Rhizomes, Leaves, Fruits and Seeds, Flowers, and Woods and Bulbs, are represented as proportional segments of the chart. Following is the breakup of the chart for clarity:

1. Fruits and Seeds (19%): This category has the highest proportion, comprising 8 out of 42 plants. Plants in this category symbolize growth, energy, and fertility, reflecting their vital role in nourishment and vitality within traditional medicine.

2. Root-Based Ingredients (14%): Representing 6 plants, this category speaks to foundation and stability, both ecologically and metaphorically, crucial in anchoring life and promoting resilience.
3. Rhizomes (14%): Like the flowers, 6 plants of rhizome are representative of the qualities of life and alteration in various ways. Their capability to produce life makes them central within the metaphorical themes of renewal and energy.
4. Leaves represent protection and spiritual balance. They play a vital protective function regarding ecological and cultural balance.
5. Woods and Bulbs (14%): The category, with 6 plants, is indicative of strength and purification, further solidifying the themes of resilience and cleansing in both physical and spiritual contexts.
6. Flowers (10%): The smallest category, with 4 plants, focuses on sacredness and renewal. Flowers are often associated with rituals and spiritual beauty, playing a unique role in traditional healing practices.

These forms are the building blocks that allow an explication of how metaphors are obtained and represent both the cultural and ecological context. The symbolic meaning and the practical application in healing of each plant derive from its physical structure.

### 1. *Root-Based Ingredients: Foundation and Stability*

The roots are at the very core of the metaphorical and functional framework of Karonese traditional medicine, standing for the very foundational elements of life and healing, symbolizing stability, resilience, and spiritual anchorage. Their ecological function of anchoring plants and preventing soil erosion thus mirrors metaphorically the function of stabilizing and strengthening a person.

Plants in This Category:

- *Vetiveria zizanioides* (Vetiver / Akar Wangi)
- *Bambusa vulgaris* (Bamboo / Akar Bambu)
- *Arenga pinnata* (Sugar Palm / Akar Enau)
- *Imperata cylindrica* (Cogon Grass / Akar Pengkih)
- *Areca catechu* (Betel Nut / Akar Pinang)
- *Alstonia scholaris* (Dita Bark / Bahing)

Medicinal usages of root-based ingredients indicate the purifying nature of roots, which often cleanse both physical spaces and spiritual realms. This is where the connection to cleansing and stability directly supports the analysis of their lexical metaphors, reflecting cultural emphasis on maintaining harmony and resilience in the face of adversity.

### 2. *Rhizomes: Vitality and Transformation*

As underground stems capable of horizontal growth, rhizomes have grown metaphors of renewal, vitality, and transformation. Their regenerative nature in ecosystems, whereby they contribute to soil fertility and biodiversity, falls in line with the symbolic role in which they restore human body and spirit.

Plants in This Category:

- *Kaempferia galanga* (Aromatic Ginger / Kencur)
- *Curcuma aeruginosa* (Black Turmeric / Temu Ireng)
- *Curcuma xanthorrhiza* (Java Turmeric / Temulawak)
- *Curcuma longa* (Turmeric / Kuning Gersing)
- *Curcuma longa* (Turmeric Peel / Kulit Kunyit Kering)
- *Alpinia galanga* (Galangal / Lengkuas)

In Karonese traditional medicine, the rhizome is associated with recovery and transformation processes. For this reason, the rhizome becomes the main element in the interpretation of the lexical metaphors of life, which underscore recovery, healing, and restoration as being circular.

### 3. *Leaves: Protection and Spiritual Balance*

Leaves, being the outer exposure of a plant, express protection and balance according to Karonese culture. This interpretation is even emphasized by metaphorical conceptions related to their ecological function during photosynthesis, providing shade, and giving protection to biodiversity while nurturing and protecting the physical and spiritual worlds.

Plants in This Category:

- *Eupatorium odoratum* (Kapal-Kapal Leaf / Daun Kapal-Kapal)
- *Pogostemon cablin* (Patchouli / Daun Nilam)

- *Antiaris toxicaria* (Ipuh Leaf / Daun Ipuh)
- *Lantana camara* (Temblekan Leaf / Daun Temblekan)
- *Avicennia* spp (Flame Leaf / Daun Jambar Api)
- *Zingiber purpureum* (Panglai Leaf / Panglai)

Leaves often play a role in rituals of protection against negative influences, which reflects their role of protector. This duality of their role in ecosystems and traditional medicine can provide rich material for the analysis of lexical metaphors based on defense, renewal, and harmony.

