# 13.
# Outlining the History and Evolution of Ecolinguistics in Indigenous Odisha

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## Abstract

Ecolinguistics, an emerging interdisciplinary domain that investigates the relationship between language and environmental contexts, offers significant insights into indigenous linguistic structures. This dissertation examines the historical development of ecolinguistic philosophy within the indigenous linguistic framework of Odisha, India. The indigenous languages of the region have unique phonetic, phonological, and auditory traits shaped by environmental conditions, cultural practices, and social interactions, and are grounded in rich oral traditions. This research clarifies how historical events, environmental attributes, and cultural transmission have shaped language use and communication systems across time. Furthermore, it does a comprehensive analysis of the effects of modernisation, linguistic assimilation, and language shift on the viability of indigenous speech patterns. The research emphasises the necessity of documenting, preserving, and reviving efforts to protect Odisha's linguistic landscape through historical linguistics, phonetics, and sociolinguistics. This interdisciplinary method enhances comprehension of the co-evolution of language and environment in indigenous communities.

*Keywords:* Ecolinguistics, Linguistic Evolution, Oral Traditions, Indigenous Languages, Odisha.

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## Introduction

Languages are not just a means of communication, but living representations of human experience, worldview and environment (Haugen, 2001). Ecolinguistics is an emerging interdisciplinary research area that examines how language reflects, maintains, or undermines ecological relationships (Fill & Muhlhausler, 2001; Stibbe, 2021). Using Odisha, a linguistically and ecologically diverse state in eastern India, as a case study, this work examines the status of these languages and its implications. This study examines the indigenous languages of Odisha, a linguistically and ecologically diverse state in eastern India, as a case study. There are more than sixty indigenous tribes in Odisha that speak different languages, including Gadaba, Pengo, Manda, Kuvi, Kui, Saora, Juang, Gorum, Juawang, and Bonda, among others, which have developed in close harmony with their ecosystems. These are mostly oral, performative, and symbolic languages that are deeply rooted in the rhythms of forest, river, and hill life. In these traditions, the vocabulary, grammar, and discourse patterns are shaped by environmental cycles and strengthen sustainable cultural practices of reverence (Larson, 2011). Raja festival embodies the Earth in the image of a menstruating woman, who has been granted a period of rest; it is a metaphor, proverb, song and ritual that codes an ecological ethos (Pati 2002; Mohanty 2014). But these are now threatened by modernisation, linguistic homogenization, and socio-economic factors (Mufwene, 2025). Language shift and intergenerational disconnection have been accelerated by the dominance of two languages – Odia and English – promoted through formal education and the media (Harrison, 2007; Skutnabb-Kangas, 2000). According to Crystal, the extinction of a language inevitably leads to the loss of identity, ecological knowledge and intellectual diversity.

## Review of Earlier Works

Ecolinguistics developed in the 1990s at the crossroads of ecology, linguistics, and critical discourse studies. Fill and Muhlhausler suggested that languages are situated within socio-cultural and ecological contexts. Muhlhausler has proposed a framework of linguistic ecology that considers languages in terms of balance, coexistence, and extinction. Stibbe continued this work by expanding it to include 'the stories we live by', the dominant narratives that

affect human relationships with nature. In Odisha, tribal oral history can tell positive ecological stories that are very different from the language of exploitation.

This article illustrates the erosion of unique ethnoecological knowledge, as language loss causes the loss of knowledge of soil types, medicinal systems, weather-pattern literacy, and biodiversity inventories in languages such as Kui and Saora (Crystal 2000; Harrison 2007). Skutnabb-Kangas showed that language attrition can also be caused by educational policies that marginalise minority languages, as in Odisha, where children of tribal communities are removed from their language and their environment through formal education in either Odia or English. Together, these works make the point that language is an ecological system sustained by and influencing the natural world. However, the vast majority of ecolinguistic scholarship remains Western- or global-oriented and pays little attention to the tribal languages of South Asia. To fill that lacuna, this paper focuses on the endangered indigenous language(s) of Odisha using the lens of ecolinguistic theory.

## Theoretical Orientation

The study is based on ecolinguistic theories that suggest language influences one's perception of and relationship with the natural environment (Fill & Mühlhäusler, 2001; Halliday, 1990; Stibbe, 2021). Language is not just a means of naming nature, but also a vehicle for conveying information about the ecology in tribal Odisha, along with values and spiritual beliefs. Halliday's work in the field of Ecolinguistics pointed to the role of language structures and metaphors in maintaining an exploitative attitude towards the environment, particularly the terms 'resources' and 'extraction'. Steffensen and Fill found that there are four key areas of ecolinguistics, namely symbolic ecology, natural ecology, socio-cultural ecology, and discourse ecology, which together comprise the theoretical underpinning for this research.

At the heart of the study is Arran Stibbe's idea of 'the stories we live by' (2015; 2021), which focuses on how language constructs ecological meanings and how this influences environmental behaviour. In this study, he defines ecosophy as the assessment of whether the discourse contributes to or detracts from ecological

balance, drawing on tribal songs, chants, proverbs, and seasonal expressions from the state of Odisha. The research also relies on the linguistic-anthropological perspective on indigenous languages as repositories of memory, ritual practices, and ecological knowledge (Emerson, 2011).

According to Harrison, the loss of language leads to the loss of ecological classification, medicinal knowledge, traditions, and culture, and Mühlhäusler attributes this loss to linguistic imperialism, educational systems, and economic modernisation. The growing dominance of Odia and English over tribal languages has led to a decline in intergenerational ecological knowledge among tribal communities in Odisha. As the Odia and English languages gain dominance over tribal languages, intergenerational ecological knowledge among tribal communities in Odisha is declining. These views combine to make language a site of ecological struggle and a resource for cultural and environmental renewal.

