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

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UNGEGN Scientific Symposium

Brussels, October 11, 2018



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1. Natural feature names
2. Main problem situations
3. Changes of natural features and their names
4. 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.



*Daugava*

Photo: A. Jansons, 2017. 3



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## 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.



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## 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.

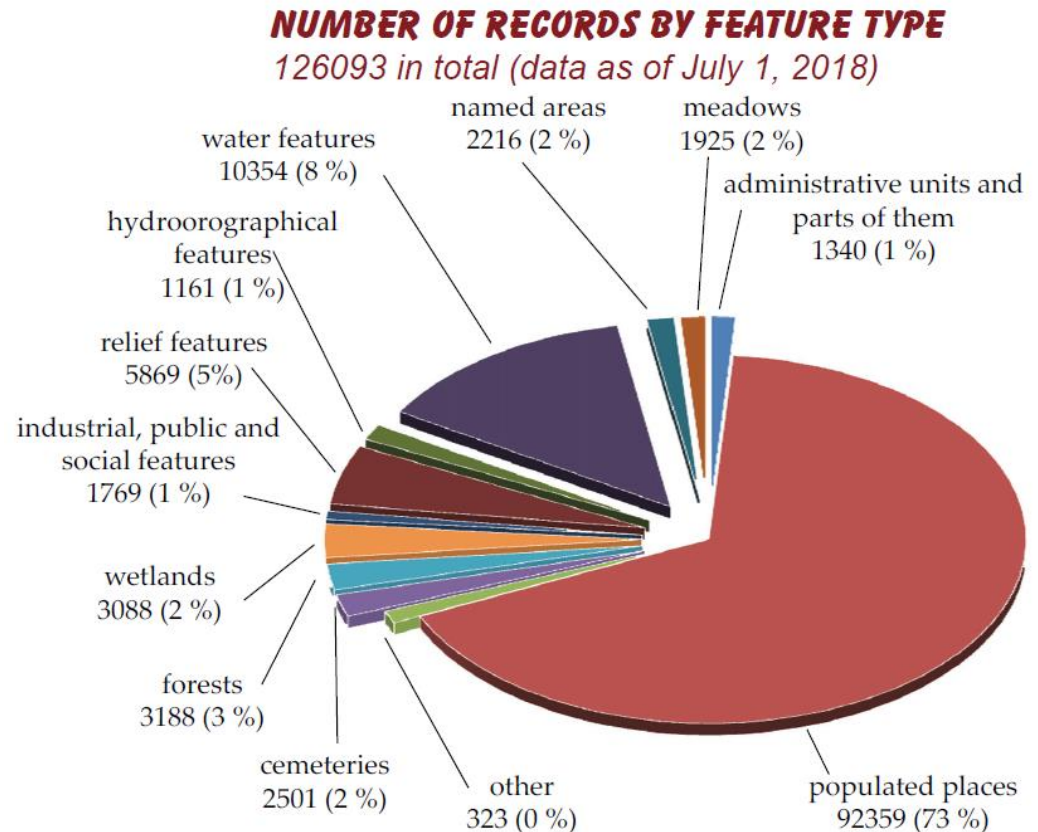
Cartographic expertise is necessary for understanding the landscape as it is and its symbolic representation digitally and on paper, whereas geographical expertise is required for reading the geomorphological distribution of an area.



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# 1. Natural feature names in the Place Names Database