#### 4. *Fruits and Seeds: Growth and Energy*

Fruits and seeds carry a powerful symbolism in the Karonese traditional medicine of growth, potentiality, and energy. This ecological importance of seed dispersal and sustaining biodiversity reinforces their metaphorical use as representations of abundance, fertility, and vitality.

Plants in This Category:

- *Cocos nucifera* (Coconut / Kelapa Hijau)
- *Cuminum cyminum* (Cumin / Jintan)
- *Syzygium aromaticum* (Clove / Biji Cengkeh)
- *Myristica fragrans* (Nutmeg / Buah Pala)
- *Piper nigrum* (Black Pepper / Lada)
- *Areca catechu* (Betel Nut / Pinang)
- *Aleurites moluccanus* (Candlenut / Kemiri)
- *Coriandrum sativum* (Coriander / Jera/Ketumbar)

In various traditional forms of healing, fruits and seeds are strongly associated with nutrition and energizing the life force. Here, in fruit treatment, the cultural values represent not only nurture for the body but also for the spirit-illuminating metaphorical knowledge, showing prosperity and growth.

#### 5. *Flowers: Sacredness and Renewal*

In the Karonese tradition, flowers represent the sacred, purity, and renewal due to their beauty being very transient and their role of pollination in ecological functioning. Flowers are used in spiritual rituals underlining metaphorical associations with divine harmony and transformation.

Plants in This Category:

- *Impatiens platypetala* (Sacred Flower / Bunga Pancur)
- *Impatiens platypetala* Lindl (Harmony Flower / Bunga Sapa)
- *Pomacea canaliculata* (Snail Flower / Bunga Keong)
- *Citrus hystrix* (Kaffir Lime / Jeruk Purut)

Traditional uses of flowers for medicines underpin the connection to emotional and spiritual restoration. It is here that an examination of metaphoric lexical items that denote spiritual beauty and balance and interlinkages between human and natural systems is instructive.

#### 6. *Woods and Bulbs: Strength and Purification*

Woods and bulbs symbolize endurance, strength, and cleansing. Ecologically, the roles of soil fixation and nutrient storage, besides others, make them out to be resilient and apt metaphors for protection and renewal of every kind, both physical and spiritual.

Plants in This Category:

- *Allium cepa* (Red Onion / Bawang Merah)
- *Allium sativum* (Garlic / Bawang Putih)
- *Rosmarinus officinalis* (Rosemary / Rosmery)
- *Caesalpinia sappan* (Sappanwood / Kayu Secang)
- *Alstonia scholaris* (Dita Bark / Bahing)
- *Vitis gracilis* BL (Tiger Claw / Gagatan Harimau)

These plant forms are very often used in the practice of traditional medicine in practices designed to rid the body of poisons and fortify both body and mind. The metaphorical meanings they take on in Karonese culture reflect a profound grasp of the need for strength and purification, both so crucial to the healing process.

This makes it possible to categorize plants into six physical forms and, in turn, connect structural attributes with the functions they serve in traditional medicine and metaphors inspired by them. Each of these forms does not only have practical healing properties but embodies cultural and ecological meanings important for the creation of lexical metaphors. It ranges in studies of the form and function of 42 plants in relation to a harmonious relationship of the culture and ecological environment of the Karonese. It is this fundamental understanding that shall set the ground for answering the research question and revealing deeper insights about traditional healing practices in their cultural embedding.

*Metaphors Reveal the Broader Cultural and Ecological Context of the Karonese.*

The metaphors identified in the table 2 below serve as a bridge between the Karonese cultural worldview and their ecological environment, emphasizing a symbiotic relationship that shapes their traditional medicine. These metaphors reflect:

1. *Integration of Nature and Culture:*

- Roots, Akar, are metaphors of stability and ancestral wisdom; this indicates how the healing practices of Karonese are set within respect for heritage and natural foundations. The cultural importance of trees thus reflects their ecological role in anchoring and stabilizing ecosystems.
- Leaves (Daun), such as Sirih and Nilam, symbolize life and rebirth, related to their ecological role in the production of energy and renewal of life. This duality reflects a cultural belief in the treatment process: one must be in harmony with the natural cycles of nature.

