

Shades of Green: Communicating Ecological Information in Indigenous Languages.

Fúnmiláyò O.Olúbòdé-Sàwè

Institute of Technology-Enhanced Learning and Digital Humanities
Federal University of Technology
Akure, Nigeria.

foolubodesawe@futa.edu.ng

Abstract

‘Green economy’ is the new buzzword in development economics and environmental protection, a convergence of concepts hitherto thought to be mutually exclusive. Sustainable development is defined as that which meets the need of the present without compromising the ability of future generations to meet their own needs. A corollary of this is the necessity of making those who meet their needs from the soil and water to understand the imperative of using these resources responsibly. In other words, they need to understand and buy into the greening of the economy. This paper reports a small terminological project for translating “green” and related terms, as a contribution to the grassroots popularization of the green economy concept. The extraction of terms was done manually and concept relationships used in the analysis of source terms prior to term creation, to create morphological series and other paradigms. The major method of term creation used was composition. Fine distinctions in meaning between near synonyms were made. This project demonstrates that any language can express any conceivable concept. 105 terms were created, including derived terms.

Keywords: Development Communication, Green, Terminology, Translation

Ìfààrà-àgékùrú

“Ọrò-ajéelètù” jẹ ọrò titun nínú èkó ọrò-ajé onídàgbàsókè àti idáàbòbò àyíká. Ó jẹ àkópò èrò méjì tí wón dàbí aláibáran. Oríkì idàgbàsókè alálòtónipé ó jẹ èyítí ó mójútó àìní àwọn tówà lówólówò, láìṣe ipalára fún àìní àwọn iran ojò-òl. Àwọn tí wón n lo àwọn ọrò àbáláyé bí ilẹ̀ àti omi fún àtíjẹ-àtímu ní láti mò ipondandan lílò àwọn ọrò wònyí ní àlòtò, àti l’òná to sànjùlò. Kí a kuku sọpé, kí isọrò-ajé dí elètù yé wón, kí wón sì fowósowópò pèlú àwọn tó n ṣe agbàterù rẹ. Àpilẹ̀kọ yìi jẹ àbò isẹ-àkànṣe kékeré kan tó dálérí sísẹ̀dà ọrò fún “green” àti àwọn ọrò tó bá a tan. A ṣe eléyí láti polongo èrò tó jẹmó “ọrò-ajéelètù”. Àfowosé ní a fí yọ awọn ọrò fún isẹ̀dà; a sise ibátan láàárín awọn ọrò-orisun. A fí eléyí ṣe itólẹ̀ṣeṣe awọn èyà-ọrò àti awọn ibátan miiran. A wá ṣe awọn iyàtò ọ̀rínkínni wín láàárín awọn ọrò onitumò afarajọra. Ohun ti àpilẹ̀kọ àbò-iwádí yì fihàn ní pé bí ọkàn-èniyàn bá lè rò ó, èdè èniyàn lè sọ ó. Ọrò àpilẹ̀ṣedá marún-úndin láàádófà (105) ni isẹ̀ yíigbé jade, nínú èyí tí awọn ọrò atínú- ọrò-mújáde

Kókó-ọ̀rọ̀: Ìbànisọ̀rọ̀ ajẹmọ̀ idàgbàsókè, Elètù, Ìṣedá-ọ̀rọ̀, Aáyan-ògbufò

1.0 Introduction

This paper investigates connotations and collocation of the adjective green, preparatory to making sense of the concept of “green economy” in the Yorùbá language. ‘Green economy’ is the new buzzword in development economics and environmental protection, a convergence of concepts hitherto thought to be mutually exclusive. The definition of sustainable development that is most frequently used is found in the 1987 report, *Our Common Future*, of the United Nations World Commission on Environment and Development (WCED), as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (1987: 1). Intergenerational equity, or treating future generations fairly, is the main objective. A corollary of the definition of sustainable development as that which meets the need of the present without compromising the ability of future generations to meet their own needs is the responsibility laid upon linguists to facilitate that those who meet their needs from the soil can understand and discuss the imperative of using land responsibly. In other words, people need to be helped to understand and buy into the greening of the economy.

Grassroots engagement is crucial for the attainment of the 17 sustainable developments goals (SDGs), specific targets that countries adopted on September 25, 2015 to end poverty, protect the planet and ensure prosperity for all. The SDGs are the most recent of strategies by governments to lead their nations out of the prolonged global energy, food and financial crises, with green economy (in its various forms) being proposed as a means for catalysing renewed national policy development and international cooperation and support for sustainable development (<https://sdgs.un.org/goals>). In a US study, Bruine de Bruin *et al.* (2021) found that non-specialists did not understand eight terms commonly used by scientists, including “sustainable development”, “carbon-neutral”, and “adaptation”. The problem is compounded for those who have no facility in English or one of the other UN working languages. They are doubly excluded because the information is available only in a foreign language.

Growing international interest in green economy has resulted in a rapidly expanding literature including new publications on green economy from a variety of influential international organisations, national governments, think tanks, experts, and non-government organisations (<https://sustainabledevelopment.un.org/topics/greeneconomy>). Nevertheless, there is no internationally agreed definition or universal principles for green economy, and several

interrelated but different terms and concepts have emerged over recent years (such as green growth, low carbon development, sustainable economy, steady-state economy etc.).

There is a proliferation of terms, and there is a need to help people who have facility only in their indigenous languages to make sense of it. This is the justification for this research.

Technical terminology is crucial in popularizing development programmes of a technical nature. Bamgbose (1994) proposes five elements that should go into a broader definition of development. He suggests, first, that it should be of a sort that is integrated, with economic development being linked to social and cultural development, and the combination of all three designed to improve the condition of all classes of people in society. His fifth suggestion is that economic development must include mass participation and grassroots involvement in order to ensure that it is widespread and genuine. This requirement for mass participation means more people must be reached with information they can understand and respond to: “people must find their own language to articulate the world in their own language, to articulate the world in their own terms and to transform reality in search of their own dreams” (Pasquali 1997:33).

More to the point, in recent publications on green economy or green growth, international organisations have begun to address these knowledge gaps and demystify the different concepts associated with green economy. This paper, a report of a small terminology project in the Yorùbá language of South-Western Nigeria, is a contribution to the demystification. A by-product of this is the revitalization of Yorùbá, for as terminology devised in this and similar works becomes widely known and used, the utility of the Yoruba language increases. As people find out that they can use their language to do more things, younger generations are encouraged to acquire and use the language, and this would prevent language death.

The rest of the paper is structured as follows. A review of issues in terminology development and how the present research is situated in it is briefly presented. This is followed by a review of issues in colour terminology. The methodology of term creation is presented: the manual extraction of terms, the analysis of concept relationships to create morphological series and other paradigms used in the analysis of source terms prior to term creation, the creation of terminology files, and the proposal of equivalents for the source terms.

2.0 Terminology Development

There are various factors that necessitate terminology development. It frequently occurs in “large” European languages like French, German, or Russian to fill in the gaps brought on by advances in science and technology. According to Beisembayeva and Zharkynbekova's (2014) review of terminology standardization initiatives in four languages—English, French, German, and Russian—the introduction of new terms into subject areas, particularly in rapidly expanding fields, presents a significant challenge for technical communicators in terms of clarification, definition, and revision of term meanings. Terminology augmentation, which is the most accurate description of this situation, has two strands: “generate and validate” and “extraction from corpora” approaches (Iwai et al., 2016). Automatic term extraction can be performed on parallel corpora, such as those published by Tufis et al. (2004) and Lohar and Way (2020), or on comparable corpora, as in Pinnis et al. (2012). In their excellent review of the literature, Iwai et al. (2016) highlight the fact that the majority of the studies make use of contextual information or co-occurrence inside aligned segments of contextual similarity.