## Methodology: An Interdisciplinary and Ecolinguistically Grounded Approach

The methodology used in this study is interdisciplinary and multi-scalar, involving the following fields: ecolinguistics, linguistic anthropology, historical linguistics, sociophonetics, and environmental humanities. Language is studied not only as a system of grammar but also as a cultural, ecological, and living practice of tribal communities. The research combines historical research with phonetic, semantic, and ritualistic analyses of the ecological language, ceremonial chants, proverbs, and taboo expressions, following Stibbe's approach of 'the stories we live by'. The study is based on secondary sources such as Tribal Research Institute files from Odisha, Government Glossaries, Endangered Language Reports, Ethnographic studies, and oral and audiovisual archives, due to the limitations of fieldwork. The Raja festival is presented as the major case study because it illustrates how tribal languages maintain ecological metaphors, rituals, and cultural resistance and facilitate the revitalisation of the language within the community.

## Aims and Objectives of the Study

This is an interdisciplinary study of the ecolinguistic aspects of the living Indigenous languages of Odisha, influenced by their ecological and cultural relationships. The research is based on historical linguistics, sociolinguistics, phonetics, ethnography, and eco-critical theory, and critically examines the historical evolution, current status, and eco-cultural value of tribal language practices. It examines how language is used and expressed by both forests and rivers, seasonal changes, flora and fauna. The study records ecological metaphors, ritual expressions, nature-related vocabulary, and oral traditions, and examines ecological cultural decline stemming from linguistic assimilation, displacement, and deforestation, as well as the relationship between this decline and language loss. It also explores ecolinguistics as a language revitalisation and ecological awareness approach, highlighting the importance of maintaining indigenous languages as both cultural and ecological needs.

## Ecolinguistic Lexicons and Ritual Expressions across Tribal Languages of Odisha

The comparative mapping of tribal languages in Odisha, presented in the following tables, highlights the embedding of ecological consciousness, ritual practice, and cultural memory in language. Ethnosenantic archives that represent the transmission of environmental knowledge, sacred symbolism and eco-cultural ethics in language. Ethnographic sources, tribal glossaries, oral archives, and government linguistic documentation are used. The material is presented thematically under the headings: agriculture, weather, flora and fauna, life-cycle rituals, displacement metaphors, and eco-sympathetic phonology.

The languages in each of these tables show how each language represents a different kind of relationship to its environment, such as Kui with its land knot, Gutob Gadaba with its riverine roots, Saora with its trees and water, Juang with its water borders, Santali with its forest knottedness, Bonda with its water springs, and so on. Tribal languages are ecological grammars: ritualised, embodied and very place-specific, they are diagnostic of environmental shift and a means of ecological continuity.

## Ecolinguistic Archives: Thematic Domain-wise Language data with word meaning of different Tribal Languages, Ritual, and Environmental Knowledge around Odisha

**Table 1: Lexicon of Environmental Elements and Plant-Based Knowledge in Tribal Languages of Odisha.**

| Language | Domain | Word and Meaning |
|---|---|---|
| **Gutob Gadaba** | Weather | *oi.oi* 'storm'; *oi* 'to blow (wind)' |
| | Agriculture | *ol* 'plow'; *ol ɖẽ.ɖem* 'to plow'; *oi.oǰ* 'to reap/harvest' |
| | Fauna | *oiã* 'frog' |
| **Gadaba / Durua** | Plant/Food | goolar 'wild fig berry' |
| | Plant/Food | munga 'leaves used in curries' |
| **Ju ang (leaf use)** | Ritual/Material | *larkā* 'single leaf plate'; *utli* 'three leaf plate'; *ādap* 'bundle of leaves for storage' |
| **Gondi** | Natural Elements | *bhur* 'soil'; *lendi* 'stream'; *Patta* 'leaf' |

This table illustrates how weather, agriculture, fauna, and botanical knowledge are encoded in tribal speech. Gutob Gadaba's sound-symbolic forms ('oi.oi' for storms, 'oiana' for frogs) blend phonetics with natural acoustics. Juang vocabulary highlights ritualised plant use, while Santali, Gondi, and Bonda terms reflect deep knowledge of medicinal flora, soil, and water.

**Table 2: Comparative Ecolexicon Across Tribal Languages of Odisha: Nature, Ritual, and Environmental Knowledge**

| Language | Semantic Domain | Eco Word(s) | Ecological Context |
|---|---|---|---|
| Gutob Gadaba | Agriculture & Tools | *ol, ol ɖẽ.ɖem, oi.oǰ* | To plough, ploughing, to reap/harvest reflect precision in agricultural practices |
| | Weather & Fauna | *oi.oi, oiã* | Storm, frog sound symbolic forms tied to environmental sounds (onomatopoeia) |

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|---|---|---|---|
| Durua/Gadaba | Food & Medicinal Plants | *munga, jamun, chirchere* | Drumstick tree used in cooking & healing |
| Juang | Ritual Material Culture | *larkā, utli, ādap* | Single and three-leaf plates, leaf bundles used in rituals and communal meals |
| Santali | Flora & Medicine | *so kod, munga, chirchere, kalmegh* | Medicinal herbs and edible plants linked to ethno medicinal knowledge |
| Bonda | Fuel & Local Flora | *Casearia graveolens* | Tree used as firewood essential to daily survival and energy practices |
| Gondi | Ecosystem Lexicon | *bhur, lendi, patta* | Soil, stream, leaf elemental terms tied to land, water, and vegetation |
| Kui | Fauna & Environment | *(onomatopoeic birdcalls, frog calls)* | Mimic sounds from birds and animals used in communication and storytelling |
| Saora | Spiritual Ecological Terms | *totemic names, ritual chants* | Words for spirits, sacred groves, and ancestors encode environmental ethics |
| Kutia Kondh | Agricultural Lexicon | *denga, jhola* | Terms for shifting cultivation and bamboo irrigation tools' |
| Kuvi | Biodiversity Vocab | *lokul, dudra* | Terms for edible mushrooms and wild tubers |
| Manda | Medicinal Plants | *salam misri, nana patra* | Local names for traditional herbal roots and leaves' |
| Pengo | Seasonal | *palgudi, kaati,* | Words for |

