LEXICAL FEATURES OF ECOLOGICAL TERMS TRANSLATION IN TEXTS

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Environmental issues are getting more pressing these days, necessitating immediate action. Translation of environmental texts is crucial in this sense as it helps spread awareness of environmental issues and solutions. However, because of the specialized vocabulary, cultural nuances, and requirement for proper scientific information transmission, translating terms and documents related to environmental protection causes significant obstacles.

Lexical characteristics are essential to translation because they guarantee that environmental concepts are accurately and effectively communicated across linguistic and cultural boundaries. The purpose of this study is to investigate the lexical characteristics that are involved in translating environmental protection-related terms and texts. Specifically, it will look at how particular lexical decisions affect how environmental information is understood and interpreted.

This study aims to contribute to the creation of more potent translation techniques and resources for environmental communication by investigating the lexical aspects of environmental translation.

It is well known that Ernst Haeckel coined the term "ecology" in 1866 to refer to a brand-new field of study within biology: *ecology* is the general science of how organisms interact with their surroundings. Today, though, this idea has changed significantly, it now encompasses a wider range of ideas and is far more expansive than the field of biology. The word "ecology", which derives from the ancient Greek words *oikos*, which means "house", and *logos*, which means "science", has undergone numerous changes over its more than a century of existence, as experts have observed [1]. Today, it takes the shape of an integrative science that addresses a broad variety of topics.

The American linguist Einar Haugen's work, "Ecology of Language", which emphasized interaction within the framework of sociolinguistics and psycholinguistics and coined the term, is credited with bringing the term "ecology" into use in the field of linguistics in the early 1970s. Language and ecology, or the study of the interaction between languages in the human mind and in a multilingual society, is how E. Haugen described the field of ecolinguistics [2, p. 325].

The English linguist Michael Halliday brought up the topic of language and the environment in his report, asking linguists to consider the following theoretical questions: 1) Can language help people better understand, relate to, and comprehend environmental problems?; and 2) To what extent are linguistic structures and textual units involved in covering issues related to environmental problems? Scientists started to understand interaction as the outcome of language and environment influencing one another and changing both things since they are interconnected and constitute a "ecological system" at the same time [3].

A pioneering methodological contribution to ecolinguistics can be attributed to the researchers R. Harré, I. Brockmeier, and P. Mühlhäusler. It was expressed as the following thesis: language and linguistic structures, including metaphors, are viewed as systems of interconnected individual structures rather than as closed entities existing only for themselves; a language cannot be studied in isolation from its cultural and natural surroundings [4, p. 91–118].

Considering the methods of research, we used the internet resource "inosmi.ru" (foreignmedia.ru) to look into the lexical features used in translating texts and terms linked to environmental protection. This website compiles news stories from many international sources and offers Russian translations. "inosmi.ru" provides a wealth of information for researching the translation of environmental content because of its big library of translated writings.

As part of our approach, we chose a selection of environmental articles from "inosmi.ru" that addressed a variety of subjects, including pollution management, biodiversity preservation, and climate change. In order to compare the translated materials with the original English texts, we concentrated on articles that had been translated from English into Russian.

The following categories of environmental discourse can be identified based on functional-style classification: 1) scientific (ecologist-authored studies and scientific articles); 2) journalistic (journalist-authored texts that are broadcast on radio, television, the Internet, and the press).

Ecoterms bear the majority of the semantic load in the structure of environmental discourse and are typically required elements of the semantic core of a document on environmental themes.

The primary characteristic of translating ecoterms from English into Russian is the requirement for translation transformations, which are methods for changing some parts of the original language to make the translation equivalency. English terms, like any other terms, have their own structure. There are simple, complex and compound units. Simple words are nature – "nature", earth – "earth", smog – "smog". "In the language of ecology there are terms that contain Greco-Latin prefixes and suffixes, such as *re-, de-, pre-, dis; -ing, -eror, -ment, -ity*.

Most complex environmental terms in English are formed using affixation and prefixation. Suffixes such as *-ate, -ness, -ed, -ing, -ty, -ism, -ant, -or, -er, -ic, -ify, -ive, -al, -ance, -ment, - ation, -age* form affixal terms (pollution – "загрязнении", contaminant – "вещества").

Example: And Longrock has been hit again this week, with a *pollution* warning in place on August 26, just in time for the August Bank Holiday, which will see Brits heading for the coast (CNN Travel, 5) - Лонгрок снова пострадал и на этой неделе: предупреждение о *загрязнении* прозвучало 26 августа, как раз накануне последнего уикенда лета, который британцы обычно проводят на побережье (6).

Example: The researchers concluded: "Deleterious health outcomes may be related to ... these *contaminants* in the respiratory system following inhalation" (The Guardian, 9) - Ученые пришли к выводу: "Вредные последствия для здоровья могут быть связаны с (...) этими загрязняющими *веществами*, которые при вдыхании попадают в дыхательную систему" (6).

Prefixes such as *a-, bio-, aero-, agro-, re-, over-, micro-* form prefix terms (microplastics – "микропластик" agroculture – "сельское хозяйство").

Abbreviated words are prevalent, offering the choice of either a literal translation or retention in their original English form.