The present work belongs to the extraction from corpora strand. Yoruba terminology development has recorded significant progress in the last ten years. Through a partnership between medical experts (medical doctors, nurses, pharmacists, and microbiologists) and language experts, three bilingual glossaries of HIV, AIDS, and Ebola-related terms were published in 2017 for Hausa (Amfani & Ibrahim 2017), Igbo (Igboanusi & Mbah 2017), and Yoruba (Yusuff, Adetunji & Odoje 2017). The bilingual glossaries provide authoritative definitions and concise explanations for a variety of terms used in HIV, AIDS, and Ebola discourses as well as practices and medical issues connected to the epidemics. They were specifically developed with medical professionals and patients in mind. The entries cover a wide range of topics, including ailments, signs and symptoms, drugs and drug administration, illness management and control, techniques and equipment, health service organizations, therapies, testing and screening, preventive behaviour, and procedures.

The glossary's primary goal was to improve communication between the Hausa-, Igbo- and Yoruba-speaking communities and the healthcare professionals who care for them, to facilitate interaction and lessen the negative perceptions and attitudes about the disease conditions.

Other works include terminology of football (Komolafe, 2020a), human diseases (Olupona, 2020), and agriculture (Komolafe, 2020b), which attempted to revise some terms earlier published. He notes rightly that “pest” \neq *kòkòrò ayonilénu*, as NERDC has it, as a pest is not necessarily an insect. He proposes four candidate terms: *agbógun-toko* (lit. attacker of farm); *asèpalàrafóko* (lit. agent of harm to farm); *ayòkolénu* (lit. troubler of farm); and *abokojé* (lit. destroyer of farm).

The Colour Green

Colour refers to that aspect of an object that may be described in terms of hue, lightness, and saturation, associated with the visible wavelengths of electromagnetic radiation, which stimulate the sensor cells of the eye (Nassau, 2022). This definition may lead one to conclude that colour can be identified by a set of objective criteria. Berlin and Kay (1969) conclude that there are similarities in the ways that different languages with the same number of basic colour terms (BCTs) carve up the colour space, and that there is an order in which languages acquire BCTs. In a revised theory, colour term development is viewed as re-categorisation rather than addition (Kay, Berlin et al., 2009).

Other research shows that languages categorise colour in different ways. In some North American, Mesoamerican Indian and African languages, there is a basic megacategory “grue”, which covers the colour region categorised by English speakers as green and blue (Hardin, 2013). In Russian, “blue” is a megacategory: covering *goluboi*, “light blue”, and *sinji*, “dark blue”. In addition, there are languages that have no words for the concept “colour”, including the Australian language Warlpiri (Wierzbicka, 2008) and Candoshi, spoken by an indigenous people from the Upper Amazon (Surrallés, 2016).

Green is formed as a mix between two primary colours, blue and yellow. Green is a significant colour because it occurs in profusion in nature. It is therefore not strange for it to find its way into the metaphors we create to make sense of the world around us. Green is said to stand for ‘nature, spring, and rebirth’, it is ‘the colour of life, renewal, and nature, is associated with meanings of growth, harmony, freshness, safety, fertility, and environment.’ As the emblematic colour of Ireland, green represents the vast green hillsides, as well as Ireland’s patron saint, St. Patrick, and in the Nigerian national flag, it represents agricultural productivity. Green altar cloths/vestments are used in standard Catholic masses in between seasons of celebration and special observances, being indicative of plants and trees,

representing growth and hope for life eternal (<http://peopleof.oureverydaylife.com/catholic-altar-cloth-colors-2303.html>).

Many metaphorical constructs that involve the colour green are culture-specific. According to colour psychologist Smith, green has the following associations in different parts of the world: in Iran, green, alongside blue-green and blue are symbolic of paradise; in Japan, green is regarded as the colour of eternal life (Smith, 2017). In Aztec culture, green was the colour of royalty on account of the quetzal plumes used by the Aztec chieftains and in the Scottish highlands, green was worn as a mark of honour. Green also has close ties with Islam, and Prophet Mohammed is said to have worn a green cloak and turban (<https://lammuseum.wfu.edu/exhibits/virtual/faith-five-world-religions/islam/>)

From the perspective of using colours for effective messages, it is useful to be sensitive to both universal and cultural connotations of colours since ethnic and cultural backgrounds inspire specific colour associations. For instance, in many western countries, green symbolizes good luck (shamrock), youthfulness, ecology, and fertility. However, in China green stands for disgrace and exorcism; in the USA it is associated with money and wealth but also with envy and poison; in many South American cultures it represents death. In the Middle East green is the colour of Islam; but in parts of Indonesia it is forbidden. (<http://commdesign.ca/tag/colour-connotations/>).

A related issue is that of colour hues. Green has been identified as having the following shades: emerald, sea green, sea foam, olive, olive drab, pea green, grass green, apple, mint, forest, lawn green, lime, spring green, leaf green, aquamarine, beryl, chartreuse, fir, kelly green, pine, moss, jade, sage, yellow-green, sap, viridian. In Nigeria, one can get wedding invitations requesting guests to wear army-green or GLO-green. Different shades of green may signify different things: dark green represents greed, ambition, and wealth, while yellow-green stands for sickness, jealousy, and cowardice, and olive green is the traditional colour of peace.

These colours show up in metaphors, some with positive and others with negative connotations. Someone with a “green thumb” (US) or “green fingers” (UK) has an unusual ability to make plants grow. Performers relax in a “green room”, projects get the “green light” on which they might get to spend the “greenback” (a US dollar bill) even though they

might employ greenhorns (trainees/novices). From Psalm 23 has come the metaphor of “greener pastures” and “grass is greener”, a reference to a place of better opportunities. Contrariwise, a “green-eyed monster” is a jealous person and is usually “green with envy”, and someone who is “green around the gills” has a sickly or pale appearance. Someone who “turns green”, looks pale and ill as if s/he is going to vomit but when they “go green”, they make changes to help protect the environment, or reduce waste or pollution.

Green in the Yorùbá Language

Green has several equivalents in the Yoruba language. For the concept ‘unripe’, the preferred designation is ‘*dudu*’, as in the proverb, *ògèdè dúdú kò yáa bùsán; omọ burúkú kò yáa lù pa* (green plantains cannot easily be eaten raw; a recalcitrant child cannot be easily flogged to death). In biblical translation, two other terms are used in addition to *dudu*. For example, **green** pastures (Psalm 23:2) is translated: *papa oko tutu* (*BibeliMímó, Bibeli Ìròyìn Ayò*), green plants (Psalm 37:2) is *eweko tutu*, green leaf (Proverbs 11:28) is *koriko tutu*. Other terms are descriptive of freshness. For example, **green** in Job 8:16 is *ti a bomirin* (*Bibeli ÌròyìnAyò*), or *tutu yòyò* (*BibeliMímó*) and green figs (Songs of Solomon 2:13) is *èsòpòtò tuntun*. None of these equivalents for **green** conceptualize a colour.

Yorùbá basic colours are *dudu* (black, dark), *pupa* (red) and *funfun* (white). In recent times, equivalents have been derived for other colours. For example, Odetayo (1993) presents the following equivalents for the colour spectrum: red is *epón*, orange is *osàn*, yellow is *iyeyè*, green is *ewé*, blue is *oféfe*, indigo is *aró* and violet is *èsè-àlùkò*. Other proposed equivalents for green are *àwòewéko/ aligà* (<https://www.abibitumikasa.com>); *ewé; aláwò ewéko, aláwò óbè, dúdú, àwoewé, òdò, àipón, àidé, tutu, obedò* (<https://glosbe.com/en/yo/red-green-blue>), *àwò obedo* (www.awayoruba.com/forum) *àwò ewé* (polymath.org/yoruba_colors.php).