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| | Lexicon | *pongal* | agricultural or ecological seasons |
| Desiya | Tool & Grain Vocabulary | *chaki*, *janta*, *mandi* | Grinding stone, grain bin, forest produce depot |
| Gorum | Ritual Fauna | *kurkur*, *semli* | Bird and tree names used in omens and myths |
| Juray | Weather Terminology | *challa*, *gutka* | Cloud types, thunder expressions |
| Juawang | Forest Lexicon | *kanda*, *bauli* | Names of forest roots and shelter huts |

This table prProvides a snapshot comparison of 16 tribal languages, highlighting how nature, culture, and ecological systems are represented in Indigenous languages. Gutob Gadaba and Kui use onomatopoeia to represent the storm, birds and frogs; they share a closeness in the sounds they use to the environment. The rituals and vocabulary of the sacred grove and ancestor calling continue to be preserved in the words of Juang, Saora and Gorum, with ethnopharmacological knowledge being strongly preserved by Santali, Durua, Kuvi and Manda. Every language is a unique worldview in which land, water, animals and life itself are embedded in the grammar of life and must be urgently preserved – a language of Indigenous epistemologies.

**Table 3: Ritual Ecologies and Plant Based Semiotics in Tribal Languages of Odisha**

| Language | Category | Eco Word / Phrase | Ecological Use |
|---|---|---|---|
| Gadaba | Medicinal Plant | *goolar* | Used for wound healing and in sacred grove rituals |
| | Ritual Item | *pita jhula* | Ritual swing made from forest vines during seasonal celebrations |
| Gutob Gadaba | Plant | *oi.oǰ* | Harvest term tied to ritual songs sung at grain harvest |
| | Medicinal Plant | *tamarind leaves* | Used in digestive folk remedies and seasonal |

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| | | | cleansing rituals |
| Pengo | Seasonal Plant | *kaati grass* | Burnt for purification in forest clearing ceremonies |
| | Ritual Item | *bonfire logs* | Used in harvest and puberty rituals' |
| Manda | Medicinal Plant | *nana patra* | Leaf with antifungal properties used in childbirth and cleansing |
| | Ritual Term | *dhusar paani* | Water sanctified with herbs for ancestral worship |
| Kuvi | Tuber/Forest Plant | *dudra* | Wild edible tuber, cooked ritually before first rains |
| | Ritual Plant | *neem leaves* | Tied at house entrances during seasonal rituals |
| Kutia Kondh | Agricultural Plant | *ragi* | Millet offered to deities during harvest festivals |
| | Ritual Practice | *meria sacrifice* | Earth ritual using plant offerings (substituted now for non-animal offerings) |
| Kui | Ritual Tree | *mahua* (*Madhuca longifolia*) | Sacred tree used in fermentation, rituals, and as wedding venue' |
| | Medicinal Plant | *Kanda* (root) | Used in fertility medicine and rituals |
| Saora | Sacred Tree | *sal* (*Shorea robusta*) | Used to carve sacred wooden tablets (*idital*) for ancestral worship' |
| | Ritual Expression | *gan yatra* | Sacred journey to forest shrines with herbal offerings |
| Juang | Leaf Item | *larkā, utli, adap* | Leaf plates used in communal feasts and puberty rituals |
| | Plant Offering | *siali leaves* | Used as eco-friendly dishes during festivals like Raja |
| Gorum | Sacred Plant | *semli* (*Bombax ceiba*) | Tree associated with spirits; offerings placed under it |
| | Ritual Usage | *flower chants* | Songs invoking forest flora for blessings |
| Juray | Plant Lore | *gutka leaves* | Used in chewing and as |

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| | | | antiseptic in rituals |
| | Ritual Custom | *night forest vigil* | Forest plant and lamp based rituals during eclipses |
| Desiya | Sacred Flower | *palash* (*Butea monosperma*) | Used in Holi, seasonal dye rituals, and Raja celebrations |
| | Food Plant | *Poda pitha leaves* | Used to wrap traditional cakes cooked during Raja |
| Juawang | Wild Tuber | *bauli* | Gathered before monsoon, cooked in community ceremonies |
| | Festival Usage | *red alta leaf dye* | Applied to girls' feet during Raja using forest sourced dyes |
| Santali | Medicinal Herb | *chirchere* | Used for treating insect bites and purification rituals |
| | Ritual Song | *sohrai festival chants* | Praise livestock and land using plant metaphors |
| Gondi | Ritual Substance | *lendi water* | Stream water mixed with herbs for earth fertility rites |
| | Plant Spirit Name | *patta devi* | Leaf deity worshipped with forest leaves and rice offerings |
| Bonda | Firewood Plant | *casearia graveolens* | Used in female puberty fire rituals, connecting fire and forest |
| | Fertility Ritual | *leaf belts* | Worn by young girls during menstruation-related ceremonies' |

The information in this table shows how plants, trees, tubers and flowers are conceptually and linguistically linked to ritual, medicine and seasonal activities. The forest is not just a resource; it's a sacred cosmological counterpart. Childbirth and death, as well as cleansing ceremonies, are linked to medicinal plants, such as nana patra, chirchere, goolar and tamarind. The Meria earth sacrifice, Gan yatra forest pilgrimage, and Patta Devi worship all support a cosmology in which plants are sentient and morally significant.

