

A Contribution to Compiling a Dictionary of English-Slovenian Glacial Geomorphological Terminology



Dr. Borut Stojilković

Univerza na Primorskem
borut.stojilkovic@fhs.upr.si

COBISS: 1.01

Prispevek k sestavljanju slovarja angleško-slovenske terminologije o glacialni geomorfologiji

Abstract

Finding the right technical terms when writing various geographical texts can be difficult if there is a lack of glossaries or dictionaries dealing with such terminology. The focus of this research is to compile a list of glacial geomorphological terminology in English, define its linguistic characteristics, provide definitions, and determine Slovenian translation equivalents. In addition, frequent compounds from the selected lemmata are listed. Such a list can serve as a basis for preparing geographical texts dealing with glacial geomorphological topics and, furthermore, for the compilation of a greater (physical) geographical dictionary.

Keywords: glacial geomorphology, geomorphology, physical geography, lexicography, dictionary

Izvleček

Ob pisanju različnih geografskih besedil se lahko srečujemo s težavami pri določitvi pravih strokovnih terminov, če ne obstaja slovar, ki bi vključeval tovrstno terminologijo. Raziskava se je osredotočala na zbiranje angleške terminologije s področja glacialne geomorfologije, definiranje njenih lingvističnih značilnosti, definiranje posameznih izrazov ter ugotavljanje njihovih prevodnih ustreznicev v slovenskem jeziku. V nadaljevanju so naštetje tudi sestavljene fraze izbranih gesel. Takšen seznam je lahko osnova za pisanje geografskih besedil, ki se ukvarjajo s temami o glacialni geomorfologiji, kot tudi osnova za pripravo obsežnejšega (fizično) geografskega slovarja.

Ključne besede: glacialna geomorfologija, geomorfologija, fizična geografija, leksikografija, slovar

Introduction

Various Slovenian geographers have worked on the research of glacial landscapes in recent years (e.g. Stojilković, Stepišnik and Žebre, 2013; Kozamernik et al., 2018; Boccali, Žebre and Colucci, 2019). It can be easier to write such texts in English than in Slovenian because the researchers often face the problem of the correct translation of technical terminology. The main aim of this paper is to present some of the most

frequent glaciological terms that are often used in Slovenian glacial geomorphological texts.

The formal feature of the dictionary encompasses the number of entries (i.e. 45 entries, which are directly connected to glacial geomorphology) and information category covered (basic grammatical features of the lemmata, their pronunciation, translation and derivations). Pragmatically, the dictionary is intended for use in situations where geographers or other professionals are looking for a translation of a glacially-related term in

English or its explanation. It is also intended for others who are interested in searching Slovenian equivalents of English phrases related to the covered topic (for example students or translators of geomorphologic texts).

In terms of the basic types of dictionaries, Béjoint (2010) distinguishes between monolingual and bilingual dictionaries and their intermediate types (e.g. bilingualized, hybrid dictionaries etc.), general and specialized dictionaries, encyclopaedic and linguistic dictionaries, foreign learners' and native speakers' dictionaries, dictionaries intended for adults and dictionaries for children, alphabetized and non-alphabetized dictionaries, and electronic and paper dictionaries. Hence, the typology of the compiled dictionary is as follows.

- The number of languages covered is two. The dictionary is bilingual unidirectional. The covered languages are English and Slovenian and the direction is from English to Slovenian.
- The main intended purpose of using the dictionary is to decode English terminology. This makes it a passive dictionary because its basic aim is to fulfil the receptive task of understanding a written text in a foreign language and translating it to the mother tongue.
- The predicted user's skills are the levels of geomorphologists, other geographers, students or other adults interested in the topic.
- The scope of the dictionary is a terminological dictionary compiled for specific purposes.
- The dictionary's organization is semasiological. The semantic approach taken in the dictionary is to explain the meaning of words or word combinations. The semasiological information is given with definitions as well as translation equivalents. The direction is from the word in English to the Slovenian equivalent and explanation.
- Regarding the period of time covered, the dictionary is contemporary.
- The dictionary's medium is print.
- The dictionary belongs to the category of language for specific purposes. Because its purpose is to facilitate and accurately express the understanding between two experts, the use of language was the criterion when we determined the meaning of specific terms. The target audience is experts and semi-experts.

