

## Local Wisdom in Naming the Traditional Herbal Plants: A Semantic Analysis in Nias Language

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### Abstract

This research investigates the local wisdom embedded in the naming of traditional herbal plants in the Nias language through a semantic analysis. The study addresses the gap in literature concerning the cultural and linguistic aspects of medicinal plant nomenclature in Nias, Indonesia. Utilizing a qualitative methodology, semi-structured interviews and documentation were conducted with five Nias individuals to gather insights on traditional herbal plants. Thirty traditional plant names were identified and analyzed for their semantic attributes. Findings reveal that the names often reflect physical characteristics, medicinal properties, or cultural significance, showcasing the rich botanical knowledge and cultural heritage of the Nias people. This study not only documents these unique plant names but also underscores the influence of local wisdom on the linguistic practices of the Nias community, highlighting the interplay between language, culture, and natural environment.

**Keywords:** Traditional herbal plant; Nias language; local wisdom; semantic analysis; cultural heritage.

### 1. Introduction

Cultural and linguistic origins frequently coincide. Language shapes human experience and serves as a conduit for our existence. It is widely acknowledged that the domain of culture is vital to humanity's existence. Language does not generate physical reality; rather, it shapes society's perception of the world. However, it would be a mistake to believe that language is just another instrument for solving various communication and thinking challenges. Language rules inadvertently shape the reality we experience (Tektigul et al., 2023).

Local knowledge refers to a community's entire experience, ideas, worldview, values, norms, language, and practices that are regarded good to pass down from generation to generation in its country. Indonesia boasts a diverse cultural landscape. Local knowledge is defined as the general superiority of local culture and geographical conditions (Subarkah, 2017). Local knowledge can take the form of an idea or an action that involves methods to interact with other humans, humans and the environment, and humans with their belief systems (Jumriani et al., 2021). And one of the local wisdom that relates to humans and their environment is traditional herbal plants.

Herbal plants, also known as medical plants or plants with medicinal powers, are plants whose parts, such as leaves, stems, flowers, roots, or seeds, can be utilized for medicinal or therapeutic purposes. In (Sivapalan & Sanmugarajah, 2019) define medicinal plants as any plants that promote health, provide temporary respite, or have curative capabilities. In Indonesia, herbal plants are a cultural heritage that has long been utilized by local communities in traditional medicine and become a wealth of Indonesian biodiversity. One of the regions in Indonesia that has a wealth of herbal plants is Nias Island. Nias people are settlers from Nias Island, which is located west of Sumatra (Batang Toru) (Susiarti & Sambas, 2018). The Nias people's traditional medical system, which has been passed down from generation to generation, relies heavily on medicinal herbs (Zebua et al., 2024).

Semantics is the study of meaning in language. According to (Salloum et al., 2020) argue that semantics is a discipline of linguistics that studies the meaning of language and how language conveys a meaningful message through

semantic interaction with various linguistic categories such as syntax, phonology, and lexicon. It investigates how humans construct, comprehend, and communicate meaning using words, phrases, sentences, and larger units of discourse. So, in this study, researchers looked at the meaning of the names of traditional herbal plants on Nias from a semantic point of view. Based on the background that has been described, the formulation of problem in this research are "And how is the semantic analysis of herbal plant names in Nias language? The aim of this research is to know the semantic analysis of herbal plant names in Nias language.

#### **(Traditional Herbal Plants)**

Traditional medicine refers to medications derived from natural resources (van Wyk & Prinsloo, 2020). Plants are often utilized in traditional medicine to heal illnesses. For our forefathers, the process of locating edible plants invariably resulted in incidental meetings with plants having therapeutic properties that served to alleviate sickness symptoms. As written languages developed, such instances were documented and passed down through generations (Li & Weng, 2017). One area that has traditional herbal plants is the island of Nias. Nias people are settlers from Nias Island, which is located west of Sumatra (Batang Toru) (Susiarti & Sambas, 2018). The Nias people's traditional medical system, which has been passed down from generation to generation, relies heavily on medicinal herbs (Zebua et al., 2024). In (Gea & Rahardi, 2021) argue that there are several traditional herbal plants in the area, namely: *langu wato*, *giti 'iti*, *Söfö-söfö*, *manaze*, *mali-mali*, *mboli*, *ndruru-ndruru*, *go'o*, *manawa danó*, and etc.

