Problems in the standardization of natural feature names and the utilization of expert knowledge in the production of maps

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Introduction

The aim of the present study is to examine problems in the standardization of natural feature names and to characterize the need of expert knowledge in the production of maps.
Regulations and principles

Regulations Regarding Geographical Names Information (adopted 10 January 2012) prescribe the procedures for the creation, assigning, approval, accumulation, publication, use, preservation and protection of geographical names.

The basic principles for establishing and using correct geographical names are based on local place name forms. But the local practice varies and we face a number of problems in the standardization of place names of Latvia. In my presentation I will discuss some of the problems related to the standardization of natural feature names.
Some methodological considerations

To follow up those requirements it is necessary to have access to linguistic, cartographic as well as geographical expertise. Linguistic expertise involves thorough knowledge of Latvian and regional variants. Linguistic expertise is also required for recognizing and standardizing the various elements which make part of the Latvian place names system.

Cartographic expertise is necessary for understanding the landscape as it is and its symbolic representation digitally and on paper, whereas geographical expertise is required for reading the geomorphological distribution of an area.
1. Natural feature names in the Place Names Database

- Water features (lakes and water courses) – 10 354 (8%)
- Relief features – 5 869 (5%)
- Forests – 3 188 (3%)
- Wetlands – 3 088 (2%)
- Meadows – 1 935 (2%)
- Hydroorographical features – 1 161 (1%)
Water courses in the Place Names Database - 4627

https://kartes.lgia.gov.lv/karte/
Water course types

4627 water courses in the Place Names Database:

- **upe** - river: 3489
- **straunts** - stream: 444
- **rūcis**, **urga**, **orga** [uo]
- **valks**
  - **grāvis** – ditch: 536
  - **kanāls** – canal: 83
  - **atteka** – arm of a river, distributary: 55
  - undefined water course: 20

- A **perennial stream** or perennial river is a stream or river (channel) that has continuous flow in parts of its stream bed all year round during years of normal rainfall. An **intermittent stream** flows only for some weeks or months each year, whereas **ephemeral channels** flow only for hours or days following rainfall.
- Natural and artificial, surface and undergroundwater fluxes normally cease flowing for weeks.
Diukšupe, Daukšupe, Diuškupe, Dukšupe, Dūkšupe, Dyukšupe – in Latvian

The compilers of maps and gazetteers of Latvia have to look for the so-called preferred names for natural feature names. However, it was not always clear which names should be preferred.
Zeps 1984, 119: Dyukšupe, l. trib. of Tiļža, 21 km, Tiļža; Daukšupe, A75; R Daukšupa & Diukšupa, T126; R Diuškupe, Atl. 1792; R Dyvkšupe, WRG; R Duksta, Spis.; R Dyukšupja, 1784; P Dywszkapia & Diuszkaupa, 1770.

Diukšupe – in Latvian
Dyukšupe – in Latgalian
Often geographical features bear several names and name variants or different forms of writing. The same or similar names may also be used for several geographical features.

In order to ensure a **unique feature identification**, particularly in official communication and on maps, the choice of one particular name and definite writing form, as well as its consistent use, is required. It shall ensure and grant **official status** to the geographical name.
Lines of water courses describe the distribution of water course names

- Each water course which bears a name is marked with a blue line.
- The source of the water course is known in many cases, and the water course is then drawn from it’s source to it’s mouth in another water course, waterbody or the sea.
- Sometimes it is not clear in which place the water course starts, therefore a line starts from the place from which it’s name is being used in accordance with available data.
Broken lines are used to show underground waters
Water course types in the Place Names Database

- River / Река: 75%
- Undefined water course: 0%
- Arm of a river / Рукав реки: 1%
- Canal / Канал: 2%
- Ditch / Канава: 12%
- Stream / Ручей: 10%
River Suseja near Gārsene

Photo: J. Kluša, 2014.
83 canals in the Place Names Database
localization
comparization
summarization
input into the Place Names Database
Purupīte in different sources

http://www.melioracija.lv

Classifier of Water Management Districts
The river Kamārce is ameliorated (see Nr. 1. violet ring) and its waters flow into the canal Kamārces-Packules kanāls. The old river until the river Venta bears the name Vecā Kamārce.
2. Main problem situations:

1) the source of the river is not clearly defined;
2) the mouth of the river is not clearly defined;
3) a flow of the river has changed location after amelioration.

Latvian Geospatial Information Agency (LGIA) shall assign the names of natural features.

➢ Latvian Geospatial Information Agency (http://www.lgia.gov.lv, e-mail: info@lgia.gov.lv) provides expert opinions on geospatial identity of geographical names (the relationship between the geographical name and the particular geographical feature and its location thereof).
Source of the river Suseja

https://www.melioracija.lv

http://ezerai.vilnius21.lt/suseja-v13617.html
Which is the mouth of river Kaļņupīte?