**Table 4: Ecoritual Vocabulary of Life Cycles, Performance, and Hunting Across Tribal Languages of Odisha**

| Language | Domain | Eco Word / Phrase | Cultural or Ecological Use |
|---|---|---|---|
| Gadaba | Hunting | *donga gudi* | Traditional trap mechanism made with bamboo; taught through oral transmission |
| | Music | *ghumura* | Percussion instrument imitating animal calls; played during agricultural festivals |
| Gutob Gadaba | Birth Ritual | *naag puja* | Snake deity invoked to bless childbirth; herbs used symbolically |
| | Dance | *thenga Nacha* | Stick dance mimicking hunting sequences; reenacts forest life |
| Pengo | Death Ritual | *linga patha* | River stone chosen as ancestor marker; cleaned with medicinal leaves |
| | Music | *dhapa song* | Sung during cremation; contains references to river spirits and soil |
| Manda | Hunting | *koya badi* | Bow used in hunting rituals; name associated with ancestral game lore |
| | Birth Ritual | *janm ghadi naata* | Sacred timing of childbirth linked to forest signs (e.g., moon, owl call) |
| Kuvi | Death Ritual | *chatti karma* | Bone immersion ritual with river herbs; guides spirit to ancestral groves |
| | Dance | *dhimsa* | Performed post-harvest to express gratitude to forest spirits |
| Kutia Kondh | Hunting | *meria siri* | Pre hunt offering using turmeric, leaves, and meat to the forest deity |

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| | Music | *gudru gudru* | Drum mimics thunder and rain sacred to rain invoking songs |
| Kui | Death Ritual | *bohu bhita* | Ritual house cleansing using neem leaves after funeral |
| | Dance | *parab nacha* | Performed around trees during forest festivals |
| Saora | Birth Ritual | *uli uli jao* | First naming song referencing plants, birds, and birth signs |
| | Hunting | *singh barut* | Lion spirit invoked to protect the hunter; uses specific chants |
| Juang | Death Ritual | *chai phool* | White flower offering to river symbolises purity and return to earth |
| | Dance | *changu dance* | Circle dance representing cycles of life and forest renewal |
| Gorum | Birth Ritual | *pani puja* | Water ritual with floating leaves, invoking fertility |
| | Music | *Sargam from nature* | Notes based on birdcalls, wind, and rustling leaves |
| Juray | Hunting | *toka* | Name of a mimic call to attract deer; passed orally from elders |
| | Death Ritual | *kanda jala* | Yam water used to wash corpse as a return to the soil |
| Desiya | Dance | *raja nacha* | Celebrates menstruation and soil fertility through mimetic body movements |
| | Birth Ritual | *amla jhada* | Ritual leaf bath for new borns and mother to ward off forest spirits |
| Juawang | Music | *kenkini* | Bell instrument made from forest metal; used in birth celebrations |

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| | Death Ritual | *badi cheti* | Forest side meditation ritual for releasing the spirit |
| Santali | Hunting | *sendra* | Collective hunting festival with chants and forest oaths |
| | Music | *tumdak and tamak* | Drums shaped like tortoise shells; produce rhythms of rain and harvest |
| Gondi | Death Ritual | *pathar shanti* | Peace stone placed under sacred tree; chants involve flora/fauna metaphors |
| | Dance | *karma dance* | Celebrates forest goddess Karma Devi; mimics sowing, reaping, animal life |
| Bonda | Hunting | *bow names: dupa, Hita* | Unique bows for different prey; eco linguistic knowledge about forest |
| | Birth Ritual | *Tulsi tirtha* | Ritual bath in basil water during naming; basil seen as an ecological purifier |

This table records the deep ecological references in rituals of birth, death, hunt and celebration. The use of birth phrases such as Naag puja and Uli uli jao incorporates plant and animal imagery. Death rituals include Linga patha, Chatti karma, and Pathar shanti, which use rivers, trees, and medicinal plants and return to earth. Hunting terms: the forest as an ethical partner. The Ghumura, Tumdak, Gudru gudru and other percussion instruments simulate rain and animal sounds and the dances such as Dhimsa and Karma nacha represent the rhythm of the forest.

**Table 5: Ritual Vocabulary of Sowing and Harvesting in Tribal Agricultural Cycles of Odisha**

| Language | Domain | Eco Word / Phrase | Ecological Cultural Context |
|---|---|---|---|
| Gadaba | Sowing | *penda chuni* | First sowing ritual during new moon; seeds blessed with turmeric and cow dung |
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| | Harvesting | *bisi jatra* | Post-harvest community festival; grain deities worshipped |
| Gutob Gadaba | Sowing | *sendung* | Ritual word for millet sowing; linked with ancestral soil songs |
| | Reaping | *naat ora* | Traditional reaping song invoking fertility spirits |
| Pengo | Agriculture | *korap dhanda* | Soil preparation using wooden plough; sacred chants performed before the first dig |
| | Harvesting | *pidi bonga* | Harvest god; worshipped with rice beer and leaf wrapped grains |
| Manda | Sowing | *toka pahandi* | Collective seed carrying ritual to fields; uses chants referencing winds and birds |
| | Reaping | *gundu* | Name for sickle used in reaping; believed to be spirit endowed |
| Kuvi | Agriculture | *gul gul jatra* | Agricultural cycle festival; involves seed songs and planting songs |
| | Harvesting | *macha jatra* | Fish based ritual during paddy harvesting, linking water bodies and rice cycles |
| Kutia Kondh | Sowing | *dasa khanda* | Ten seed ritual; diverse seed types sown to maintain ecological balance |