The problem is that these equivalents would not be appropriate in concepts like “green revolution”, “green growth”, or “green economy”. For example, “green growth” cannot be rendered as *idàgbàsókè aláwò ewéko, idàgbàsókè dúdú* or *idàgbàsókè tutu*. *Idàgbàsókè ewé* would even be worse because development does not contain the feature plus colour. The nonsense sentence used in elementary linguistics classes comes to mind: “Colourless green ideas sleep furiously”. Since these equivalents obviously do not capture the concept of “green” that is required, a concept analysis is called for, and the creation of a new set of designations for “green’ and other related terms.

3.0 Research Method

3.1 Generation of Source Terms

This is a two part process: term identification and term extraction. The first part involved the recognition and selection of designations. Basically, this meant going over texts and choosing the terms to be retained for study and possible dissemination. The basic skill needed here is the recognition of the terminological units. In specialized languages, a term is a linguistic unit made of a single word or a word combination, and is usually associated with the same conventional definition when used by speakers of a given specialized language, including symbols, chemical or mathematical formulae, official titles, etc. (Gorodetsky 1990). The second part involved going through a corpus in order to identify concepts and their designations (terms, abbreviations), recording them and noting any relevant information about a concept such as definitions, contexts, and usage labels. In this work, source terms were taken from ten online general purpose texts dealing with green economyⁱ. The terms were manually extracted after manual highlighting the beginning and the end of each term's context so the data could subsequently be transcribed on a terminological record for analysis. A total of 143 terms were initially extracted in this manner.

3.2 Concept Analysis

Concepts enter into different kinds of relationships among themselves. The relationships are of two kinds, namely, hierarchical and associative. Hierarchical relationships are subdivisible into two: generic-specific and part-whole. All these relationships were used to structure knowledge and assign source terms to paradigms to ensure concept-designation monosemy, create generic-specific and associative morphological series, following Olubode-Sawe (2010). As Odetayo (1993:1) suggested, near synonymous terms were treated together by assembling synonyms in the target language and matching them. Existing terms were sought from the following texts with the following short forms: *Quadrilingual Glossary of Legislative Terms* (QG), *Yoruba Modern Practical Dictionary* (YMPD), *A Dictionary of the Yorùbá Language* (DYL) and *A Yoruba Vocabulary of Building Construction* (YVOC).

Where an existing suitable equivalent could not be found, a term was devised for the source term, based on terminological definitions extrapolated from definitions taken from online general purpose dictionaries.

4.0 Results and Discussion

From the 10 texts studied, green occurred in such noun phrases as ‘green buildings’, ‘green business’, ‘green economy’, ‘global green economy’, ‘green economy policies’, ‘green economy programmes’, ‘green growth’, ‘green industry’, ‘green industry sector’, ‘green investment’, ‘green job’, ‘green market’, ‘green options’, ‘green sectors’, ‘green technologies’, ‘greener policies and regulations’, and ‘greenhouse gas emissions’. It also occurred as complement of verbs: as in ‘be... green’, ‘make...green’, ‘being green’, ‘go green’, ‘considered green’.

From six selected definitions of “green terms”, some recurring meanings were isolated: ‘environmental friendliness’, and ‘a concern with sustainability and with natural resources’. It was decided that designations for ‘green’ would focus on these meanings. Related concepts found in the corpus include: *bioenergy, carbon, climate change, degradation, depletion of ecological assets, ecology, environment, renewable energy and sustainability*. It was decided to focus on these concepts that are somewhat related to the environment, and propose designations for these key terms, and thereafter generate terms for related concepts. The relationships were highlighted using a concept diagram, shown in Figure 4.1 below.

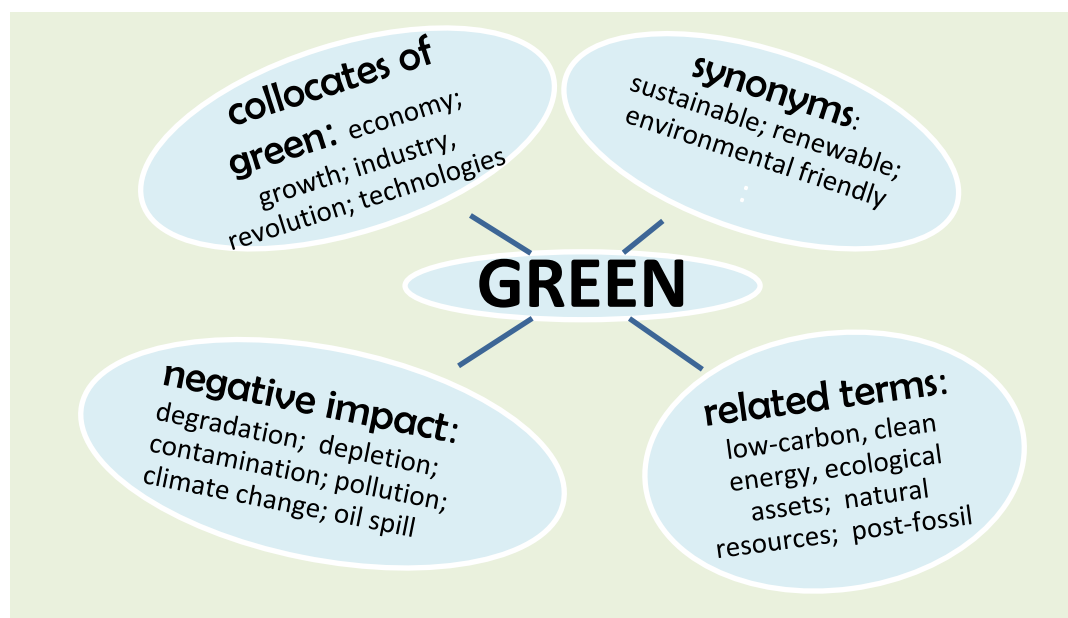


Figure 4.1: Concept Diagram of GREEN and Related Terms.

After an understanding of relationships between the concepts for which terms were to be created, terminological information was recorded in terminology case files (TCF) which show

the ISO 639-1 language code (en for English and yo for Yorùbá); then the term and its word class in brackets. On the next line is a terminological definition (DEF), the source of the term, if borrowed from another language or its morphological composition, if an indigenous term (←), synonyms or variants (SYN) and any equivalents (EQ). Observations, in form of comments by specialists (OBS) and References (R) indicating the textual sources, where available, are also included. The TCFS for **green**, **biodiversity** and **habitat** are presented below. The slot for equivalent is still empty because no term has been found for **green**.

| | | |
|-----------|---|------------------|
| En | GREEN (ADJ) | simple term, ADJ |
| DEF | environmentally responsible and resource-efficient; producing no negative impact the local or global environment | |
| SYN | renewable; sustainable | |
| Yo | Lónà to bẹ̀wọ̀ fúnàyíká, tìkòsì fì àlùmónìṣòfò; ti ko si mu ìpalàrabaàyíká, yálàtiagbẹ̀gbẹ̀kàntàbíkàriayé. | |
| EQ | ? | |
| OBS | Terms must be created separately for synonyms | |