2. *Sustainability and Knowledge of Biodiversity:*

- The use of different plant parts, like the Buah Pala fruits and Akar Bambu roots, shows ecological understanding or consciousness that is based on the different values of each species. Often, these metaphors detail plants as necessary to sustain life in the balance of ecosystems and in human health and underscore sustainable resource use.

3. *Cultural values represented in Plant Metaphors:*

- Stems (Batang), for example, Batang Urip, signify structure and resilience, a metaphor that underlines the Karonese philosophy of connectivity: the body's organs are connected, and the individual is with the surrounding environment. Flowers, for instance, Bunga Pancur, are beauty and spiritual balance, which is further expressed in cultural ceremonies and in ecological systems like pollination.

Table 2. Metaphorical, Cultural, and Ecological Analysis of Karonese Plant Use

No.	Plant Part	Metaphorical Analysis	Cultural implications	Ecological Significances
1	Root	Roots symbolize grounding, stability, and ancestral wisdom, reflecting physical anchoring and cultural foundation.	Viewed as the foundation of life and spiritual guidance, roots reflect the Karonese reliance on ancestral teachings.	Roots stabilize soil, prevent erosion, and support ecosystems, paralleling their cultural symbolism of stability.
2.	Leaf	Leaves represent vitality, connection, and renewal, derived from their role in energy flow and biodiversity support.	Leaves are tied to healing and energy, showcasing the belief in nature's role in revitalization and health.	Leaves facilitate photosynthesis and regeneration, supporting ecological cycles of energy and biodiversity.
3.	Stem	Stems metaphorically signify structure and endurance, bridging roots (ancestral grounding) to leaves (spiritual vitality).	Stems highlight the Karonese focus on resilience and the interconnectedness of life systems.	Stems transport nutrients and provide structural integrity to plants, analogous to their metaphorical role in support.
4.	Fruit/Seed	Fruits and seeds are linked to growth, prosperity, and sustenance, symbolizing continuity and cultural blessings.	Fruits and seeds emphasize the Karonese value of sustenance and the blessings of fertility and harmony.	Fruits and seeds propagate species, support pollinators, and sustain ecosystems, mirroring cultural ideas of growth.
5.	Flower	Flowers metaphorically denote beauty, balance, and inspiration, aligning with ecological roles in pollination and balance.	Flowers embody ceremonial purity and aesthetic harmony, important in rituals and spiritual practices.	Flowers aid in pollination, ecological balance, and species survival, reflecting their symbolic inspiration and balance.

The analysis reveals that metaphors associated with the Karonese's use of plants and their parts in traditional medicine provide significant insights into the broader cultural and ecological context of their society. These findings are presented under two key dimensions:

### 1. *Cultural Context*

- **Spiritual Significance:** Most plant parts' metaphors bear spiritual and ancestral connotations. For example, Akar Wangi and Akar Bambu, representing the roots, signify staying grounded and wisdom and reflect the Karonese notion that ancestors are the bases which guide present practices.
- **Symbolism in Healing:** Plants such as Bunga Pancur and Batang Urip have metaphorical associations to life, balance, and purity. Such metaphors epitomize the Karonese understanding of health, which holds that it emanates from harmony within the body or between the person and nature.
- **Cultural Preservation:** The continued use of certain plants, such as Kelapa Hijau and Buah Pala, reflects the role that traditional medicine plays in sustaining cultural identity. These plants are considered gifts from nature and a means to transfer cultural knowledge.

### 2. *Ecological Context*

- The metaphors show a great reliance on local biodiversity, whereby plants are sourced from the forest, fields, and other natural landscapes. For instance, Daun Nilam and Daun Sirih are related to vitality and energy due to their ecological roles of supporting biodiversity and human health.
- **Sustainability and Knowledge of Nature:** The selection of plants such as Akar Enau and Daun Kapal-Kapal indicates the ecological knowledge of the Karonese. These are metaphorically referred to as "the heart of the forest," showing how their function maintains both ecological balance and human health.
- **Ecological Resilience:** The hardy plants, particularly Alang-Alang and Batang Panglai, are symbolic of the strength that is 'unyielding resistance or firmness,' a feature derived from ecological awareness about plant species' contributions toward the sustenance of the topmost land layer.