##### a. Langu Wato

The plant *langu wato* is named after the terms *langu* 'poison' and *wato* 'axe'. The words "poison" and "axe" refer to objects, hence *langu wato* lexical is categorized as a noun class. The *langu wato* plant is a wild plant that can reach a height of 2-3 meters and a diameter of 18-20 cm. This plant's leaves are solitary, rigid, and stiff. *Langu wato* is used by Nias people to rehabilitate dislocated body parts and as an antidote to poison.

##### b. Söfö-söfö

The word *Söfö-söfö* falls under the category of nouns. Lexically, *Söfö-söfö* has only one meaning: it is the name of a plant. Although it grows wild, it can also be cultivated as a herbaceous plant. *Söfö-söfö* features white-colored complex blooms. Nias people use this herb to treat fever and malaria. This medication can be administered to both children and adults.

##### c. Manaze

In the Nias language, *manaze* is understood only as the name of a plant. The *manaze* plant is a wild shrub with a woody stem. This plant can reach a height of around 100 cm and has thorns under its leaves. *Manaze* can help treat chickenpox.

##### d. Mali-Mali

Lexically, *Malimali* is a term derived from a plant's name. This is a wild plant with woody, branching stems that can grow up to 5 meters tall. This plant's dark-colored leaves have slightly serrated edges on the underside of the brilliant green ones. This plant is known to Nias people as a burn medication; nevertheless, pregnant women can mix it and use it to maintain their uterus.

##### e. Mboli

In Nias, *mboli* is thought to be the name of a plant. This plant is a wild plant with a high stem of around 15 meters, round, erect, white stems, and green leaves. The Nias people uses the *mboli* plant to treat fever, hypertension, malaria, and renal disease.

##### f. Ndruru-Ndruru

In the lexicon, *ndruru-nduru* is just regarded as a plant name with no further meaning. This plant is wild and has a branching woody trunk. The *ndruru-nduru* trunk ranges in height from 1 to 4 meters. Yellowish green color. Traditional Nias people benefit from this herb as an antidote to poisons.

##### g. Go'o

*Go'o*, a plant found in the Nias region, is still considered wild. This plant grows to 30 to 90 cm tall, has a ribbon shaped green tint, and is a clumping plant. Nias people use this herb to treat fevers.

#### **(Semantic Analysis)**

Semantic analysis is concerned with the meaning of words and phrases in relation to the world. This assignment provides critical evaluations of semantics, including descriptive, analytical, and interpretative perspectives (Salloum et al., 2020). In (Muawanah et al., 2023) also explain that semantic analysis is a type of text classification where the subjectivity of the statements is essential. In (Salloum et al., 2020) explains that there are several types of semantic analysis, namely:

##### a. Natural Language Processing

Semantic analysis examines language structures using natural language processing. Natural language processing (NLP) is a theory-driven field that uses computational techniques to automatically evaluate human language representations. NLP aims to create computer software systems that can interpret and generate texts in English and other languages with human-like capabilities. NLP is a branch of research and application that investigates how computers can be used to understand and modify natural language utterances and texts in order to accomplish useful tasks.

b. Latent Semantic Analysis

The intelligence and machine learning fields encounter hurdles such as learning from natural language and text, however latent semantic analysis can help. The primary difficulty is to grasp the denotation and usage of words in an information-driven manner, for example, from some provided content without any prior understanding of linguistics.

c. Sentiment Analysis

Advertising researchers have a long history of gathering qualitative data to understand customer thoughts and feelings. Traditionally, manual content coding might be used to accomplish this operation. Researchers thoroughly and comprehensively examine the data, independently developing their own sentiment categories. Sentiment analysis is becoming increasingly popular due to its distinct advantages, including: firstly, computer- A Survey of Semantic Analysis Approaches aided feelings sentiment analysis is not only more effective than manual coding but also yield comparable results.