Materials and Methods

The lexicographic work encompassed three stages. The first consisted of collecting texts and

books dealing with glaciers and paleo-glaciers. The phrases to be included in the dictionary were chosen and analysed: the selection was made according to the opinion of three Slovenian geomorphologists who study palaeo-glacial extents in Slovenia and the Balkan area based on previously collected texts. Afterwards, the phrases were analysed terminologically. Secondly, the phrases were processed and edited with the purpose of completing the word list. In this step, the manual of style and the information categories were determined. Thirdly, the dictionary was compiled and presented in a way that it becomes useful for a specific target audience, namely geographers dealing with glacial geomorphology.

In the planning stage, it was determined that the dictionary would be intended for geographers or experts who study the topic. They will use it primarily to decode the meaning of words from English to Slovenian and to find the meaning of those words, provided in the definitions. The skills expected of the target user are the ability to navigate the dictionary and deduct the meaning of the lemmata.

The dictionary structure is divided into a megastructure, a microstructure, an access structure and a cross-reference structure. Within the alphabetical macrostructure, word boundaries are recognized. The multi-word lexical items as lemmata follow the word-by-word principle, where the spaces between words come first, hyphens come second and letters come last. There is no front, middle and back matter of the dictionary because it is not yet a published dictionary, but it is incorporated into this paper.

The dictionary microstructure deals with the structure of the dictionary article and it was endeavoured that the typography would be standardized, as it mainly is to a large extent in modern dictionaries (Béjoint, 2010). Its structure is the following:

- The dictionary article head
 - The lemma (in bold)
 - The phonetic transcription (provided by Jones (2003))
 - Grammatical characteristics of the lemma (in italics)
 - Slovenian translations
- The definition (supported by Bufon et al., 2005)
- The derivations
- The derivations' translations

When writing the definition, the rules of simplicity, non-circularity, closedness and

substitutability (Béjoint, 2010) were taken into consideration. The definitions are easy to understand. The definitions are not defined by other definitions (e.g. A is not defined by B and B is not defined by A). Closedness, however, does not apply to this particular dictionary. All the words used in the dictionary text are not in the macrostructure. The reason for that is that the dictionary serves specific purposes and is not a general dictionary. Lastly, the definitions are written in such a way that they can be substituted with the lemmata that they define. As a basic source we used the Slovenian geographical terminological dictionary (Bufon et al., 2003).

If there are several definitions of the lemma, they are listed according to the number of occurrences in which the lemma functions as a such definition. The more frequent use is listed before the less frequent one.

There are no indicators (e.g. running heads or the thumb index) in the dictionary that would lead to a particular lemma. The external access structure is not needed for use in this dictionary because the number of dictionary articles is not so high that it would be difficult to navigate between them. The internal access structure includes the numbered meanings and different typography for the different elements of the articles.

The cross-reference is used only in cases where lemmata or their derivations are synonyms of other dictionary entries. In these cases, the cross-reference is marked with the symbol SYN and the synonym is marked in a special typography.

The lexical items in the dictionary are either single-word lemmata or multi-word lexical items. The lemmata are marked typographically in bold and are clearly visible. They mark the beginnings of the dictionary entries.