Figure 4.2: Terminology Case File for ‘Green’

| | | |
|-----------|---|-----------------|
| n | BIODIVERSITY (N) | complex term, N |
| DEF | the variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable all species and living things on Earth or in a specific ecosystem | |
| SYN | biological variety; ecological diversity (narrower); ecosystem diversity (narrower) | |
| Yo | bíonírúúrúewékoàtiẹranko(ohunoniyè) ẹ̀pọ̀ tóniàgbáyétàbiniibùgbé- àbáláyé | |
| EQ | ? | |
| OBS | Terms must be created separately for synonyms | |

Figure 4.3: Terminology Case File for ‘Biodiversity’

| | | |
|-----------|--|----------------|
| En | HABITAT (N) | simple term, N |
| DEF | The conditions suitable for an organism or population of organisms to live and thrive | |
| SYN | natural environment; natural home | |
| Yo | àwọnibátí ó fàyẹ̀gbáoníyètàbiàgbájọ̀pọ̀ oníyèlátigbèàtilátipọ̀ síí | |
| EQ | ibùgbé-àbáláyé | |
| OBS | synonyms are merely descriptive; terms not needed | |

Figure 4.4: Terminology Case File for ‘Habitat’

After the creation of terminology case files, the next step was to generate candidate terms as equivalents. First, existing dictionaries and terminological works were scanned to see if appropriate terms existed for any of the source terms. Table 4.1 shows the results of the matching of existing terms for three concepts.

Table 4.1: Matching of Existing Terms for Near Synonyms

| | QG | YM | DYL | YVOC |
|-----------------------|-------------|-----------------------|---------------------|----------------------|
| Contaminate | ---- | latifiabuku kan nnkan | ba...je | ---- |
| contaminant | asodidibaje | ---- | ---- | ---- |
| Contamination | isodidibaje | ---- | Ibaje | |
| Degrade | ---- | èlò | re...sile; ye nipo | ---- |
| Degradation | ---- | ---- | ---- | ---- |
| Biodegradation | ---- | èlò èlà-iyè | ---- | ---- |
| Pollute | ---- | | ba...je; so di aimo | |
| Pollution | Ìtorósi | ibayikaje | ibaje; aimo; eeri | isodeléèèrí |
| atmospheric pollution | ---- | ---- | ---- | isojú-sánmò-deléèèrí |

As can be noticed, there are many gaps, representing concepts for which no terms currently exist. In addition, they are concepts for which the same terms are used. It is therefore necessary to propose terms for these gaps and ensure that they are used in a consistent manner, with an eye on the derivations that may arise. For example, **degradation** occurs as a source term in data, but not **degrade**, **degradable**, **biodegradable**, **non-biodegradable** or **biodegradation**. However, it is necessary that whichever term is chosen or created for **degradation** should be of a kind that will generate the base morpheme **degrade** and all its derivations.

Most of the terms in this work were created by composition. Composition is the process of combining morphemes, words, or even phrases from a language to produce new expressions that signify new concepts.(Olubode-Sawe, 2013). The three compositional strategies of description, translation, and idiomatisation make use of these combinations. Composition by description includes describing a tangible object while mentioning a few of its essential features, which may include the object's function or application, its construction or use, its physical appearance, its behaviour, and any other peculiar characteristics. The second method of composition is loan translation. This requires morphemes from the source term to be translated into the target language. Each morpheme in a borrowed phrase therefore has an equivalent in the recipient language. Like the second method of composition, idiomatisation,

which also combines morphemes, words, and phrases, the meaning of the word or term formed does not come from the combined meanings of its combining components. Rather, the combining units are used in puns, euphemisms, and other ways that show innate intelligence. Three Yoruba instances are given by Olubode-Sawe (2010): *adéedádì*, *àrùngbajúmò* and *bòsìkòrò*. In *adéedádì*, *adé*, (“crown,”) and *dádì*, (“daddy,”) are combined in *adéedádì* (literally, “daddy's crown”) for “condom”.

Table 4.2 shows three concepts describing negative impacts on the environment and their derivations.

Table 4.2: Creation of Terms for Near Synonyms

| Base Source Term | Derivations | Proposed Equivalents | Another equivalent? |
|--------------------|-------------------------|---|---------------------|
| CONTAMINATE | | sọ...dàimò; | |
| | contaminated | àsọdàimò | |
| | contaminant | asọdàimò | |
| | Contamination | ìsọdàimò | |
| DEGRADE | | díbàjé (non-trans) sọdídibàjé (trans) wópàlẹ̀ (trans./non-trans) | |
| | Degradation | ìsọdídibàjé/ìwópàlẹ̀ | |
| | Degradable | aṣẹwópàlẹ̀ | |
| | biodegradable | aṣẹfohun-abẹmiwópàlẹ̀ | aṣẹfoníyèwópàlẹ̀ |
| | non-biodegradable | aláìṣẹfohun-abẹmiwópàlẹ̀ | aláìṣẹfoníyèwópàlẹ̀ |
| | biodegradation | ìfohun-abẹmiwópàlẹ̀ | ìfoníyèwópàlẹ̀ |
| POLLUTE | | toró...sí | |
| | Pollution | Ìtorósí | |
| | atmospheric pollution | ìtorósíọju-sánmò | |
| | environmental pollution | ìtorósíàyíká | |

In creating terms for **green** and related terms, it became obvious that the semantically transparent options could not be used for green because the concept of “green economy” itself involves metaphorical construal. This matter had been earlier raised when it was pointed out that *idàgbàsókè aláwọ ewéko*, *idàgbàsókè dúdú* or *idàgbàsókè tutù* would not be appropriate equivalents for “green growth”. From the definitions of “green” terms, some distinguishing characteristics appeared and were grouped under three as shown in Table 3. In creating the term for bio- (living), the options were *abẹmí* (having a spirit) or *oníyè* (having life). It is conceivable that plants have life, but not spirits. This is subject to debate: with

questions about whether plants have souls or consciousness. Marder 2011 addresses the issue of plant soul, and a 1968 experiment by Cleve Backster seems to support that plants have feelings. Plants react to pain and seem to be able to react to the thought of being harmed. I have side-stepped the issue, by selecting *oniyè*, using that term in all bio- constructions.

Table 4.3: Green and Related Terms

| Definitions of green | Environmental friendliness | sustainability | Natural |
|---|-----------------------------------|--------------------|-------------------|
| environmentally responsible and resource-efficient | environmentally responsible | resource-efficient | - |
| no negative impact is made on the local or global environment | no negative impact on environment | - | - |
| reducing environmental risks and ecological scarcities, ...aims for sustainable development without degrading the environment | without degrading the environment | sustainable | - |
| uses natural resources in a sustainable manner | - | sustainable | natural resources |
| environment friendly | environment friendly | - | - |
| conservation of natural resources... environmentally conscious | environmentally conscious | conservation | natural resources |

Based on the information in Table 4.3, candidate target terms were generated for “green” and back-translated into English, as shown in Table 4.4 below.