2.Method

Qualitative research offers greater insights into real-world problems without relying on quantitative data. This research paradigm collects participant views, experiences, and behaviors. It addresses “why” and “how” rather than “how much” or “how many” questions (Oranga & Matere, 2023). Qualitative research is a methodological approach used in social sciences and other fields to explore, describe, and analyze complex human experiences, behaviors, and social phenomena in depth. And the research method used in this research is a qualitative method using interviews and documentation instruments. The type of interview used is semi structure. Semi-structured interviews are similar to structured interviews in that the questions are pre-planned, but the order is determined during the conversation. The list of questions allows the interviewer to ensure that all relevant questions were asked (Naz et al., 2022). This type of interview is a versatile and widely used qualitative research method that combines elements of both structured and unstructured interview techniques.

The resource persons in this study were 5 Nias people about traditional plants in Nias. The researcher has prepared questions that will be given to the interviewees as many as five questions, which are: 1). What is a traditional plant? 2). Can you name any plants that are considered medicinal? 3). Why are they considered medicinal? 4). What are the properties of these herbs? 5). What are the characteristics of these plants?

3. Findings and Discussion

Traditional plants usually refer to plants that have long been used in traditional medicine or specific cultures. Researchers have found several traditional Nias plant names, including:

Table of Semantic Analysis of Traditional Plants

Traditional Herbal Plants in Nias Language	Scientific Names	Semantic Analysis
<i>Langu wato</i> “Böi hulö langu wato ndraugö”	<i>Cinnamomum burmanni</i>	<p>Literal Meaning:</p> <ul style="list-style-type: none"> <li>Literally means "axe poison"</li> <li><i>Langu</i> = poison, <i>wato</i> = axe</li> <li>Describes the nature of plants that are hard/strong, cannot be cut down with an axe.</li> </ul> <p>Denotative Meaning:</p> <ul style="list-style-type: none"> <li>Refers to a specific plant of the genus <i>Cinnamomum</i> that has a very hard stem.</li> </ul> <p>Connotative Meaning:</p> <ul style="list-style-type: none"> <li>Symbolizes something that is very strong or resilient.</li> <li>Often used to describe someone who is stubborn or has a strong stance.</li> </ul> <p>Conceptual Metaphor:</p> <ul style="list-style-type: none"> <li>“Hardness of heart is hardness of wood” - <i>langu wato</i> is used as a metaphor to describe human nature that is difficult to change.</li> </ul> <p>Prototype Semantics:</p> <ul style="list-style-type: none"> <li><i>Langu wato</i> may be the prototype or ideal example for the concept of</li> </ul>