English-Slovenian Dictionary of Glacial-Geomorphological Terminology

ablation /ə'bleɪʃən/ *noun* **ablacija**

zmanjšanje prostornine ledenika zaradi taljenja

ablation zone /ə'bleɪʃən'zəʊn/ *phrase* **ablacijsko območje**

območje ledenika, kjer prihaja do zmanjšanja prostornine ledenika zaradi taljenja

accumulation area /ə'kjʊ:mjə'leɪʃən'eərɪə/ *phrase* **akumulacijsko območje**

območje ledenika, kjer poteka proces kopičenja ledu

arête /ə'ret/ *noun* **arete, skedenj**

oster in podolgovat gorski greben, ki nastane med dvema ledenikoma

boulder /'bouldə/ *noun* **balvan, eratični blok, eratična skala**

skalni blok, ki ga je odložil ledenik

cirque /sɜ:k/ *noun* **krnica**

strma polkrožna kotanja v vrhnjem delu ledenika, kjer se kopiči led

cirque basin /'sɜ:k'beɪsən/ *phrase* **krniška kotanja**

poglobljen del krnice, nastal zaradi globinske erozije ledenika

col /kɒl/ *noun* **krniško sedlo**

znižan del med dvema vrhovoma, nastal zaradi zadenjske erozije ledenikov

crevasse /krə'væs/ *noun* **ledeniška razpoka**

vrzel v ledeniku, ki nastane zaradi njegovega premikanja

deglaciation /,di:gleɪsɪ'eɪʃən/ *noun* **deglaciacija, razledenitev, odledenitev**

zmanjševanje obsega ledenika zaradi zmanjšanja količine snežnih padavin ali otoplitve

degree-day model /dɪˈɡriː ˈdeɪ ˈmɒdəl/ *phrase* model stopinjskih dni

numerični model, s katerim lahko izračunamo temperaturne in padavinske pogoje, potrebne za ohranjanje ravnovesne meje ledenika

drumlin /ˈdrʌmlɪn/ *noun* drumlin

podolgovat greben, ki ga gradi ledeniški material, nastal pod ledenikom

equilibrium-line altitude /ˌiːkwɪˈlɪbrɪəm ˈlaɪn ˈæltɪtjuːd/ *phrase* ravnovesna meja ledenika

meja med akumulacijskim in ablacijskim delom ledenika

esker /ˈeskə/ *noun* esker

fluvio-glacialni material, ki ga je transportiral in v obliki nasipa nasul ledeniški potok

glacial drift /ˈgleɪʃl ˈdrɪft/ *phrase* ledeniški nanos

ledeniška akumulacija, ki jo nanese ledenik ob svojem delovanju

glacial isostasy /ˈgleɪʃl aɪˈsɒstəsi/ *phrase* ledeniška izostazija

ravnovesje litosfere, kjer endogene sile ustvarjajo ravnovesje s silami, ki površje potiskajo navzdol, tj. ledeniki ali ledenim pokrovom

glacial lake /ˈgleɪʃl ˈleɪk/ *phrase* ledeniško jezero

1 jezero, nastalo v delu ledeniške kotanje

2 jezero, nastalo za ledenikom, ki je zaježil vodotok

glacial trough /ˈgleɪʃl ˈtrɒf/ *phrase* ledeniška dolina

dolina, praviloma v obliki črke U, ki jo je preoblikoval ledenik

glaciation /ˌgleɪsɪˈeɪʃn/ *noun* poledenitev

proces ali stanje pokritosti površja z ledenim pokrovom ali ledeniki

glacier /ˈgleɪsɪə/ *noun* ledenik

gmota ledu, ki nastane v krniškem delu doline in teče proti dnu doline

- cirque glacier **krniški ledenik**
- debris covered glacier **z moreno prekrit ledenik**
- debris mantled glacier **z moreno zajezen/obdan ledenik**
- moraine dammed glacier **ledenik zajezen z moreno**
- outlet glacier **odtočni ledenik**
- tributary glacier **stranski ledenik**

glacier complex /ˈgleɪsɪə ˈkɒmpleks/ *phrase* ledeniški kompleks

sistem več ledenikov na določenem območju

glacier flour /ˈgleɪsɪə ˈflaʊə/ *phrase* ledeniška moka

finozrnat material, ki se tvori z erozijo na stiku ledenika s kamninsko podlago

glacier terminus /ˈgleɪsɪə ˈtɜːmɪnəs/ *phrase* čelo ledenika

skrajni končni premikajoči se del ledenika, kjer se ob umikanju odlaga čelna morena