Example: The most common particles were polypropylene, used in plastic packaging and pipes, and *PET*, used in bottles (The Guardian, 9) - Чаще всего встречался полипропилен, который используют для производства пластиковых упаковок и труб, и $\Pi \Im T$, из которого изготавливают бутылки.

Explanation: The term *PET* refers to "Полиэтилентерефталат" (Polyethylene Terephthalate in English), a type of polymer commonly used in the manufacturing of plastic bottles due to its durability and recyclability. In the translation, "ПЭТ" is retained as an abbreviation corresponding to the Russian translation of the term, maintaining consistency with the original terminology (6).

As an example of compound words, two-word terms are also formed in various ways:

1. *noun* + *noun* (carbon emissions – "выбросы углекислого газа");

Example: Even though Germany succeeded in reducing *carbon emissions* last year by an impressive 20%, they do not consider the problem taken care of (The

Guardian, 10) - Хотя Германии и удалось в прошлом году сократить выбросы углекислого газа на целых 20%, электорат не считает, что проблема решена (6). 2. *adjective* + *noun* (chemical interactions – "химические взаимодействия");

Example: But researchers still didn't know the mechanism behind the smoothness or whether it might be linked to factors aside from microplastics such as marine life, other debris, or *chemical interactions* - Но тогда исследователи не понимали механизмы, стоящие за такой "сглаженностью" поверхности океана, и выдвигали гипотезы, что она может быть связана с другими факторами, такими как особенности морской флоры и фауны, другой мусор или особые *химические взаимодействия*.

3. noun + preposition + noun (remains of a burn – "остатки продуктов горения", release of toxins – "выброс токсичных веществ ");

Example: A defunct military base may produce less pollution than an active one—for example, the uncovered *remains of a burn* pit present less direct harm than the active *release of toxins* from burning waste (Scientific American, 11) - Закрытая военная база загрязняет окружающую среду меньше, чем действующая. Например, *остатки продуктов горения* в незарытых ямах для сжигания мусора причиняют меньше вреда, чем *выброс токсичных веществ* при сжигании отходов (6).

4. past participle + noun (wind-generated waves - "волны, которые возникают под действием ветра");

Example: The CYGNSS satellite radar measures the ocean surface's roughness, caused by *wind-generated waves* (Scientific American, 7) - Спутниковый радар CYGNSS измеряет шероховатость поверхности океана, создаваемую *волнами*, *которые возникают под действием ветра* (6).

5. present participle + noun (working hydrogen-electric plane - ", работающий водородно-электрический самолет");

Example: Miftakhov now has the support of some of the world's most deeppocketed individuals, close ties to flight operators, and most importantly a *working hydrogen-electric plane* (The Telegraph, 12) - Сегодня у Мифтахова есть поддержка некоторых самых богатых людей мира, близкие связи с авиаперевозчиками и, что более важно, *работающий водородно-электрический самолет*.

In this context, it is important to emphasize the following fundamental methods for translating terms and phrases:

1) Tracing, or reproducing the combinatorial composition of a phrase by translating its constituent parts into equivalent elements in the target language: aerial scanning

— воздушное сканирование, soil analysis — почвенный анализ, living organisms — живые организмы;

- 2) Translation using term-phrase noun components in the genitive case: animal behaviour поведение животных, coordinate system система координат; vegetation distribution распределение растительности;
- Prepositional translation (important for sentences that consist of a string of two or more words to create a link between them): geographical name — подпись на карте, storm evacuation map — карта эвакуации при шторме;
- Descriptive translation (transferring one or more terms or phrases while providing a more thorough explanation of the English word's meaning): environmental problems — проблемы окружающей среды, graphic tablet — планшет для ввода графической информации;
- 5) Inversion, which is rearranging a phrase's constituent parts: animal ecology экология животных, plant ecology экология растений; spatial data's updating обновление пространственных данных, cellular breakdown разрушение клеток;
- 6) Lexical additions (the insertion of new words into a phrase to help explain meanings that are inferred but not expressed in the original): data analysis анализ полученных данных, herbivore травоядное животное, carnivore плотоядное животное;
- 7) Specification (using a term whose subject-logical meaning is narrower in translation than it is in the original language): quadrangle name номенклатура, state plane coordinates государственная система координат;
- 8) Equivalent substitution (adding a similar unit from the translated text to a unit from the original): 3D modeling трехмерная модель поверхности, sound basis прочная основа, benchmark репер, choropleth map картограмма. Since equivalents refer to consistent, equivalent correspondences between words in two languages that are typically independent of context, this approach is the primary means of communicating terms [13].

Lexical features are important in environmental translation because they strike a balance between the necessity for clear communication and exact terminological accuracy. The study lists a number of difficulties that translators have, such as translating stable phrases, adding ecoterms, and creating complicated environmental words by affixation and derivation.

Furthermore, the study delineates essential techniques for translating environmental terms and phrases, such as lexical additions, prepositional translation, and tracing, offering insightful information to translators and educators working in the sector. Stakeholders can work together to address environmental concerns more successfully on a global scale by understanding the linguistic nuances of environmental translation.

To sum up, this research advances translation methods and tools for environmental communication, encouraging global collaboration and better understanding in the face of environmental concerns.

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