## 3.2. *Discussions*

The discussion of this study goes to the very heart of how lexical metaphors bridge Karonese cultural values and ecological understanding. Such metaphors allow for several overarching concepts through which their broader significance could be viewed. This section discusses these concepts and their implication.

### *Integration of Nature and Culture*

Most outstanding among the revelations in this study is how nature and culture blend in Karonese traditional medicine. Metaphors of "roots of wisdom" for Akar Wangi and Akar Bambu show how the physical attributes of plants are directly linked to spiritual and ancestral beliefs. These metaphors not only summarize the cultural importance placed on respect for tradition but also reveal how natural elements are seen as integral to locating cultural identity. The implication of this embedding is, therefore, that the Karonese conceive health as a holistic process, involving physical, spiritual, and ecological spheres.

### *Metaphors of Cultural Preservation*

Another important theme here is the use of metaphors in maintaining cultural identity. That plants like Kelapa Hijau are still referred to as "blessings of nature" points out their dual role: as a medicinal resource and a symbol of continuity in culture. Such metaphorical framing ensures that traditional knowledge will be passed down through generations, reinforcing community values and practices. The symbolic use of plants in rituals and healing ceremonies further underlines their status as cultural artifacts, anchoring the Karonese to their ancestral heritage.

### *Ecological Awareness Embedded in Language*

The metaphors also reflect acute ecological awareness beyond the cultural dimensions. For example, Daun Nilam and Daun Sirih are referred to as "leaves of vitality" because they have deep knowledge about the ecological functions these plants play in supporting biodiversity and regeneration. This indicates that the Karonese do not only depend on these plants for their medicinal values but also recognize their contributions to sustaining environmental health. Such metaphors depict the mutualism between people and nature; ecological care is part of community survival.

### *Practice of Resilience and Sustainability*

Other metaphors, such as "resilient stems" for Batang Urip and Alang-Alang, show Karonese commitment to sustainability. These plants, capable of living and growing in a hostile environment, stand symbolically for adaptation and strength, both culturally and ecologically. Through such metaphors in their traditional medicine, the Karonese people implicitly promote sustainable practices regarding the conservation of critical plant species and their habitats.

### *Interplay of Physical and Metaphysical Realms*

The metaphors finally show the interaction between the physical and metaphysical realms. Fruits and seeds, such as Buah Pala and Biji Cengkeh, are referred to as "harbingers of growth and prosperity," serving to emphasize their role in bridging tangible health benefits with intangible spiritual blessings. This double meaning brings forth the belief of the Karonese that healing does not concern the body only but also spiritual balance and harmony with nature.

Wider implications: These observations together draw a picture of the interrelationship between culture, ecology, and language within the Karonese traditional medicine system. The study is a contribution for researchers and practitioners in building an understanding of indigenous knowledge systems toward sustainable healthcare and ecological practice. These findings highlight that maintaining linguistic and cultural diversity may be an important factor in ecological resilience and cultural continuity.

## 4. Conclusion

The study also shows that the lexical metaphors of Karonese traditional medicine have a critical function in acting as a nexus between the conservation of cultural heritage and ecological understanding. Plant-based metaphors, in this regard, have been found to bear the worldview of the Karonese in their speech, representing holistic approaches to health, spirituality, and environmental harmony.

The findings reveal that metaphors like "roots of wisdom" and "leaves of vitality" are not just linguistic artefacts but bear deep cultural and ecological meanings. These metaphors underline the intimacy of the Karonese with their natural environment and their dependence upon traditional practices in sustaining cultural identity and ecological balance. Importantly, the prominence of roots as a symbol of stability and wisdom underlines the typical local wisdom of the Karonese in integrating ecological knowledge with cultural values.

This basically emphasizes that research underlines linguistic, cultural, and ecological integrations, which are very important to be preserved and understood about indigenous knowledge systems. It further argues that such metaphors within traditional medicine provide critical pathways to understanding sustainable practices, holistic health paradigms, and act as bridging mechanisms between modernity and tradition.

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