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STRUCTURAL AND COMPOSITIONAL FEATURES OF ECO TERMS IN UZBEK AND ENGLISH

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ABOUT ARTICLE

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Abstract: The present study examines the lexical-semantic characteristics of ecological vocabulary in Uzbek and English. The research focuses on the structural and semantic features of eco-words and eco-terms, as well as their classification into different lexical-semantic groups. The analysis demonstrates that ecological vocabulary reflects the interaction between human activity and the natural environment and includes both denotative and connotative meanings. Based on semantic characteristics, eco-lexicon can be divided into two major groups: ecological units with positive meanings and those with negative meanings. Each group includes several microcategories such as ecological verbs, natural geographical terms, flora and fauna terminology, technical eco-terms, and lexical units denoting professionals engaged in environmental activities. The study also reveals that negative ecological lexemes prevail over positive ones in the Uzbek language, which may reflect the growing environmental challenges faced by society.

Introduction. It is widely acknowledged that the native language plays an exceptionally significant role in the spiritual development of individuals and in the cultural and educational

progress of society. As the most authentic and vivid reflection of national spirituality, enlightenment, and culture, the Uzbek language has historically expressed ecological concepts in concise, clear, and simple forms. Within this linguistic system, a number of lexemes reflecting ecological meanings can be identified. Among them are words belonging to the Turkic lexical layer such as damba (dam), yog‘in (precipitation), isish (warming), kechish (flow), qirqish (cutting), kovlash (digging), qurish (drying up), quritish (drying), suv (water), tutun (smoke), urug‘ (seed), o‘toq (vegetation patch), chang (dust), and cho‘l (desert). In addition, Persian-origin lexemes such as bog‘ (garden), bo‘ron (storm), ishqor (alkali), kushanda (destructive agent), and toza (clean), as well as Arabic-origin lexemes such as iflos (polluted), muvozanat (balance), musaffo (pure), muhit (environment), sel (flood), tabiat (nature), havo (air), xavf (danger), hayot (life), and harorat (temperature) are widely used. Each of these lexemes implicitly contains the semantic component related to ecology [4, 43].

Such terms are distinguished not only by borrowings from different languages but also by their affiliation with various lexical strata. In many cases, words belonging to ecological vocabulary are also widely used in other domains while retaining the same or closely related lexical meanings.

These characteristics of ecological vocabulary are also common in other languages. In this regard, the fact that ecology has become an independent scientific discipline in recent decades due to social and scientific developments plays an important role. In particular, the development of ecological terminology in English and its evolution into distinct lexical units is closely connected with the emergence of ecology as an independent field of science. The specialization of the functional semantics of these terms and the formation of thematic groups have occurred largely as a result of the close interaction of ecology with other scientific disciplines [9, 67].

Literature review. The emergence, development, and structural-semantic features of ecological terminology in English have been studied by a number of foreign scholars such as R. Wittig, I. Dedyu, I. N. Ponomarev, B. Streit, and L. Trepl, as well as Uzbek researchers including Z. A. Djurabayeva and X. D. Paluvanova. As a result, investigations into the linguistic characteristics and evolution of ecological terminology have created favorable conditions for comparative studies and have also enabled the analysis of principles governing the interlingual interaction of terms within the context of globalization [8, 32].

Materials and methods. As mentioned in our previous studies, although ecology as an independent scientific discipline emerged relatively recently, many of the terms used in this field originated from common vocabulary whose meanings gradually underwent semantic

narrowing and specialization [5, 22]. It should be emphasized that words related to ecological concepts have been widely used in many languages since ancient times with essentially the same semantic meanings.

For instance, in the Uzbek language, words such as to‘qay (riparian forest), qayir (floodplain), dasht (steppe), cho‘l (desert), and qurg‘oqchilik (drought) have been used with ecological meanings since ancient times in the works of prominent scholars such as Beruni, Navoi, and Babur. A similar tendency can also be observed in English, where the early formation of ecological vocabulary dates back to the period between the 7th and 19th centuries, when words referring to everyday economic activities, natural phenomena, and living organisms began to emerge.

Following the Great Geographical Discoveries, the extensive scientific exploration of nature, and the emergence of intellectual movements such as Darwinism and naturalism, the nineteenth century marked a turning point in the development of ecological terminology in English. This period witnessed a significant expansion and transformation of ecological vocabulary. However, many ecological terms introduced during this time were formed on the basis of borrowings from Latin and Greek [2, 24]. Although these terms have become integrated into English, their borrowed roots remain clearly recognizable.