Table 4.4: Candidate Target Terms

| Candidate Target Term | Back Translation | Remarks |
|-----------------------|--|---|
| aláìlòlèsá, | that does not use the soil till it loses its nutrients | |
| aláìbalèjé, | that does not spoil the soil | |
| aláìjèlèrun, | that does not consume the soil | |
| alálòtúnlò, | that can be used and re-used | |
| alálòpé, | that can be used for long | |
| alálòtò | that can be used in the right manner OR that can be used in a long-lasting manner | intentional ambiguity * long lasting * rightful use |
| asàyíká-dòtun | that renews the environment | |
| abayìíká-dòrèè | that makes friends with the environment | |

Green is of course all these and more. The main task was to find a culturally relevant Yorùbá expression that will recall the characteristics of retained fertility, abundance, comfort. (These

candidate terms will not be wasted but be used in the definition of the term.) The proposed term is *ilẹ̀-ẹ̀lẹ̀tùlọ́jú*. This phrase is traditionally used to describe soil that is fertile; as a matter of fact, it calls up associations of life, renewal, and nature, growth, harmony, freshness, safety, fertility, and environment; all the associations of green, except the colour. Previous uses of *ẹ̀lẹ̀tùlọ́jú* includes *ilú-ẹ̀lẹ̀tùlọ́jú* in the anthem of Áwẹ town in Òyọ State, and ‘*Wanihin, wanihin, si’lẹ̀-ẹ̀lẹ̀tùlọ́jú*, in the refrain of CAC Hymn 956. *Ilẹ̀-ẹ̀lẹ̀tùlọ́jú* is a ‘green land’, the noun-head has been deleted and the qualifier *ẹ̀lẹ̀tùlọ́jú* retained as the equivalent for **green**. Examples of *ẹ̀lẹ̀tùlọ́jú* and its collocates are: *ibá-ìkòlẹ̀ ẹ̀lẹ̀tùlọ́jú* (green building), *ilana ọ̀rọ̀-ajé ẹ̀lẹ̀tùlọ́jú* (green economy policies), *idàgbàsókè ẹ̀lẹ̀tùlọ́jú* (green growth) and *idókòwò ẹ̀lẹ̀tùlọ́jú* (green investment). Other terms include *isọ-tédátàyíkà-dìdibàjé* (ecological degradation) *àìfàlùmọ̀nìsòfò* (resource efficiency), *àwùjọasàìfàkẹ̀kù-oníyèsagbára* (post-fossil society), and *àwọ̀nọ̀rìsunalálòtùnlò* (renewable sources). One hundred and five designations were created in this manner.

An entry for green economy would therefore be as follows:

| | | |
|-------|--|----------------|
| En | Green economy (NP) | simple term, N |
| DEF | A system of production in which activities are carried out in an environmentally responsible and resource-efficient manner, with little or no negative impact on the local or global environment | |
| Yo | ọ̀rọ̀-ajé ẹ̀lẹ̀tù | |
| Oríkí | Ètò isenńkan-jáde nínú èyí tí àwọ̀n àgbẹ̀sẹ̀ jẹ̀ abọ̀wọ̀fáyiíkà àti aláìfàlùmọ̀nìsòfò, tí kò sì ẹ̀ ipalára (púpọ̀) fún àyíkà, yálá ní itòsì tàbí káráiyé | |

Figure 4.5: Terminology Case File for “green economy”

The terms were shared via WhatsApp with a group of ten competent Yoruba speakers: three linguists, two engineers, one applied geologist with special interest in ecology, one cooperative official who attends a Yoruba-speaking church and ministers in the medium of Yoruba and two others. Their suggested modifications are presented in bold red letters and asterisked. A strikethrough indicates that the suggestion is problematic in some way. For example, “omi-ilẹ̀ àti ilẹ̀ tó ti dàimó” is not only too long, it lacks the agentive morpheme “sọ di-”. The point of contamination is not that something is unclean, but has been made unclean by an external agency.

5. 0 Conclusion

This paper set out to do two things: first, to show that we need to carry monolingual users of our indigenous languages along in development efforts. A revolution involves mass action, and English-speaking scientists in their rarefied laboratories and technical sessions of conferences cannot constitute the critical mass needed to start or sustain a revolution. The sustainable development goals must be owned by the masses; all things green must be demystified so that people can participate. Ondo State Oil Producing Area Development Commission (OSOPADEC) commissioned indigenous language versions of their vision and mission in 2017. In preparing the Vision, Mission and Core Values of the Commission, ecological responsibility was listed as a core value. But what does it mean? The phrase was unpacked in the following manner:

Ecological Responsibility

Using natural capital in a resource-efficient and sustainable manner, as trustees of present and future generations

Ìbòwò fún Àyíká

Lílo àwọn ọrọ àbáláyé ní àyíká l'òná to sànjùlọ, ti yóó sì ní àlòtọ; gégé bí àlámòójútó ogún àwọn ìran òní àti àròmódómọ wọn

OSOPADEC Vision and Mission

The second goal was to show that it can be done. Therefore terms were created by locating, evaluating, using, transforming, and/or modifying existing resources, relying on the compositional strategies of description, translation, and idiomaticisation. The analysis of word meanings and semantic fields was linked to the analysis of the characteristics of specialized concepts (to be designated) and the disciplinary knowledge structure formed by the links between the concepts. Devising a designation for the key term, “green economy” involved metaphorical construal, since the source concept itself is a metaphor. The task was to select an existing metaphor that fit, rather than create a new one. Nevertheless, composition still featured in the process.

In attaining the second goal, what is required is the will, the cooperation of technical and language experts, and enough respect for our indigenous languages to know that if we can conceptualize an idea, our languages can express it. The terms may not sound very smooth to start with, and there are times that it will seem cheaper to just keep the information

conveniently in foreign languages. Respect for our indigenous languages must, therefore, be accompanied by a respect for the rights of those whose only way of making sense of the world is in these languages.

The first goal of this paper was to demonstrate that terminology development can contribute significantly to development communication. The second goal was to demonstrate the feasibility of creating terms using existing resources and compositional strategies. The analysis of word meanings and semantic fields was linked to the identification of specialized concepts and the disciplinary knowledge structure.

Postscript: 2022¹

OSOPADEC commissioned me to do the Yoruba version of their vision and mission in 2017. I checked the website of OSOPADEC in 2022. I did not find the indigenous language versions there. So, I called the consultant. He informed me that regrettably, they did not upload the indigenous language versions. In other words, even after terms have been created, users (who may have commissioned the terms) are reluctant to popularise them. We can take the horse to the river, but we cannot force it to drink.

References

- “Ile alafia kan wa, ti 'lekun re si s'ile”. *Christ Apostolic Church Gospel Hymn Book* Hymn 956.
Available at <https://play.google.com/store/apps/details?id=com.adediranife.cachymn>
- Amfani, A. H., & Ibrahim, G. (eds) 2017. *English-Hausa glossary of HIV, AIDS and ebola related terms*. Ibadan: University Press PLC.
- Antia, B. E (2000). *Terminology and language planning: An alternative framework of practice and discourse*. Amsterdam: John Benjamins
- Antia, B. & Ianna, B. (2016). Theorising terminology development: Frames from language acquisition and the philosophy of science. *Language Matters*, 47:1, 61-83, DOI: 10.1080/10228195.2015.1120768
- Àwòni Yoruba / Colours in Yoruba. Retrieved June 9, 2017 from www.awayoruba.com/forum
- Bamgbose, A (1994). ‘Pride and prejudice in multilingualism and development’. In R Fardon & G Furniss (Eds.) *African Languages, Development and the State*. London & New York: Routledge. 33-43
- Basic Colors in Yoruba. Retrieved June 9, 2017 from <https://www.abibitumikasa.com>
- Backster, C (1968). Evidence of a Primary Perception in Plant Life. *International Journal of Parapsychology*, 10 (4). 329-348
- Beisembayeva, G & Zharkynbekova, S. (2014). Development trends of technical terminology in the Germanic Languages *Procedia - Social and Behavioral Sciences*, 143. 487 – 490

¹The first version of this paper was written in 2017. Since then it has gone through several rewrites and revisions.