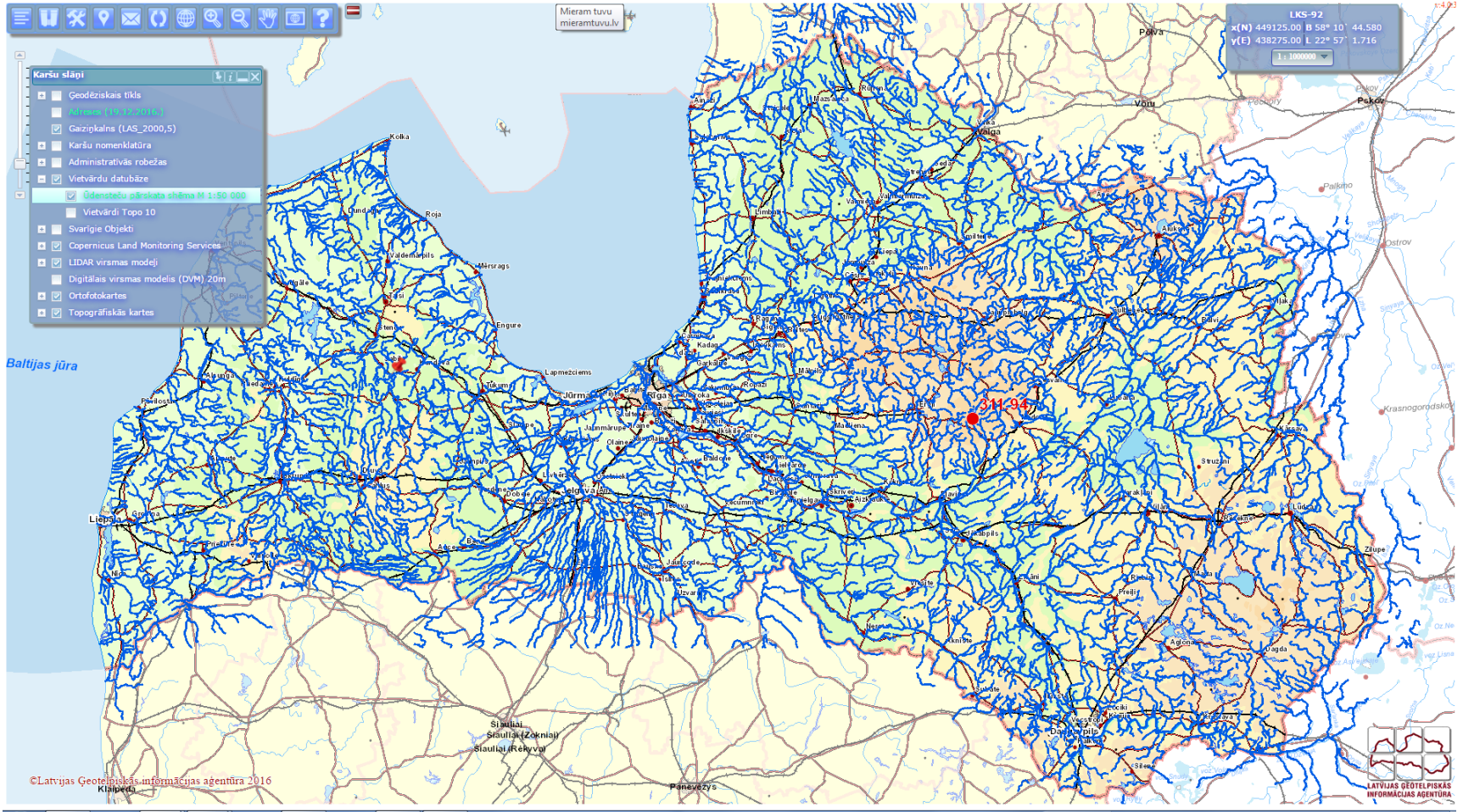
- Water features (lakes and water courses) – 10 354 (8%)
- Relief features – 5 869 (5%)
- Forests – 3 188 (3%)
- Wetlands – 3 088 (2%)
- Meadows – 1 935 (2%)
- Hydroorographical features – 1 161 (1%)





# Water courses in the Place Names Database - 4627

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## Water course types

### 4627 water courses in the Place Names Database:

- **upe** - river: 3489
- **strauts** - 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.





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# *Diukšupe, Daukšupe, Diuškupe, Dukšupe, Dūkšupe,* – in Latvian *Dyukšupe* – in Latgalian

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.

## Informācija par objektu

[Izdrukāt](#)

Objekta ID: <input type="text" value="96259"/> Pamatnosaukums: <b>Diukšupe</b> Pamatnosaukums pārbaudīts: <input checked="" type="checkbox"/> (25.09.2012) Nosaukums lietošanai kartē: <b>Diukšupe</b> Nosaukums Adrešu klasifikatorā: Nosaukumi: <b>Daukšupe</b> <b>Diuškupe</b> <b>Dyukšupe (latgaliski)</b> <b>Dukšupe</b> <b>Dūkšupe</b> Ietilpst (ietek) objektā: <b>Tīža (ID=96246)</b>	Objekta veids: <input type="text" value="upe"/> Obj. stāvoklis: <input type="text" value="pastāv"/>	Sagatavotājs: <input type="text" value="Zane Cekula"/> Sastādīšanas datums: <input type="text" value="17.05.2005"/> Pēd. izmaiņu datums: <input type="text" value="15.06.2015"/> Ieraksts pārbaudīts un apstiprināts: Satelītkartes lapas nosaukums: <input type="text" value="MEŽVIDI (ID=3533)"/>
Administratīvā vai teritoriālā piederība: <input type="text" value="Krišjāņu pagasts, Balvu novads, agrāk Balvu rajons"/>	Skaitliskais raksturojums Vērtība: <input type="text" value="18 km"/> Avots: <input type="text" value="Latvijas ūdens saimniecisko iecirkņu klasifikators. - Latvijas Vides aģentūra, 2005. (ŪSIK 2005)"/> Apraksts: <input type="text"/>	Ģeogrāfiskās koordinātas Platums: <input type="text" value="56.7976(56° 47' 51'')"/> Garums: <input type="text" value="27.2833(27° 17' 00'')"/> Avots: <input type="text" value="(15.06.2015)"/>

[Pasiēpt visus slāņus](#)

Nosaukumi (6)