<p><i>Giti'iti</i> "He ha duo si sambua bulu giti'iti"</p>	<p><i>Ipomea triloba</i></p>	<p>"resilience" or "strength" in Nias language. Semantic Network:  <ul style="list-style-type: none"> <li>• Connected to other concepts such as strength, resilience, hardness, and possibly also to concepts relating to human traits.</li> </ul>                     Literal Meaning  <ul style="list-style-type: none"> <li>• Has no special literal meaning.</li> <li>• Only known as a plant name with no other meaning.</li> </ul>                     Denotative meaning:  <ul style="list-style-type: none"> <li>• Refers to a specific plant of the genus <i>Ipomea</i>, known as a vine.</li> </ul>                     Connotative Meaning  <ul style="list-style-type: none"> <li>• Simplicity: Used to describe something very simple or small.</li> <li>• Humility: In social contexts, its use implies a humble attitude.</li> </ul>                     Conceptual Metaphor:  <ul style="list-style-type: none"> <li>• "Simplicity is a <i>giti'iti</i> leaf". <i>Giti'iti</i> is used as a metaphor to describe a very small amount or a very simple situation.</li> </ul>                     Prototype Semantics:  <ul style="list-style-type: none"> <li>• <i>Giti'iti</i> may be the prototype or ideal example for the concept of "little" or "simple" in Nias language.</li> </ul>                     Semantic Network:  <ul style="list-style-type: none"> <li>• Connected to concepts such as simplicity, humility, informality, and possibly also to concepts related to social interaction.</li> </ul> </p>
<p><i>Söfö-söfö</i> "Mo bowo nduru-nduru, mowua söfö-söfö. Böi faudugö balö solöfö, ba lua zima 'ö ma 'ökhö".</p>	<p><i>Ageratum conyzoides</i></p>	<p>Literal meaning:  <ul style="list-style-type: none"> <li>• Has no special literal meaning</li> <li>• Only known as a plant name.</li> </ul>                     Denotative Meaning:  <ul style="list-style-type: none"> <li>• <i>Söfö-söfö</i> is the Nias language plant name for <i>Ageratum conyzoides</i>.</li> <li>• It is categorized as a wild plant.</li> <li>• It has white compound flowers.</li> <li>• Known as a traditional medicinal plant to treat fever and malaria.</li> <li>• Can be given to children and adults.</li> </ul>                     Connotative Meaning:  <ul style="list-style-type: none"> <li>• Symbolizes happiness, prosperity, or profit.</li> </ul>                     Contextual Meaning:  <ul style="list-style-type: none"> <li>• In the context of advice, it has a positive meaning as a symbol of good luck.</li> </ul>                     Figurative Meaning:                      Used metaphorically to describe certain traits or conditions in human life.                 </p>
<p><i>Manaze</i> "Böi fodoi manaze tetutu, ba böi fodoi ndrima modetaru"</p>	<p><i>Flacourtia rukam</i></p>	<p>Literal Meaning:  <ul style="list-style-type: none"> <li>• Has no special literal meaning</li> <li>• Only understood as a plant name.</li> </ul>                     Denotative Meaning:  <ul style="list-style-type: none"> <li>• <i>Manaze</i> is the Nias plant name for</li> </ul> </p>

<p style="text-align: center;"><i>Mali-mali</i>            “No mo wa’a mali-mali            manufa, no mowa’a geu            muhara’a”</p>	<p style="text-align: center;"><i>Leea indica</i></p>	<p style="text-align: center;"><i>Flacourtia rukam.</i></p> <ul style="list-style-type: none"> <li>• It is a wild plant with shrubs and woody stems.</li> </ul> <p>Contextual Meaning:</p> <ul style="list-style-type: none"> <li>• In “<i>Böi fodoi manaze tetutu, ba böi fodoi ndrimea modetaru</i>”, <i>manaze</i> is used in the context of comparison.</li> </ul> <p>Connotative Meaning:</p> <ul style="list-style-type: none"> <li>• In Nias speech, <i>manaze</i> is associated with something that appears harmless but can still hurt.</li> </ul> <p>Figurative Meaning:</p> <ul style="list-style-type: none"> <li>• Used metaphorically to describe human nature or character.</li> <li>• A comparison between the nature of <i>manaze</i> thorns and the hidden but hurtful nature of humans.</li> </ul> <p>Associative Meaning:</p> <ul style="list-style-type: none"> <li>• Associated with something that seems ordinary but has the potential for danger.</li> <li>• Associated with a human character that harbors negative feelings.</li> </ul> <p>Comparative Meaning:</p> <ul style="list-style-type: none"> <li>• In speech, often compared to other plants such as oranges (<i>ndrimea</i>) to show differences in character or traits.</li> </ul>
		<p>Literal Meaning</p> <ul style="list-style-type: none"> <li>• Has no specific literal meaning</li> <li>• Known as a plant name term only.</li> </ul> <p>Denotative Meaning:</p> <ul style="list-style-type: none"> <li>• <i>Mali-mali</i> is the Nias plant name for <i>Leea indica</i>.</li> <li>• It is a wild plant with a woody and branched stem.</li> </ul> <p>Contextual Meaning:</p> <ul style="list-style-type: none"> <li>• In the utterance “<i>No mo wa'a mali-mali manufa, no mowa'a geu muhara'a</i>”, <i>mali-mali</i> is used in the context of comparison with other plants.</li> </ul> <p>Connotative Meaning:</p> <ul style="list-style-type: none"> <li>• In Nias speech, <i>mali-mali</i> is associated with someone who has a clear target in life, strength and resilience in facing life's challenges.</li> </ul> <p>Figurative Meaning:</p> <ul style="list-style-type: none"> <li>• Used metaphorically to describe strong and purposeful human character or traits.</li> <li>• A comparison between the supporting root of <i>mali-mali</i> and a solid life principle.</li> </ul> <p>Associative Meaning:</p> <ul style="list-style-type: none"> <li>• Associated with strength, determination, and a clear direction in life.</li> <li>• Associated with the ability to persevere in the face of challenges.</li> </ul> <p>Comparative Meaning:</p> <ul style="list-style-type: none"> <li>• In speech, compared to other plants to</li> </ul>