glaciofluvial /ˌgleɪsɪˈfluːviəl/ *adjective* glaciofluvialen

povezan z ledeniški in rečnimi procesi

glaciology /ˌgleɪsɪˈɒlədʒi/ *noun* glaciologija

veda, ki se ukvarja s preučevanjem lastnosti in učinkov ledu ter ledenikov

hummocky meadow /ˈhʌməki ˈmedəʊ/ *phrase* grbinasti travnik

travnato razgibano površje na območju zakraselega karbonatnega morenskega gradiva

ice /aɪs/ *noun* led

voda v trdi agregatni obliki

- sea ice **morski led**
- ice cap **ledeni pokrov**
- ice sheet **ledeni ščit**

interglaciation /ˌɪntɜːɡleɪsɪˈeɪʃən/ *noun* interglacial, medledena doba

obdobje med dvema ledenima dobama

kame /keɪm/ *noun* kame

fluvialno-glacialna oblika, ki nastane ob talečem se ledeniku

- delta kame kame delta

kettle /ˈketl/ *noun* kotanja mrtvega ledu

depresijska oblika, ki nastane ob taljenju kosa ledu, ki je bil ločen od glavnega ledenika, prekrit s sedimenti (**SYN kettle hole**)

last glacial maximum /ˈlɑːst ˈgleɪʃl ˈmæksɪmə/ *phrase* višek zadnje poledenitve

obdobje viška zadnje poledenitve, ko so paleoledeniki zadnjič dosegali svoj maksimum

mass balance /ˈmæs ˈbæləns/ *phrase* masna bilanca

med akumulacijo ledu ali snega na ledeniku in njunim taljenjem (ARSO, 2011)

- specific mass balance specifična masna bilanca

melt /melt/ *noun* staljeno

količina staljenega snega ali ledu v določenem časovnem obdobju

moraine /məˈreɪn/ *noun* morena

1 nesortiran material, ki ga ledenik prenaša s seboj ali akumulira

2 greben ali nasip, ki ga odloži ledenik (**SYN moraine ridge**)

- fossil moraine **fosilna morena**
- ground moraine **talna morena**
- lateral moraine **bočna morena**
- medial moraine **sredinska morena**
- terminal moraine **čelna morena, terminalna morena, končna morena**

nourish /ˈnʌrɪʃ/ *verb* hraniti

proces pridobivanja ledu predvsem v akumulacijskem delu ledenika

outwash plain /ˈaʊtˌwɒʃ ˈpleɪn/ *phrase* sander, podledeniški vršaj

akumulacija v obliki vršaja iz sortiranega materiala pri čelu ledenika, ki ga je erodiral ledenik, in ki ga je transportirala voda iz staljenega ledu

plasticity /plæsˈtɪsɪti/ *noun* plastičnost

fizična lastnost ledenika, ki govori o njegovi zmožnosti spreminjati obliko

rate of snowmelt /ˈreɪt əv ˈsnəʊˌmelt/ *phrase* višina staljenega snega

višina oz. količina staljenega snega

scree /skriː/ *noun* melišče

geomorfološka akumulacijska oblika v visokogorju

sérac /ˈsɜːræk/ *noun* serak

ledeniški blok na površju ledenika, ki nastane ob premikanju ledenika ali ob ledeniških razpokah

solifluction /ˈsɒlɪˌflʌkʃən/ *noun* soliflukcija

periglacialni process, kjer s staljeno vodo prepojena preperlina drsi po pobočju v toplejšem času, ko ni zamrznjena

stress /stres/ *noun* **napetost**

fizični pritisk, ki lahko povzroča določeno spremembo

- driving stress **strižna napetost/napetost**, ki poganja
- shear stress **strižna napetost**
- yield stress **meja plastičnosti**