- Berke, P., & Manta, M. (1999). *Planning for Sustainable Development: Measuring Progress in Plans*. Lincoln Institute of Land Policy. <http://www.jstor.org/stable/resrep18489>
- Bibeliṛòyìn Ayò* (2005). (The Holy Bible in Yoruba Common Language). Lagos: The Bible Society of Nigeria
- Bíbèlì Mímó* (2005). Revised from the Holy Bible in Yoruba, 1900 edition. Chicago: Bible League
- Bruine de Bruin, W., Rabinovich, L., Weber, K., Babboni, M., Dean, M. & Ignon, L. (2021) Public understanding of climate change terminology. *Climatic Change*, 2021; 167 (3-4)
doi: [10.1007/s10584-021-03183-0](https://doi.org/10.1007/s10584-021-03183-0)
- Brundtland, G.H. (1987) *Our Common Future: Report of the World Commission on Environment and Development*. Geneva, UN-DokumentA/42/427. <http://www.un-documents.net/ocf-ov.htm>
- Catholic Altar Cloth Colors. Retrieved June 9, 2017 from
<http://peopleof.oureverydaylife.com/catholic-altar-cloth-colors-2303.html>.
- Dictionary of the Yoruba Language, A* (2005). Ibadan: University Press PLC.
- Fakinlede, K J (2003). *Yorùbá Modern Practical Dictionary (Yoruba – English/ English – Yoruba)*. New York: Hippocrene Books Incorporated.
- Gorodetsky, B Y (1990) “Cognitive Aspects of Terminological Phenomena”. In *Proceedings : Second International Congress on Terminology and Knowledge Engineering*, 2—4 October 1990, University of Trier, Germany. Ed. Hans Czap & Wolfgang Nedobity. Frankfurt Main: INDEKS Verlag.
- Green Economy. Retrieved June 9, 2017 from
<https://sustainabledevelopment.un.org/topics/greeneconomy>,
- Guidelines for Terminology Policies: Formulating and implementing terminology policy in language communities*, (2005). Prepared by Infoterm. Paris: UNESCO.
- Hardin, C.L. (2013). Berlin and Kay Theory. *Encyclopedia of Color Science and Technology*. New York: Springer Science+Business Media
- Igboanusi, H., & Mbah, B. M (eds.) (2017). *English-Igbo glossary of HIV, AIDS and ebola-related terms*. Ibadan: University Press PLC
- Iwai, M., Takeuchi, K., Kageura, K. & Ishibashi, K. (2016). [A Method of Augmenting Bilingual Terminology by Taking Advantage of the Conceptual Systematicity of Terminologies](#). In *Proceedings of the 5th International Workshop on Computational Terminology (Computerm2016)*, pages 30–40, Osaka, Japan. The COLING 2016 Organizing Committee.
- Kay, P., Berlin, B., Maffi, L., Merrifield, W.R., Cook, R.: (2009) *The World Color Survey*. CSLI Publications, Stanford
- Komolafe, O. E. (2020a) The place of indigenous languages in the development and teaching of agriculture in Osun State, Nigeria *LWATI: A Journal of Contemporary Research*, 17(4), 41 -52.
- Komolafe, O. E. (2020b) Developing football language in Yorùbá *Inkanyiso: Journal of Humanities and Social Sciences* 12(2) 178-193
- Lohar, Pintu & Way, Andy (2020) Parallel data extraction using word embeddings. In: *NLPTA 2020 : International Conference on NLP Techniques and Applications*, 28-29 Nov 2020, London, UK (Online). *Computer Science & Information Technology*. 10 (15). AIRCC Publishing Corporation. 2020 pp. 251-267., 2020
- Marder, Michael (2011) Plant-Soul: The Elusive Meanings of Vegetative Life. *Environmental Philosophy*, 8 (1). 83-100.
- Nassau, Kurt. “Colour”. *Encyclopaedia Britannica*, 7 Sep. 2022,
<https://www.britannica.com/science/color>. Accessed 10 October 2022.
- Odetayo, J A (1993) *Yoruba Dictionary of Engineering Physics*. Lagos: University of Lagos Press
- Olubode-Sawe, F. O (2013). ‘Strategies of Composition in Yoruba Plant Nomenclature’. In O-M Ndimele, , L. C. Yuka & J. F. Ilori (Eds.) *Issues in Contemporary African Linguistics: A festschrift in honour of Oládélé Awóbùlúyì*. 237-256



- Olubode-Sawe, F. O. (2010). “Devising a Yorùbá Vocabulary for Building Construction”. PhD Dissertation, Adekunle Ajasin University, Akungba-Akoko, Nigeria.
- Olupona, O. (2020). Devising Yorùbá terminology for human diseases. Afribary. Retrieved from <https://afribary.com/works/ma-thesis-copy-2>
- Onyango J O (2005). ‘Issues in National Language Terminology Development in Kenya.’ *Swahili Forum* 12. 219-234
- Oriki Awe - Awe Town's Praise Song. Retrieved June 9, 2017 from <https://web.facebook.com/notes/2634312596832002/>
- OSOPADEC Vision and Mission (Trilingual Version) (MS)
- Owolabi, K (2004). ‘Developing a strategy for the formulation and use of Yoruba legislative terms.’ In K. Owolabi & A. Dasylva (Eds.), *Forms and Functions of English and Indigenous Languages in Nigeria*. Ibadan: Group Publishers.
- Pasquali, A (1997): ‘The Critical Avant-Garde’. *Journal of International Communication*, 4 (2), 29-45.
- Pinnis, M., Ion, R., Ștefănescu, D., Su, F., Skadiņa, I., Vasiļjevs, A. & Babych B. (2012). ACCURAT toolkit for multi-level alignment and information extraction from comparable corpora. *Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics*. 91–96,
- Project Augustine (nd) Plant theology: Do plants have a soul? <https://projectaugustine.com/science-and-theology/cognitive-neuroscience/plant-theology-do-plants-have-a-soul-plant-neurobiology/>
- Quadrilingual Glossary of legislative terms (English, Hausa, Igbo, Yoruba)*, (1991). Lagos: Spectrum Books Limited (for Nigerian Educational Research and Development Council).
- Red-green-blue in Yoruba–English–Yoruba dictionary. Retrieved June 9, 2017 from <https://glosbe.com/en/yo/red-green-blue>
- Smith, K. (2004) ‘Colour Symbolism and the Meaning of Green. Retrieved June 9, 2017 from <http://www.sensationalcolor.com/color-meaning/color-meaning-symbolism-psychology/all-about-the-color-green-4309#.WTpDJpt0O2d>
- Surrallés A. (2016). On contrastive perception and ineffability: assessing sensory experience without colour terms in an Amazonian society. *Journal of the Royal Anthropological Institute* 22 (4). 962-979
- Thirumalai, M S (2003): *Language in science*. Language in India Series, Volume 3. Available at <http://www.languageinindia.com/>
- True colours, is that why I love you? Retrieved June 9, 2017 from <http://commdesign.ca/tag/colour-connotations/>
- Tufiş D., Barbu A. M. & Ion, R. (2004) Extracting multilingual lexicons from parallel corpora. *Computers and the Humanities*. 38, (2) 163-189.
- Wierzbicka, A. (2008). Why there are no ‘colour universals’ in language and thought. *Journal of the Royal Anthropological Institute* 14 (2) 407-425
- Yoruba Colours. Retrieved June 9, 2017 from www.polymath.org/yoruba_colors.php
- Yusuff, L. A., Adetunji, A., & Odoje, C. (eds.) (2017) *English-Yorùbá glossary of HIV, AIDS and ebola-related terms*. Ibadan: University Press PLC