Result and discussions. During this period, new scientific disciplines specifically focused on ecological studies began to emerge on the basis of fields such as biology and zoology. Consequently, terms containing the roots eco- and bio- became increasingly widespread, leading to the formation of new scientific concepts such as ecology, ecosystem, biometry, and biocenosis.

In the subsequent development of ecological terminology, new nominations that were not characteristic of general vocabulary also appeared. These terms were formed in accordance with the internal structural principles of the language and its derivational mechanisms. Therefore, analyzing derivational principles across different languages plays a particularly important role in understanding the formation and development of ecological terminology.

The study of eco-lexicon in languages belonging to different linguistic systems has shown that eco-words belonging to various lexical-semantic groups possess not only their primary meanings but also additional connotative and emotionally evaluative meanings. This can be explained by the fact that the concepts expressed by eco-words and eco-terms often reflect either the positive or negative impact of human activity on nature and the environment [6, 17]. Accordingly, eco-lexicon can be divided into two major lexical-semantic groups (LSGs):

1. ecological units with positive meanings;

2. ecological units with negative meanings.

The eco-lexicon of the first group can further be divided into the following microgroups:

a) verbs with positive meanings;

b) natural geographical names;

c) terms related to the animal and plant world;

d) eco-terms denoting technical devices and equipment;

e) names of workers and professionals engaged in ecological activities.

Eco-lexemes belonging to the second group consist of the following microgroups:

a) verbs expressing negative meanings;

b) ecological disasters;

c) names of sources causing pollution;

d) eco-words denoting human activities.

Such lexical-semantic groups of eco-lexicon are found not only in Russian and English but also in the Uzbek language. Their study expands the possibilities of identifying the nature of linguistic units related to ecology, the dynamic changes occurring within them, their specific features of usage in speech, and the issues of their continuous growth and development. This approach contributes to a comprehensive and in-depth interpretation of ecological vocabulary.

Research has shown that within the eco-lexicon of the Uzbek language, words with negative meanings outnumber those with positive meanings. The quantitative dominance and continuous increase of such eco-lexemes can be explained by the complexity of the ecological situation in Uzbekistan and the insufficient attention given to solving this globally significant problem. Unfortunately, this situation is also reflected in the Uzbek language as the linguistic system of the region [1, 34]. Reversing this process cannot depend solely on linguists; rather, the entire society must direct its collective social potential toward achieving this noble goal. In the following sections, we will examine the lexical-semantic groups of eco-lexicon in Uzbek and English in greater detail.

Eco-words with positive meanings are widely distributed in both English and Uzbek. They can be divided into five main subgroups.

1. Verbs expressing positive ecological meanings. These verbs express positive human attitudes and actions toward nature. Compared to verbs with negative meanings, such verbs are relatively fewer in number. In English this microgroup includes approximately 300 lexical units, in Russian about 400 units, and in Uzbek around 700 lexical units [11, 56]. These verbs constitute nearly half of the total vocabulary under study in all the analyzed languages. Structurally, they may be simple, derived, or compound words. In English, most such verbs are

formed through prefixation, while their Uzbek equivalents are typically formed through suffixation. For example:

- to readapt – qayta moslashmoq
- to reorganize – qayta tuzmoq

Suffixal verbs are also widely used. The most productive suffixes in English include -en, -fy, -ate, -ize, as in: to purify, to liquidate, to harmonize, to freshen.

In Uzbek, common suffixes include -la, -moq, -lashtir, for example:

tozalamoq, yo‘q qilmoq, uyg‘unlashtirmoq.

Simple verbs also occur in English and Russian in moderate numbers. For instance:

English: to purge, to protect, to limit, to litter, to mine, to preserve, to freeze, to clog, to safeguard.

Uzbek: tozalamoq, himoyalamoq, cheklamoq, tartibsiz tashlamoq, kovlab qazib olmoq, ehtiyot qilmoq, muzlamoq, ifloslantirmoq, qo‘riqlamoq.

Compound eco-verbs of this type occur relatively rarely in all languages.

Many eco-verbs with positive meanings are used in the form of phrases. For example:

English: to fight pollution; to preserve ecosystems; to harmonize industry; to preserve woodlands; to reduce pollution.

Uzbek: ifloslanishga qarshi kurash; ekotizimlarni asrash; sanoatni moslashtirmoq; o‘rmonlarni asrab-avaylash; ifloslikni kamaytirish.