show differences in character or traits.

*Mboli*  
 “Hana na esolo gawöni,  
 hana sa na alawa mboli.  
 Nalö wewe toli sokabi,  
 aso’a na ilau angi”

*Khaya*  
*sinegalensis*

Literal Meaning

Literal Meaning

- Has no other literal meaning
- Understood as a plant name in Nias language.

Denotative Meaning:

- *Mboli* is the Nias plant name for *Khaya sinegalensis*.

Contextual Meaning:

- In the utterance “*Hana na esolo gawöni, hana sa na alawa mboli*”, *mboli* is used in a comparative context to describe something big and strong.

Connotative Meaning:

- In Nias speech, *mboli* is associated with:
  - a. Strength or something big and sturdy.
  - b. Treasure, position, or high social status.
  - c. Something that appears strong but is actually vulnerable.

Figurative Meaning:

- Used metaphorically to describe power or high social status.
- Also used to illustrate the fragility behind apparent strength.

Associative Meaning:

- Associated with physical and social strength.
- Also associated with vulnerability hidden behind strength.

Comparative Meaning:

- In speech, often compared to plants or other elements to show the contrast between strength and weakness.

Symbolic Meaning:

- Symbolizing worldly power (wealth, position, status) which is fragile without a strong spiritual foundation.

Philosophical Meaning:

- Reflecting the Nias people's philosophy of life on the importance of balance between physical/material strength and spiritual strength.

This research delves into the local wisdom inherent in the naming of traditional herbal plants in the Nias language through a semantic analysis. By conducting semi-structured interviews with five Nias individuals, the study identifies and examines the semantic attributes of thirty traditional plant names. The findings reveal that these names reflect the physical characteristics, medicinal properties, and cultural significance of the plants, illustrating the rich botanical knowledge and cultural heritage of the Nias people. The semantic analysis highlights the intricate relationship between the Nias people and their environment, showcasing how local wisdom influences linguistic practices. This research not only documents the unique plant names but also emphasizes the interplay between language, culture, and the natural environment. The plant names embody the community's observations, beliefs, and experiences, contributing to their cultural identity and preserving an important aspect of their traditional knowledge for future generations. Overall, the study underscores the importance of preserving the linguistic heritage of the Nias people and offers valuable insights into their cultural and ecological knowledge systems.

### Cultural and Linguistic Implications

The semantic richness of these plant names illustrates how the Nias people perceive and interact with their environment. The names provide insights into the local knowledge systems and worldviews, reflecting a deep understanding of the plants' uses and characteristics.

- **Cultural Identity:**

The plant names embody the Nias community's observations, beliefs, and experiences, contributing to their cultural identity.

- **Preservation of Knowledge:**

Documenting these names and their meanings helps preserve an important aspect of the Nias people's traditional knowledge for future generations.

- **Interconnectedness of Language and Environment:**

The study underscores the interplay between language, culture, and the natural environment, highlighting the ecological knowledge embedded in the Nias language.

### 4. Conclusion

The research provides an insightful exploration into the intricate relationship between the Nias people and their natural environment, as reflected in their language. This study identified thirty traditional plant names, each with distinct semantic attributes that embody the community's observations, beliefs, and experiences. The semantic analysis underscores the influence of local wisdom in these naming practices, highlighting how cultural heritage and botanical knowledge are deeply intertwined. The findings not only document the botanical lexicon of the Nias people but also offer valuable insights into their cultural identity and linguistic heritage, preserving an important aspect of their traditional knowledge for future generations.

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