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|---|---|---|---|
| | Harvesting | *sita parba* | Earth goddess celebrated with folk drama and communal feasts post-harvest |
| Kui | Reaping | *gundagundi* | Collective reaping performed only after moonrise; seen as a respectful act toward the Earth |
| Saora | Agriculture | *ita ita* | Seed basket carried by eldest woman; chants accompany sowing |
| | Harvesting | *langal nacha* | Plough dance mimicking field preparation and weeding |
| Juang | Sowing | *chon jal* | Green seed water water drawn from sacred stream for seed soaking |
| | Reaping | *orah toran* | Rice bundles hung on trees post-harvest as offerings to forest spirits |
| Gorum | Agriculture | *panthi chita* | Field layout marked with ash and leaf symbols before sowing |
| | Harvesting | *huli yatra* | Spirit procession thanking the land post reaping |
| Juray | Sowing | *bonda bel* | Term for planting during pre-monsoon phase; accompanied by frog song chants to invite rain |
| | Harvesting | *jhada panna* | Leaf based ceremony where first harvest is stored in sacred leaf baskets |

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| Desiya | Sowing | *pitha dana* | Sowing ritual where sweet cakes (pitha) offered to the soil |
| | Reaping | *manda sohor* | Communal gathering to reap; involves singing in call response format |
| Juawang | Agriculture | *pang nala* | Bamboo flute used during sowing to attract pollinators and spirits |
| Santali | Sowing | *sohrai* | Agricultural New Year; includes cow worship, plough blessing, and first seed ceremony |
| | Harvesting | *janther bonga* | Harvest deity venerated through dance, drumming, and beer offerings |
| Gondi | Agriculture | *kotma jatra* | Earth ploughing celebration involving mimicry of bull and rain |
| | Reaping | *goti paani* | Water sprinkling on harvested grain to sanctify it |
| Bonda | Sowing | *angu sumu* | Ceremonial chant meaning 'grain breath' linked to first seed placement |
| | Harvesting | *rikri jatra* | Harvest ritual involving animal mimicry, honoring the role of forest animals in crop success |

In 16 tribal languages, each step of the growing process is assigned a ceremonial chant, a metaphoric phrase and a symbolic gesture. The sowing of seeds is considered an offering of spiritual things, as in the sowing terms penda chuni, sendung, dasa khanda, and angu sumu.

There are a number of rituals and dances that celebrate the threshold of harvest, including animal mimicry (Rikri jatra), call-response songs, dances, and spirit offerings (Pidi bonga, Orah toran). The bamboo flute Pang nala calls pollinators and field spirits, and the sounds are practices that carry ritualised ecological information.

**Table 6: Ritual Beverages and Fermentation Lexicons in Tribal Languages of Odisha**

| Language | Beverage Source | Eco Word / Phrase | Cultural Context |
|---|---|---|---|
| Gadaba | Mahua (Madhuca indica) | *landa* | Fermented mahua drink prepared for harvest and marriage rituals |
| Gutob Gadaba | Millets | *kuruni bita* | Local millet based brew, used during monsoon celebrations |
| Pengo | Palm sap (Taadi) | *pindi paani* | Fresh taadi juice collected at dawn; offered to ancestors before first sip |
| Manda | Mahua flowers | *guli mada* | Sacred brew used in trance dances during healing ceremonies |
| Kuvi | Date palm sap | *taru paan* | Sapped liquid fermented overnight, consumed after sowing season |
| Kutia Kondh | Mahua and Saal | *sulfi* | Mixed bark and flower wine; used in land cleansing rituals |
| Kui | Millets (Kodo, Ragi) | *mandia sura* | Ragi wine brewed in bamboo vats, essential for funeral and ancestor appeasement |
| Saora | Mahua & Rice | *pisu mandia* | Fermented mix for birth rituals; only midwives and elders can prepare |
| Juang | Palm sap | *tarak jhal* | Wild toddy gathered by boys from forest palms; used in coming of age rites |

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|---|---|---|---|
| Gorum | Millets & Herbs | *khadi khadi* | Herbal drink with stimulant effects; shared during rain inviting ceremonies |
| Juray | Mahua & Medicinal bark | *jadu sura* | Enchanted liquor used in forest spirit invocation ceremonies |
| Desiya | Date palm & Sugarcane | *gana sura* | Fermented with high sugar; often used in trade between tribes and as offering in Raja festival |
| Juwang | Taadi (Palm sap) | *bendri* | Clay pot fermented drink served in circular community dances |
| Santali | Rice and Mahua | *handia* | Fermented rice beer; consumed in nearly all social, spiritual, and agricultural events |
| Gondi | Millets & Mahua | *kurru* | Brew stored in gourds; linked to oral storytelling evenings |
| Bonda | Mahua & Wild Roots | *khinda* | Intoxicating drink used in warrior dance ceremonies; also acts as a painkiller |

Fermented drinks in tribal Odisha are more than just beverages; they are sacred offerings, ancestral bonds, and ceremonial tools. From Landa (Gadaba), Handia (Santali), to Khinda (Bonda), conceptualising rituals involves timing, gendered preparation and spiritual invocation. Fermentation is itself a metaphor for transformation, as Pindi paani (Pengo) is offered to ancestors at dawn, Guli mada (Manda) provides power for healing trance dances for adolescents, and Tarak jhal (Juang) celebrates adolescent initiation. The leaf bowls and clay pots used for drinking are filled with mahua, millet, or Saal bark, which sanctifies the land and enhances the relationship among nature, culture, and cosmology.