tarn /tɑ:n/ *noun* **krniško jezero**

jezero nastalo v krniški kotanji

till /tɪl/ *noun* **til**

akumuliran nesprijet, praviloma mlajši nesortiran ledeniški sediment

tillite /'tɪlaɪt/ *noun* **tilit**

akumuliran sprijet in praviloma starejši ledeniški sediment

Analysis and Discussion

There are 45 lemmata included in the dictionary. They are both simple and complex phrases. The majority of them are nominal phrases (43). There is one verbal phrase (i.e. nourish) and one adjectival phrase (i.e. glaciofluvial). The verbal and adjectival phrases are simple. The nominal phrases mainly name different geomorphological forms. The verbal phrase is about geomorphological processes and the adjectival phrases provide a description of the forms.

While compiling the dictionary, several issues arose. They were classified into four categories: issues connected to meaning, issues connected to grammar, issues connected to pronunciation and issues connected to organising the dictionary. All four categories are presented and exemplified in the continuation.

Issues connected to meaning

The first issue connected to meaning that arose was the distinction between glacial geomorphological and other geomorphological terms. The aim was to compile a more narrowly defined glossary, dealing only with terms related to glacial geomorphology. The first list of words encompassed 66 words. Furthermore, the list was shortened to 45 because some words on the list pertained to other subcategories of geomorphology; mainly fluvial or karst geomorphology (e.g. watershed, limestone pavement etc.). The dictionary compilation was not clear-cut in all cases. That was mainly because for English words there are several Slovenian translations or no translation at all. One such example is deglaciation, for which there are three possible translations: *deglaciacija*, *razledenitev* and *odledenitev*. The first is a direct translation and the others are derived from the Slovenian word for glaciation. In cases where several different translations were found for an

English phrase, the most suitable was chosen. The criterion for this was the use of the word in Slovenian technical and scientific literature published in recent years (e.g. Kodelja, Žebre and Stepišnik, 2013). Where no equivalent was found in the Slovenian literature, a new translation was made. We took into consideration that these are geomorphological (i.e. technical) terms, which need to be clear-cut. For example, the degree-day model can be translated in different ways and Slovenian technical literature is not standardized regarding this phrase. We suggested the translation *model stopinjskih dni*.

Issues connected to grammar

The first grammatical issue that we faced when compiling the dictionary and translating the lemmata was the grammatical aspect of the verb. It would be best to translate the verb so that we provide both the perfective and imperfective forms. The verb nourish in Slovenian (*hraniti*) is used in technical texts only in perfective form. That is why only the perfective form is provided in the dictionary. Another issue connected to grammar was the complex phrases. In the cases of multi-word lemmata, we did not label them according to the headword (as nominal phrases) but simply as phrases.

Issues connected to pronunciation

Another issue was phonetic in nature. In some cases, multiple pronunciation transcriptions were possible for a given lemma. In those cases, one of the possible pronunciation transcriptions in Received Pronunciation was chosen. For the transcription of the phrase *glacier*, the transcription /gleɪsɪə/ was used. According to Jones (2003), another possible transcription is /'glæsiə/. Where there are several options of pronunciation to choose from, the option that would be more suitable for Slovenian speakers was chosen.

Issues connected to style, organisation and compiling the dictionary

After the lemmata were chosen and the dictionary entries compiled, the issue connected to style was which colours to choose for the fonts to make it easier for the reader to use the dictionary. That is why it was decided to write the lemmata in red colour and bold print, followed by the transcription in the standard phonetic script, the grammatical characteristics of the lemma in English in italics, and the translation into Slovenian in blue colour. These four parts form the head of the dictionary entry. They are also shaded in light grey. Another issue was where to include the derivations and complex phrases made of the lemmata. The decision was to include phrases that consist of already defined lemmata in the dictionary articles with those lemmata. Those derivations and complex phrases are written under the definition. Each phrase also has a translation in Slovenian, written in blue font, the same as the lemma's translation. An example entry for this issue is *moraine*, where several types of moraines are listed and translated under the definition, but they are not further defined as the lemma is. In all cases, the translation of the phrase and the definition of the lemma itself function as a sufficient definition.