Appendix: PROPOSED YORÙBÁ TERMS FOR “GREEN” AND RELATED TERMS

| SOURCE TERM | CANDIDATE TERM 1 | CANDIDATE TERM 2 | SELECTED TERM | RATIONALE |
|---|--|---|------------------------------------|--|
| 1. alternative fuels | ohun-àmúḍánámiiran | ìdánámiiran | ìdánámiiran àmúḍáná miiran* | Brevity |
| 2. atmospheric pollution | ìtorósíojusánmò | | ìtorósíojusánmò | sole term |
| 3. biodegradation | ìfoníyèwópalẹ | ìfohun-abẹmiwópalẹ | ìfoníyèwópalẹ | |
| 4. biodegradable | àṣeéfóníyèwópalẹ | àṣeéfóhun-abẹmiwópalẹ | àṣeéfóníyèwópalẹ | Transparency |
| 5. non-biodegradable | aláìṣeéfóníyèwópalẹ | aláìṣeéfóhun-abẹmiwópalẹ | aláìṣeéfóníyèwópalẹ | |
| 6. biodiversity | onírúuru-oníyẹ | | onírúuru-oníyẹ | sole term |
| 7. bioenergy | àmúṣagbáraoníyẹ | Okunoníyẹ | àmúṣagbáraoníyẹ | |
| 8. biomass | ohun-àmúṣagbáraoníyẹ | | ohun-àmúṣagbáraoníyẹ | sole term |
| 9. carbon | kábòṇ | Èédú | kábòṇ | |
| 10. carbon economy; 11. carbon-based economy | orọ-ajéadàléríkábòṇ | | orọ-ajéadàléríkábòṇ | sole term |
| 12. carbon emissions | ìbìjádèkábòṇ | | ìbìjádèkábòṇ | sole term |
| 13. carbon footprint | ìpasẹ kábòṇ | | ìpasẹ kábòṇ | sole term |
| 14. clean energy | okunaláìṣèérí | Okunaláìléèérí | okunaláìṣèérí | more exact |
| 15. climate change | ìyípadà-ojú-ojojó | ìyípadà-ojú-ojó | ìyípadà-ojú-ojó | Brevity |
| 16. climate change policy (policies) | (àwọṇ) ilànàìyípadà-ojú-ojó | (àwọṇ) ilànàìràpadàìyípadà-ojú-ojó | (àwọṇ) ilànàìràpadàìyípadà-ojú-ojó | removes ambiguity |
| 17. Contaminate | sọ...dàimò | | sọ... dàimò | sole term |
| 18. contaminant | àsọdàimò | asọhundàimò* | àsọdàimò | sole term |
| 19. contaminated | àsọdàimò | tótídàimò | àsọdàimò | sole term |
| 20. contaminated groundwater and soil | omi-ilẹ àtiilẹ àsọdàimò | omi-ilẹ àtiilẹ tótídàimò* | omi-ilẹ àtiilẹ àsọdàimò | sole term |
| 21. Contamination | ìsọdàimò | | ìsọdàimò | sole term |
| 22. Degrade | sọdì...dìbàjẹ | wó... palẹ | wó... palẹ | Brevity |
| 23. Degradable | àṣeéwópalẹ | àṣeésọdìdìbàjẹ | àṣeéwópalẹ | retains the base word ‘wópalẹ’ |
| 24. Degradation | ìsọdìdìbàjẹ | ìwópalẹ | ìwópalẹ | retains the base word ‘wópalẹ’ |
| 25. Deplete | lò...gbẹ | | | sole term |
| 26. Depletion | ìlògbẹ | lílògbẹ | | Brevity |
| 27. depletion of ecological assets | ìlògbẹorọ àyíká | lílòorọ àyíkágbẹ | ìlògbẹorọ àyíká | keeps the pattern of the head word |
| 28. Ecology | ẹkọ nípaèdà-ínú-àyíká | ẹkọ ajẹmọ-tẹdátàyíká | ẹkọ (ajẹmọ-) tẹdátàyíká | Brevity |
| 29. Ecological | ajẹmédàá-ínú-àyíká | ajẹmọ-tẹdátàyíká | ajẹmọ-tẹdátàyíká | more euphonious |
| 30. ecological crises | ìrúkerúddàajẹmédàá-ínú-àyíká | ìrúkerúddò (ajẹmọ-) tẹdátàyíká | ìrúkerúddò (ajẹmọ-) tẹdátàyíká | keeps the pattern of the head word |
| 31. ecological degradations | ìsọdìdìbàjẹ ajẹmédàá-ínú-àyíká /ìwópalẹ ajẹmédàá-ínú-àyíká | ìwópalẹ(ajẹmọ-) tẹdátàyíká/ìwópalẹ ajẹmédàá-ínú-àyíká | ìwópalẹ (ajẹmọ-) tẹdátàyíká | ajẹmọ can be omitted in most constructions |
| 32. ecological economics | orọ-ajéajẹmédàá-ínú-àyíká | orọ-ajé(ajẹmọ-) tẹdátàyíká | orọ-ajé (ajẹmọ-) tẹdátàyíká | |
| 33. ecological resources | orọ ajẹmédàá-ínú-àyíká | orọ (ajẹmọ-) tẹdátàyíká | orọ (ajẹmọ-) tẹdátàyíká | |
| 34. ecological scarcities | òwọṇajẹmédàá-ínú-àyíká | òwọṇ(ajẹmọ-) tẹdátàyíká | òwọṇ(ajẹmọ-) tẹdátàyíká | |
| 35. ecologically sustainable | alálòtọ ajẹmọ-tẹdátàyíká | alálòtọ tẹdátàyíká | alálòtọ (ajẹmọ-) tẹdátàyíká | |
| 36. ecological sustainability | ìlòtọ ajẹmọ-tẹdátàyíká | ìlòtọ tẹdátàyíká | ìlòtọ (ajẹmọ-) tẹdátàyíká | Brevity |
| 37. Energy | àmúṣagbára | Okun | àmúṣagbára/okun | context dependent |
| 38. environment | Àyíká | | àyíká | existing term |
| 39. Environmental | ajẹmáyiíká | Àyíká | ajẹmáyiíká/ àyíká | context dependent |
| 40. environmental damage | ìbàjẹ àyíká | | ìbàjẹ àyíká | |