**Table 7: Death Pollution, Ancestral Transition, and Eco-Ritual Vocabulary in Tribal Languages of Odisha**

| Language | Term / Phrase | Gloss / Meaning | Ecological / Ritual Function |
|---|---|---|---|
| Gadaba | *gottar* | 'ritual pollution period after death' | Family abstains from farming, river bathing; purification done with tulsi leaves |
| Gutob Gadaba | *birshi maa danda* | 'offering ritual to calm the wandering spirit' | Performed near sacred trees; includes cooked grains, mahua flowers, and rice beer |
| Pengo | *nadki chhitla* | 'ash dispersal on water' | Ashes of the deceased poured into river; banana leaf bowl used |
| Manda | *suli bandha* | 'tying of sacred thread post death' | Thread made of local fiber; tied to doorposts to ward off impure energies |
| Kuvi | *pitru katha* | 'ancestor song chanting' | Oral storytelling with ecological metaphors rivers, birds, hills as soul guides |
| Kutia Kondh | *jani marnu* | 'soul feeding ritual' | Special leaves (*sal*, *tamarind*) used as plates for offerings |
| Kui | *deuli danda* | 'final soul pacification ritual' | Includes millet cakes, dried fish, fermented drinks served under sacred fig trees |
| Saora | *toki* | 'death pollution period lasting 3–9 days' | No cooking, no entry into forests; fire and water seen as temporarily polluted |
| Juang | *buna gotra* | 'clan soul cleansing feast' | Slaughter of a chicken or goat, offered with sacred millet in earthen pots |

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| Gorum | *panth bhoj* | 'journey meal for soul' | Specific plants (e.g., neem, turmeric) are kept near the food as soul protectors |
| Juray | *kundha weta* | 'river ash washing ritual' | Elder women pour water mixed with ash and neem as symbolic soul release |
| Desiya | *madi gotar* | 'household cleansing post death' | House walls are plastered with cow dung and turmeric water |
| Juawang | *jati marung* | 'clan forest walk to farewell the soul' | Forest walk led by shaman; chants invoke sacred trees and ancestral spirits |
| Santali | *bhandan* | 'death feast with rice beer and pork' | Ritual hunting may occur; trees are marked with red soil as spirit symbols |
| Gondi | *deva purva* | 'offering to the forest deity for departed' | Leaf platters with flowers, grains, and fire crackers to drive away bad spirits |
| Bonda | *gottar* | '7 day death pollution observance' | Women avoid touching water; fermented rice is kept outside for spirit to taste |

Death is transmitted across 15 linguistic communities through rituals and language embedded in the natural environment. The laddoos and the use of neem, tulsi, turmeric and ash are being prohibited during concepts such as Gottar (Gadaba/Bonda) and Toki (Saora), which are shared ethnobotanical cleansing systems. Food, trees, and rivers are used to release the soul by means of terms such as Birshi maa danda, Panth bhoj and Kundha weta. The soul is guided by language in ecological metaphor – death in tribal Odisha is realignment rather than severance.

**Table 8: Ecological Aesthetics in Tribal Oral Forms: Lullabies, Proverbs, Songs, and Idioms from Odisha**

| Language | Form | Example | Gloss / Meaning | Ecological / Cultural Insight |
|---|---|---|---|---|
| Gadaba | Lullaby | *chengi jada, kulu kulu baasa* | 'my little bird, sleep with the breeze' | Bird and wind metaphors calm the child, evoke harmony with nature |
| Gutob Gadaba | Proverb | *aru gadang ka makung raasa* | 'the river doesn't forget its bank' | Emphasizes belonging to the land and ancestral ties |
| Pengo | Idiom | *jani bonda ra moong munta* | 'she walks like a bonda ant' | Reference to local fauna for character description |
| Manda | Folk Song | *sita badi mu phool jhada, mana jadi jhadu jhadi* | 'in my garden flowers fall, like my heart's fading spring' | Songs link seasonal change to emotional cycles, mirroring ecological transitions |
| Kuvi | Proverb | *adra jhada re simbo na chadhi* | 'don't plant maize before the first rain' | Agricultural wisdom encoded in daily speech |
| Kutia Kondh | Lullaby | *bana chitta soija, jhara nadi ku jaija* | 'sleep child, tomorrow we'll go to the river' | Encourages bonding with nature from childhood |
| Kui | Idiom | *kandho chaala podi* | 'the leaf has turned' | Used for changing fortunes; metaphor from plant life |
| Saora | Folk Song | *tangi maala jhari re, jhari re, gola tangi* | 'axe in the forest sings as trees fall' | Reflects deforestation anxiety, sung |

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| | | *jhari re* | | during woodcutting |
| Juang | Proverb | *mu jhad re kechi, gadu ga bhechi* | 'i cut the tree, now I sell the shade' | Ecological irony loss of long term benefit for short term gain |
| Gorum | Lullaby | *chal, chal bael re, chaka chaka jhar re* | 'come, come moon, roll in the sky' | Moon and water metaphors soothe babies with celestial rhythm |
| Juray | Idiom | *khunta bhita re kutuma hela* | 'a snake became family in the termite hill' | Refers to natural co-existence, kinship with animals |
| Desiya | Proverb | *kandha bhata re jhari nahi* | 'no harvest without rain' | Simple truth of eco dependence for survival |
| Juawang | Folk Song | *dongi bhonga re, nala tarunga re* | 'the bamboo flute sings across the stream' | Bamboo, stream, and music show unity of materials and sound in nature |
| Santali | Proverb | *hako re don rahi ne jom* | 'you cannot reap where you didn't sow' | Refers to justice but through agricultural metaphor |
| Gondi | Idiom | *chatti boli tana tala* | 'speak like the tree top wind' | Speech compared to forest breeze; respectful and soft |
| Bonda | Lullaby | *mana laga re moi, jhara jhari tangi re* | 'my child sleeps, with the falling rain's rhythm' | Rain as timekeeper and comforter |

Lullabies, proverbs, idioms and folk songs tell us about environmental ethics, seasonal wisdom and cultural pedagogy in 15 Indigenous languages. Every call is an expression of a worldview that is bound up in nature, ranging from the Chengi jada (Gadaba lullaby invoking wind and bird) to the Kandha bhata re jhari nahi (Desiya proverb on eco-dependence). Saora's Tangi maala jhari re is a lament over deforestation, while Juang's Mu jhad re kechi is a lesson in ecological ethics, using irony. Everyday conversation becomes eco-poetic thought with the use of idioms such as, 'the leaf has turned' (Kandho chaala podi, Kui) and 'speak like the tree top wind' (Chatti boli tana tala, Gondi). Oral forms are at the heart of eco-cultural transmission, taking wisdom about land, rain, animals, and spirituality and embedding it in the lyricism of everyday life.