Conclusion

Using suitable terminology is a standard that every geographer should follow. Hence, it is crucial that specific studies address the issue of finding the right translation equivalents for various expressions. In this manner, we compiled a short list of main glacial geomorphological terms in English and provided the most suitable translation equivalents. Secondly, we defined each expression. The basis for this part was the Slovenian geographical terminological dictionary (Bufon et al., 2005), which already lists some lemmata and definitions. The linguistic research was in close relation with the geographical one in the way that through studying the literature on the glaciations of different world regions, specific articles and monographs were selected, from which basic glacial geomorphological terminology was used to compile the dictionary.

Firstly, a theoretical background was established and the dictionary type was defined using the procedures and typologies proposed by Béjoint (2010). When all the relevant terminology was selected, the lemmata were ordered alphabetically. We added specific information to each lemma. Each dictionary article head includes the lemma, one of its phonetic transcriptions in

the Received Pronunciation, and the grammatical characteristics of the lemma (i.e. whether it is a noun, a verb, an adjective or a phrase). The definition in Slovenian language follows each article head. It is in the Slovenian language because the intended users of the dictionary are the speakers of Slovenian who would use the dictionary for specific purposes. The derivations of the lemma follow the definition in some cases. Only the most frequent derivations were selected and they are listed with their Slovenian equivalents following the definition.

A brief dictionary analysis and the problems that arose when compiling the dictionary were presented in the third part of the linguistic research. The analysis chapter also includes explanations of the issues encountered in compiling and editing the dictionary, and the solutions for those issues. They need to be addressed in greater detail when compiling larger geographical bilingual dictionaries. Namely, there is a gap in translating geographical technical vocabulary since there is no bilingual dictionary addressing this topic yet. If it is to be prepared in the future, some of our solutions and suggestions can be used. With this work, we have made a start and paved the way for future linguistic and geographical studies to be done.

Sources

- ARSO. (2011). *Kazalci okolja v Sloveniji. Spreminjanje obsega ledenika*. http://kazalci.arso.gov.si/?data=indicator&ind_id=413
- Béjoint, H. (2010). *The Lexicography of English. From Origins to Present*. Oxford University Press.
- Boccali, C., Žebre, M., Colucci, R. R. (2019). Geometry and paleo-ice content of rock glaciers in the southeastern Alps (NE Italy - NW Slovenia). *Journal of maps*, 15(2), 346–355. DOI: 10.1080/17445647.2019.1595753
- Bufon, M., Černe, A., Gams, I., Jeršič, M., Jurinčič, I., Kladnik, D., Kokole, V., Komac, B., Krevs, M., Kunaver, J., Lovrenčak, F., Natek, M., Ogorelec, B., Orožen Adamič, M., Pavšek, M., Perko, D., Plut, D., Radinja, D., Ravbar, M., Smrekar, A., Špes, M., Zorn, M. (2005). *Geografski terminološki slovar*. Založba ZRC SAZU.
- Jones, D. (2003). *Cambridge English Pronouncing Dictionary* (CD ROM). Cambridge University Press.
- Kodelja, B., Žebre, M. and Stepišnik, U. (2013). *Poledenitev Trnovskega gozda*. Znanstvena založba Filozofske fakultete Univerze v Ljubljani. DOI: 10.4312/9789612375614
- Kozamernik, E., Colucci, R. R., Stepišnik, U., Forte, E., Žebre, M. (2018). Spatial and climatic characterization of three glacial stages in the Upper Krnica Valley, SE European Alps. *Quaternary international*, 470, Part A, 67–81. DOI: 10.1016/j.quaint.2017.05.047
- Stojilković, B., Stepišnik, U., Žebre, M. (2013). Pleistocenska poledenitev v Logarski dolini. *Dela*, (40), 25–38. DOI: 10.4312/dela.40.2.25-38