Where to write the river name Kaļņupīte here?
River Longa

Digital Cadastr of Amelioration:
http://www.melioracija.lv
Bērzupīte, Bārzupeite, Bērze

Digital Cadastr of Amelioration: Vārzagūne.
Map browser: Bērzupīte
Topographic Map of Latvian SSR, scale 1:25 000: Bārzupeite (Барзупейте)
Topographic Map of Latvia, scale 1:75 000: **Bērze**

- **Vārzhūne** flows from the lake **Vāržgūnes ezers**,  
- **Bērzupeite** (Bārzupēte) – flows into the lake **Vāržgūnes ezers**.
A flow of the river has changed location, for instance the river *Sita* and the arm of the river *Sitas Vecupe*
Old+rivernname
New+rivernname

If a flow of the river after amelioration has changed location, in many cases the old river is being named by using the model old+rivername (Vecpededze), whereas the new one is named according to the model new+rivername (Jaunpededze).

Pededze
3. Changes of natural features and of their names

- Geographical features and their names have changed over time.

- During the span of time landscape has changed. Lakes have disappeared and the flow of rivers has changed. In some cases the geographical feature has disappeared.

*Kuja*  
The ameliorated river *Kuja* and the boulder *Velna*

*Skroderis*

Photo: A. Jansons, 2010
Rudņa, Bukupe, Tartaka, Izvalta

**Rudņa, Bukupe, Tartaka, Izvalta in the Place Names Database of Latvia**

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<th>Value</th>
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<td>Nosaukums tīkošanai kārtē</td>
<td>Rudņa</td>
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<td>Nosaukums Adrešu klasifikatorā</td>
<td>Bukupe</td>
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<td>Nosaukumi</td>
<td>Izvalta, Rudņa, Tartaka</td>
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<td>Daugava (ID=636)</td>
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**Administratīvā vai teritorīālā piederība:**

- Ūdriņu pagasts, Krāslavas novads, agrāk Krāslavas rajons

**Skaitliskais raksturojums**

- Vērtība: 23 km
- Apraksto:
# Rudņa, Bukupe, Tartaka, Izvalta in different sources

<table>
<thead>
<tr>
<th>Source</th>
<th>Details</th>
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**Latvian Geospatial Information Agency**
4. Utilization of expert knowledge in the production of maps

Expert knowledge in the production of maps has been used since 1994 when the Laboratory of Toponymy was established under the Department of Cartography. Today amount of field work is decreased radically. Communication via e-mail and phone has come instead.

*Laboratory of Toponymy*: from the left Māra Šterna, Otilija Kovaljevska, Aija Kresse, Ineta Rušmane, Zane Cekula, Dace Kavace, Vita Strautniece

*Photo*: V. Strautniece, 2018
Each toponymist works with place names in a definite area of Latvia (the whole territory of country – 64 000km²). Almost all of them have gathered more then 20 years experience in the work with place names. This experience is invaluable.
The Place Names Sub-commission of the Latvian Language Experts Board was re-established at the State Language Centre in 2012.

From 2014 the State Language Centre has been working on a voluminous list of recommendations and conclusions regarding the official names proposals (for more than 4,000 natural features) submitted by the Latvian Geospatial Information Agency.
Standartization of natural feature names

Place Names Database of Latvia

Natural Feature Names

Checking, evaluating, comparization with different sources

Official Names Proposals (Excel table)

State Language Center

Decision on Approving the Official Names

Registration of the Official Names

Latvian Geospatial Information Agency

Recommendations of the Place Names Sub-commission
# Recommendations of the Place Names Sub-commission

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<tr>
<th>Objekta ID</th>
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<th>Objekta veids (VDB Veids 3)</th>
<th>Pilsēta, novads</th>
<th>Pilsēta, pilsētas daļa, pagasts</th>
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<th>LVEK Vieta un daļa spēkā izteikumā</th>
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Opinions and consultations on place names are provided by:

State Language Centre
(http://www.vvc.gov.lv, e-mail: info@vvc.gov.lv)
which provides opinions on conformity of geographical names with the requirements of the Regulations.

The opinion of the State Language Centre is binding to the geographical names authorities.

Latvian Language Institute of the University of Latvia
(http://www.lulavi.lv, e-mail: latv@lza.lv)
which provides information on writing, pronunciation, etymology, history, and rendering of place names.
Conclusions

1. Numerous geographical features and their names have changed over time.

2. In different sources different data about the river or its name can be found. Important sources to ascertain which place names are the oldest ones and to show the location of feature are maps.

3. If a flow of the river after amelioration has changed location, in many cases the old river is being named by using the model old+rivername (Vecā Iča, Vecpededze, Sitas vecupe), whereas the new one gets the prefix new+rivername (Jaunpededze).

4. The State Language Center is the supervisor of geographical names standardization who gives conclusions binding for authorities approving official names. The Place Names Sub-commision (linguists, geographers, cartographer) evaluates official names proposals and gives recommendations.
Map browser: http://kartes/lgia.gov.lv/
Place Names Database of Latvia: http://vietvardi/lgia.gov.lv/

zane.cekula@lgia.gov.lv