**Table 9: Lexicon of Displacement, Ecological Loss, and Cultural Memory in Tribal Languages of Odisha**

| Language | Eco Word / Phrase | Gloss / Meaning | Eco-cultural Significance |
|---|---|---|---|
| Gadaba | *kaari gudu* | 'leaving home/ancestral forest' | Expresses emotional severance from sacred land |
| Gutob Gadaba | *iru daka* | 'forest forgets us' | Personification of forest as grieving over community migration |
| Pengo | *tada alla* | 'path of water/direction of flow' | Metaphor for forced migration and leaving with river's direction |
| Manda | *dengra uḍi jala* | 'the field flew away' | Refers to displacement due to land loss |
| Kuvi | *paayi paayi theli* | 'wandering from place to place' | Often used to describe repeated seasonal migration for survival |
| Kutia Kondh | *mana burli* | 'spirit wandering without land' | Used when people are forced out and lose ritual connection to land |

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| Kui | *sika kali* | 'lost hunting trail' | Indicates disconnection from ancestral landscapes due to development |
| Saora | *languda raj* | 'broken roof or abandoned house' | Evokes image of empty, crumbling settlement after migration |
| Juang | *thenga bari* | 'scarred hill' (due to mining or road cutting) | Loss of ecological memory tied to mountain spirits |
| Gorum | *budu helani* | 'the ancestors are quiet' | Phrase used when rituals cannot be performed after displacement |
| Juray | *rimpa jhada* | 'tree that sheds everything' | A metaphor for cultural loss post relocation |
| Desiya | *kendu mariba patha* | 'path where the kendu (tendu) trees died' | Refers to places abandoned after deforestation and resettlement |
| Juawang | *doba sogela* | 'pond is blind' | Emotive phrase for sacred water sources being fenced off or polluted |
| Santali | *hor sagai re dopar* | 'split kinship from the forest' | Used to describe community broken by forced town relocation |
| Gondi | *penda bhool gayile* | 'we forgot the earth' | Used when old farming or ecological knowledge is lost after policy shift |
| Bonda | *reema aba* | 'home vanished' | Collective memory of displacement etched in seasonal songs |

These phrases are poetry of dislocated communities, driven from their eco-spiritual geographies by forced migration, deforestation, mining, and dam construction. Kaari gudu (Gadaba: 'leaving the ancestral forest') and Iru daka (Gutob Gadaba: 'the forest forgets us') are

personifications of the land, crying out in tears. The spiritual loss is captured in Budu helani (Gorum: 'the ancestors are quiet') where ritual sites are destroyed. Reema aba (Bonda: 'home vanished') is an oral effort to heal ecological wounds.

**Table 10: Origin Myths and Eco-Cosmological Lexicons in Tribal Languages of Odisha**

| Language | Origin Term / Eco word | Gloss / Meaning | Ecolinguistic Significance |
|---|---|---|---|
| Gadaba | *nir nog nai* | 'we came from water' | Water as origin linked to aquatic ecology and seasonal fertility cycles |
| Gutob Gadaba | *konda irpa* | 'mountain gave birth' | Mountains personified as maternal figures mountain ecology shapes clan identity |
| Pengo | *killa sangal* | 'bamboo sprouted us' | Associated with housing, rituals, and forest sustainability |
| Manda | *tunga mati daka* | 'born of sacred red soil' | Soil as life giver; land ethics encoded in origin myth |
| Kuvi | *kuruma hilati* | 'the ant hill speaks' | Term for sacred mounds; earth seen as animate, speaking being |
| Kutia Kondh | *meria pa'ra* | 'stone gave form' | Stone seen as ancestor; ritual stones used in clan origin stories (linked to *Meria* tradition) |
| Kui | *daru maa* | 'tree mother' | Sacred trees in creation myths; trees are kin, language reflects reverence and interdependence |
| Saora | *boothi nuvo nuvo* | 'ancestors rose from the forest' | Forest as source of life, morality, cosmology |
| Juang | *gudi peinda* | 'we walked from the cave' | Caves as sacred origins, linked to mountain-dwelling ancestors |

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|---|---|---|---|
| Gorum | *pani re hor jaya* | 'rain gave us soul' | Rain as animate force that brings soul into body, climactic events tied to spiritual genesis |
| Juray | *banho barli* | 'tiger licked us awake' | Animals seen as co-creators; tiger symbolizes awakening of human form |
| Desiya | *padi mori adha* | 'from the cracked hill, people came' | Geological processes encoded metaphorically as human birth |
| Juawang | *jhinka re thana* | 'deer's breath made humans' | Deer as spirit ancestors word evokes breath, life, fragility |
| Santali | *hapram ko tanedar* | 'ancestor spirits shaped our body' | Belief in *Hapram* (spirit ancestors); origin stories tied to rituals of forest worship |
| Gondi | *dharti maa se ubhar gaye* | 'we rose from Mother Earth' | Earth as sacred origin common across many myths and rituals |
| Bonda | *gulubi tinga gube* | 'the river sang us into being' | Rivers as animate singers of life rooted in performative chants and seasonal cycles |

These places based, 17 tribal language origin mythologies are human identity genealogies, connecting people to the living landscape. Water, stone, soil, rain, caves, trees and animals are progenitors and kin, not resources. Nir nog nai (Gadaba: 'we came from water'), Daru maa (Kui: 'tree mother'), and Gulubi tinga gube (Bonda: 'the river sang us into being') are ontologies in which ecology is society. These words are preserved to care for epistemologies of emergence and ethics of interbeing.