| | | | | |
|-----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------|
| 41. environmental degradation | iwópalèajemàyiiká | isàyikádídibàjé | iwópalèàyiiká/ ajemàyiiká | |
| 42. environmental friendliness | ibayiká-dòrèé | | ibayiká-dòrèé | |
| 43. environmental friendly | abayiká-dòrèé | | abayiká-dòrèé | |
| 44. environmentally responsible | | | abòwòfàyiiká | |
| 45. environmental impacts | àpálàràayiiká | | àpálàràayiiká | |
| 46. environmental pollution | ìtorósíayiiká | | ìtorósíayiiká | |
| 47. environmental risks | ewuajemàyiiká | Ewuayiiká | ewuayiiká | Brevity |
| 48. environmental sustainability | ìlòtò àyiiká | | ìlòtò àyiiká | |
| 49. fossil fuels | epoàkèkù-eranko | epoàkèkù-oniyè | epoàkèkù-oniyè | terminological exactitude |
| 50. Green | elètùlójú | elètù | elètù | Brevity |
| 51. be green | di elètùlójú; jé elètùlójú | di elètù; jé elètù | di elètù; jé elètù | Brevity |
| 52. being green | jíjé elètùlójú | jíjé elètù | jíjé elètù | Brevity |
| 53. green building technology | ibá-ìkóléelètùlójú | ibá-ìkóléelètù | ibá-ìkóléelètù | regularization |
| 54. green building | iléelètùlójú | iléelètù | iléelètù | regularization |
| 55. green business | isè-òwòelètùlójú | isè-òwòelètù | isè-òwòelètù | regularization |
| 56. green economy | orò-ajéelètùlójú | orò-ajéelètù | orò-ajéelètù | regularization |
| 57. green economy policies | ìlànàorò-ajéelètùlójú | ìlànàorò-ajéelètù | ìlànàorò-ajéelètù | regularization |
| 58. green economy programmes | ètòorò-ajéelètùlójú | ètòorò-ajéelètù | ètòorò-ajéelètù | regularization |
| 59. global green economy | orò-ajéelètùlójúakáriayé | orò-ajéelètùakáriayé | orò-ajéelètùakáriayé | Brevity |
| 60. green growth | ìdàgbàsókèelètùlójú | ìdàgbàsókèelètù | ìdàgbàsókèelètù | regularization |
| 61. green industry | isòwò-şèdáelètùlójú | isòwò-şèdáelètù | isòwò-şèdáelètù | regularization |
| 62. green industry sector | abalaisòwò-şèdáelètùlójú | abalaisòwò-şèdáelètù | abalaisòwò-şèdáelètù | regularization |
| 63. green investment | ìdókòwòelètùlójú | ìdókòwòelètù | ìdókòwòelètù | regularization |
| 64. green job | isè elètùlójú | isè elètù | isè elètù | regularization |
| 65. green market | ojàelètùlójú | ojàelètù | ojàelètù | regularization |
| 66. green sectors | (àwọn) abala (orò-ajé) elètùlójú | (àwọn) abala (orò-ajé) elètù | (àwọn) abala (orò-ajé) elètù | regularization |
| 67. green technologies | (àwọn) ogbón-àmúşeeelètùlójú | (àwọn) ogbón-àmúşeeelètù | (àwọn) ogbón-àmúşeeelètù | regularization |
| 68. greenhouse | ilé-iba | | | semantic extension |
| 69. greenhouse gas | aláfèfè amáyé-móorusódi | | aláfèfè amáyé-móorusódi | |
| 70. greenhouse gas emissions | ìbijadealáfèfè amáyé-móorusódi | | ìbijadealáfèfè amáyé-móorusódi | |
| 71. Habitat | ibùgbé-àbáláyé | ibùgbé-adèrùn | ibùgbé-àbáláyé/ ibùgbé-adèrùn | context dependent |
| 72. low carbon, low-carbon | oníkábòn-kíún | alokábòn-kíún | oníkábòn-kíúnalokábòn-kíún | context dependent |
| 73. low carbon transition | (àsiko) àyípadàsìilokábòn-kíún | | (àsiko) àyípadàsìilokábòn-kíún | |
| 74. low-carbon goods and services | ojààtiisè-ifisèrànwò alokábòn-kíún | ojààtiisè-ifisèrànwò oníkábòn-kíún | ojààtiisè-ifisèrànwò alokábòn-kíún | |
| 75. low-carbon infrastructure | ìhun-àkòtè-ìlúoníkábòn-kíún | ìhun-àkòtè-ìlúalokábòn-kíún | ìhun-àkòtè-ìlúalokábòn-kíún | |
| 76. low-carbon investments | ìdókòwòoníkábòn-kíún | ìdókòwòalokábòn-kíún | ìdókòwòalokábòn-kíún | |
| 77. low-carbon sector | (àwọn) abala (orò-ajé)alokábòn-kíún | (àwọn) abalaalokábòn-kíún | (àwọn) abalaalokábòn-kíún | |
| 78. low-carbon technologies | ogbón-àmúşeoníkábòn-kíún | ogbón-àmúşealokábòn-kíún | ogbón-àmúşealokábòn-kíún | |
| 79. make...green | sò di elètùlójú | sò... di elètù/ sò ... deletù | sò... di elètù/ sò ... deletù | |
| 80. natural capital | orò àbáláyé | orò àdánidá | orò àbáláyé | |

| | | | | |
|-------------------------------------|-----------------------------------|----------------------------------|--|-----------|
| 81. natural ecosystem | tèdátàyíkààdánidá | tèdátàyíkààbáláyé | tèdátàyíkààbáláyé | |
| 82. natural systems | ètòàdánidá | Ètòàbáláyé | ètòàbáláyé | |
| 83. Pollute | torósí (ta orósí) | | torósí | |
| 84. Pollution | ìtorósí | | ìtorósí | |
| 85. Pollutant | Oró | | oró | |
| 86. atmospheric pollution | ìtorósíojusánmò | | ìtorósíojusánmò | sole term |
| 87. environmental pollution | ìtorósíàyíká | | ìtorósíàyíká | |
| 88. oil pollution | ìtorósíepo | | ìtorósíepo | |
| 89. oil spills | ifòndànùepo | | ifòndànùepo | |
| 90. post- fossil society | àwùjqasàifàkèkù- erankosagbára | àwùjqasàifàkèkù- oniyèsagbára | àwùjqasàifàkèkù- oniyèsagbára | |
| 91. Recycle | tún...şefúnitùnlò | túnşefúnitùnlò; | túnşefúnitùnlò; tún ...şefúnitùnlò | |
| 92. Recycled | àtúnşe-tùnlò | | àtúnşe-tùnlò | |
| 93. Recycling | itúnşe-tùnlò | | itúnşe-tùnlò | |
| 94. renewable energy | ohunàmúşagbáraalálòt únìlò | àmúşagbáraalálòtùnlò | àmúşagbáraalálòtùnlò | brevity |
| 95. renewable resource | àlùmòniàlálòtùnlò | | àlùmòniàlálòtùnlò | |
| 96. renewable sources | (àwọn) orísunalálòtùnlò | | (àwọn) orísunalálòtùnlò | |
| 97. resource efficiency | àifàlùmònişòfò | àifàlùmònişòfò | àifàlùmònişòfò | |
| 98. resource efficient | tíkò fi àlùmònişòfò | aláifàlùmònişòfò | láiifàlùmònişòfò/ aláiifàlùmònişòfò | |
| 99. reuse (v) | tún ... lò | | tún ... lò | |
| 100. reuse (n) | ìtúnlò | ìtúnlò | ìtúnlò | |
| 101. Sustainability | ilòtò | | | |
| 102. sustainable development | ìdàgbàsókèalálòtò | | | |
| 103. sustainable development goals | ilépaidàgbàsókèalálòtò | ifojúnsùnidàgbàsókèalálòtò | ilépaidàgbàsókèalálòtò | |
| 104. sustainable development policy | ilànàidàgbàsókèalálòtò | ilànàidàgbàsókèalálòtò | ilànàidàgbàsókèalálòtò | |
| 105. sustainable development path | ipanàidàgbàsókèalálòtò | ipanàidàgbàsókèalálòtò | ipanàidàgbàsókèalálòtò | |

Source Texts for Term Extraction

<https://www.eea.europa.eu/themes/economy>

<https://farmingfirst.org/green-economy/>

<https://www.quora.com/What-is-green-economy>

<https://www.environment.gov.za/projectsprogrammes/greeneconomy/about>

<https://www.theguardian.com/environment/2017/jun/04/green-business-needs-strong-and-stable-support-from-the-next-uk-government>

<https://www.theguardian.com/commentisfree/2017/apr/09/climate-change-good-for-economy-britain-john-major-global-warming>

http://www.academia.edu/9270430/Green_Economy_Vs_Green_Growth_in_Nigeria_Quest_for_Ecological_Sustainable_polity

<https://www.modernghana.com/news/733205/nigeria-needs-to-part-of-the-global-green-economy.html>

<http://www.ecomii.com/ecopedia/green>

<https://greeneconomygroup.com/company/green-economy-definition/>