2. Eco-words denoting natural geographical concepts. Such words are also abundant in Uzbek. For example:

Uzbek: tabiat, o‘rmon, ummon, daryo, ko‘l, qo‘ltiq, botqoqlik, qirg‘oq, basseyn, botqoq, tog‘ oralig‘i, bog‘, atrof, dovul, yer, chakalakzor.

In English, these lexical units are also numerous. They include simple, derived, and compound words, although most are simple words. For example:

English: nature, forest, ocean, river, lake, bay, bog, bank, basin, coast, defile, garden, habitat, hurricane, land, morass, moor, mire, thicket.

Compound words also exist and are represented in the following models:

English: wildlife, ecosystem, landscape, water ratio, urban center, thick fog, plant ecology, marine life, float wood, droughty zone, derelict land, barren soil, wasteland.

Uzbek: yovvoyi dunyo, ekotizim, landshaft, suv miqdori, shahar markazi, qalin tuman, o‘simliklar ekologiyasi, suv osti hayoti, suzuvchi o‘rmon, qurib qolgan zona, tashlandiq yer, unumsiz yer, bo‘sh yer.

In some cases, English compounds correspond to single lexical units in Uzbek. For example:

English: woodland, greenhouse, grassland, greenbelt, nonforested area.

Uzbek: seroʻrmon hudud, issiqxona, yashil maydon, oʻrmonsiz hudud.

3. Eco-words related to flora and fauna. In English and Russian, simple lexical units are predominant within this group.

English: flower, fowl, animal, mammals, biota, fauna, verdure, harvest, weed.

Uzbek: gul, parranda, hayvonot, mayda jonzotlar, hayvonot olami, biota, fauna, yashil oʻsimlik, hosil, begona oʻt.

Eco-lexemes representing flora and fauna are also formed as compound words, which are among the most common structural patterns.

4. Eco-terms referring to technology and professionals. Eco-lexemes referring to technical tools and devices are also present. In English about 60 lexical units belonging to this category have been identified. Many of them are derived using agentive suffixes such as -er, as in arrester, duster, and conditioner. Uzbek equivalents include tutuvchi, chang tozalovchi, and konditsioner. Another subgroup includes lexical units denoting specialists working in environmental fields. In English these words are typically formed using the agentive suffixes -ist and -er, such as ecologist, gardener, botanist, and collector. In Uzbek similar meanings are expressed using suffixes such as -chi and -bon, for example bogʻbon and ekolog.

5. Negative ecological verbs. Eco-words with negative meanings form another important lexical-semantic group. In English approximately 630 verbs belong to this category, which accounts for nearly 40% of the analyzed lexical units. Many of these verbs are simple lexical units, including to combust, to deplete, to damage, to exhaust, to obstruct, to dump, to pollute, and to litter. Their Uzbek equivalents include yoqmoq, kamaytirmoq, zarar keltirmoq, toʻsmoq, tashlamoq, ifloslantirmoq, and xalal bermoq. These verbs describe destructive actions that negatively affect the natural environment.

Conclusion. The study of eco-lexicon in Uzbek and English demonstrates that ecological vocabulary represents a complex lexical-semantic system reflecting the interaction between human activity and the natural environment. The analysis shows that eco-words in both languages possess not only denotative meanings but also connotative and evaluative semantic components that express positive or negative attitudes toward environmental processes.

The research revealed that ecological vocabulary can be classified into two main lexical-semantic groups: eco-units with positive meanings and eco-units with negative meanings. Each group consists of several microgroups, including verbs expressing ecological actions, terms

denoting natural geographical objects, flora and fauna terminology, eco-terms related to technical devices and tools, as well as lexical units referring to specialists engaged in environmental activities. Such classification demonstrates the structural and semantic diversity of ecological vocabulary in both languages.

The comparative analysis also indicates that negative eco-lexical units prevail quantitatively over positive ones in the Uzbek language. This tendency can be associated with the increasing ecological challenges and environmental problems observed in contemporary society. Consequently, linguistic reflection of ecological realities becomes an important indicator of environmental awareness and socio-cultural attitudes toward nature.

Furthermore, the formation and development of ecological terminology in both Uzbek and English are closely connected with processes of lexical derivation, borrowing, and semantic specialization. The emergence of new eco-terms reflects the dynamic development of environmental sciences and the growing importance of ecological issues in modern society.

Therefore, the comprehensive study of eco-lexicon not only contributes to the development of linguistic research in the field of terminology and lexical semantics but also provides valuable insights into the interaction between language, society, and ecological consciousness. Future studies may focus on deeper comparative analyses of eco-terminology across different languages and the role of linguistic mechanisms in shaping environmental discourse.

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