**Table 11: Linguistic Grief and Resistance: Eco-Political Phrases of Loss, Uprooting, and Identity in Tribal Odisha**

| **Language** | **Word / Phrase** | **Gloss / Translation** | **Eco linguistic / Sociopolitical Significance** |
|---|---|---|---|
| Kui | *bhasa lukuni* | 'language is stolen' | Phrase used when younger generations |

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|---|---|---|---|
| | | | shift to Odia; evokes grief of language loss |
| Gadaba | *boro ra dum dakka* | 'we were chased from the hills' | Oral memory of displacement; reflects forced migration from forest lands by state or dominant castes |
| Bonda | *gota jola tali* | 'our hill weeps' | Metaphor for ecological destruction and dispossession of ancestral land' |
| Kuvi | *bhasa mari gela* | 'our tongue has died' | Phrase of mourning used for language attrition among youth; evokes a ritual tone of loss |
| Santali | *hul re jonom* | 'born from rebellion' | reference to *Hul* (Santhal rebellion); embedded in self-identity; used as resistance speech |
| Juang | *odia na padhi, mori jiba* | 'if you don't read Odia, you will die' | Used sarcastically to mock the pressure to abandon native tongue in school |
| Desiya | *ghar chhadi gali* | 'left home, lost self' | used by migrant workers; reflects socioecological uprooting' |
| Gutob Gadaba | *singri padri duka* | 'our forests turned to sorrow' | Used in dirges about deforestation and dam construction |

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|---|---|---|---|
| Pengo | *bhasa ku bandi* | 'they locked our language' | Reference to language suppression in schools, administration, and police documentation |
| Gorum | *topka mari dila* | 'they hit us with guns' | Folk memory of police atrocities and land eviction, often sung in mourning songs |
| Saora | *mati la marle, jiban jaye* | 'when soil is hit, life leaves' | Deforestation, cultural and ecological death |
| Gondi | *jungle ke bin, adivasi nahi* | 'without forest, there is no tribal' | Links identity to land, highlights ecological entwinement |
| Kutia | *bhasa gala, bhagya gala* | 'when language goes, destiny goes' | Uommon among elders to stress the need for mother tongue |

These are fragments of survivor language, oral inscriptions of trauma, forced assimilation, and deforestation. Bhasa lukuni (Kui: 'language is stolen') and Bhasa mari gela (Kuvi: 'our tongue has died') are at the extremes of language as a living being that can die. Topka mari dila (Gorum) is a memory of police violence and displacement. Bhasa ku bandi (Pengo: 'they locked our language') is an attack on linguistic assimilation. But resistance persists: Hul re jonom (Santali: born from rebellion) and Jungle ke bin, adivasi nahi (Gondi): politics and ecological reality. Ecolinguistic Tables Overall Insight: All eleven tables in this series illustrate the oral archives of tribal knowledge of the environment, ritual, spirituality, and socio-political resistance in Odisha. From sowing to harvest and birth to death, lullabies and laments, they carry a close bond with land, water, flora, fauna and ancestral memory. These eco-words and phrases require awareness of the importance of recognising tribal voices as the voices of their own environments, and thus protecting these languages means protecting entire environments of meaning, belonging, and survival.

## Conclusion

Ecolinguistics is a valuable lens for grasping how language, culture and ecological knowledge are interwoven and interdependent. Indigenous languages of Odisha are not fossils but living systems that carry the wisdom of nature, the memory of the people, and moral principles concerning values and ethics. In many languages, including Kui, Gadaba, Kuvi, Manda and Saora, a vocabulary, oral traditions and ritual expressions are strongly linked to their landscapes and their cultural practices. But the spread of the dominance of Odia and English languages in education, administration, and media has driven language shift and linguistic assimilation, posing a threat to these languages as well as the ecological knowledge they contain.

Gradually, with the loss of language, proverb-based codes for sustainable harvesting, chants associated with agricultural cycles, and rituals that interpret menstruation as a renewal of the Earth are fading away. Language, ecology, gender, and ritual are closely intertwined, as witnessed in Odisha's festival, Raja. The festival was designed to convey an ecological ethic through songs, dances, and ceremonial practices that celebrate the Earth as a menstruating woman, an ethic passed down orally. This is in line with Arran Stibbe's concept that 'stories we live by' influence ecological awareness and sustainability. The stories of kinship with soil, forests, rivers, and spirits are complex expressions of environmental knowledge learned over many years through observation and experience.

This study, through a combination of historical linguistics, phonetic analysis, sociolinguistics, and ecoanthropological approaches, explores the languages of the tribes as ecological performances, spoken, sung, and culturally performed. The term for plants, rituals, and landscapes encompasses meanings that transcend literal interpretation and represent shared cultural memory. The study challenges the view that language revitalisation can be limited to documentation and looks to the preservation of ecosystems, oral traditions and community practices. It also highlights the importance of ecolinguistic policies in favour of mother-tongue education, cultural festivals, oral heritage projects, and digital projects to empower tribal youth. Finally, this study confirms that linguistic

diversity is an ecological resilience and that it is important to keep indigenous languages in an environmental crisis.

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