Nosaukums	Nosaukuma ID	Nosaukums oficiāls [avots]	Nosaukums ievadīts	Nosaukuma forma	Fonētiskā rakstība	Lietošanas biežums	Lietotāju vide	Nosaukuma izcelsme		Etimoloģija un semantika
								valoda	vārds	
Diukšupe	108618	Nē								
Daukšupe	175957	Nē	15.06.2015							
Diuškupe	126872	Nē	07.02.2008							
Dyukšupe	199971	Nē	05.10.2018							
Dukšupe	175956	Nē	15.06.2015							
Dūkšupe	108887	Nē								



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**Zeps 1984, 119: Dyukšupe, l. trib. of Tīļža, 21 km, Tīļža; Daukšupe, A75; R Daukšupa & Diukšupa, T126; R Diuškupe, Atl. 1792; R Dyvkšupe, WRG; R Duksta, Spis.; R Dyukšupja, 1784; P Dywzskapia & Diuszkaupa, 1770.**

*Diukšupe – in Latvian*

*Dyukšupe – in Latgalian*

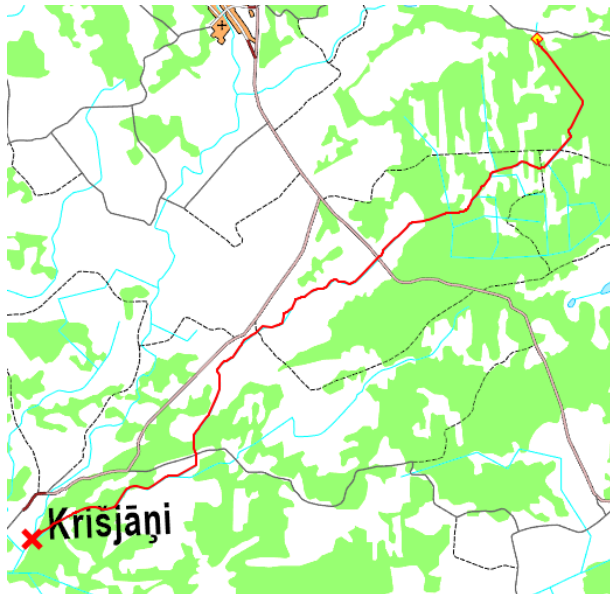


Photo: J. Kluša, 2017. 1  
0

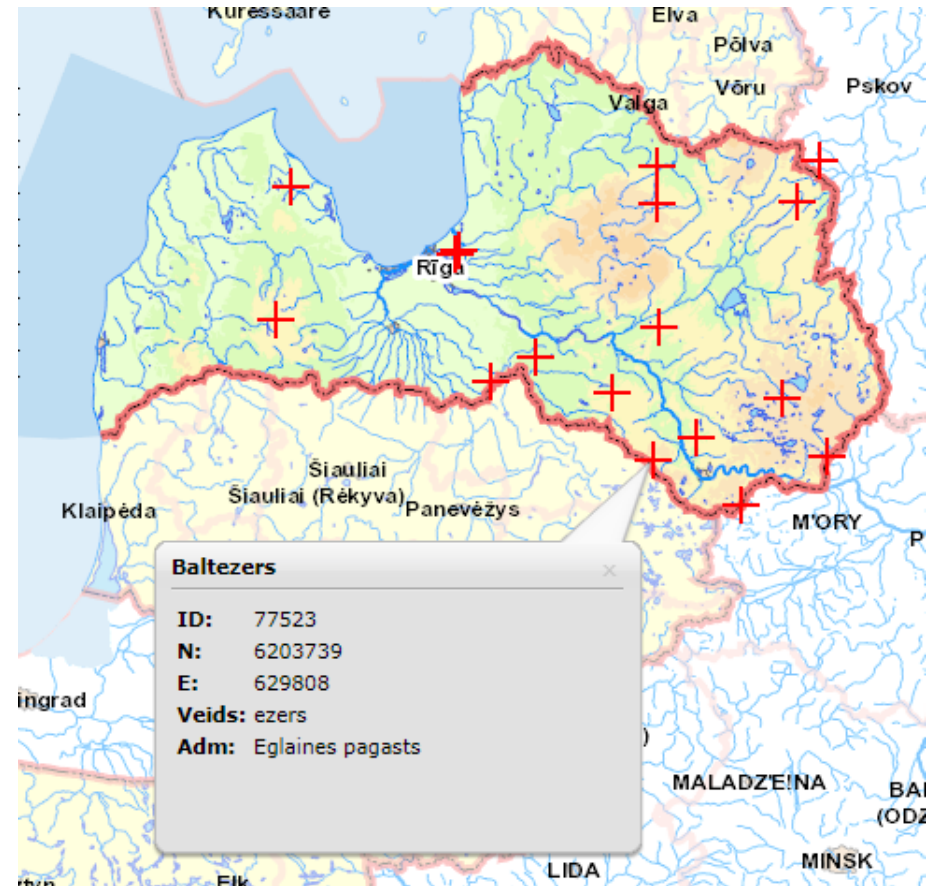


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## Lake name *Baltezers* ('White lake') in Latvia

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.

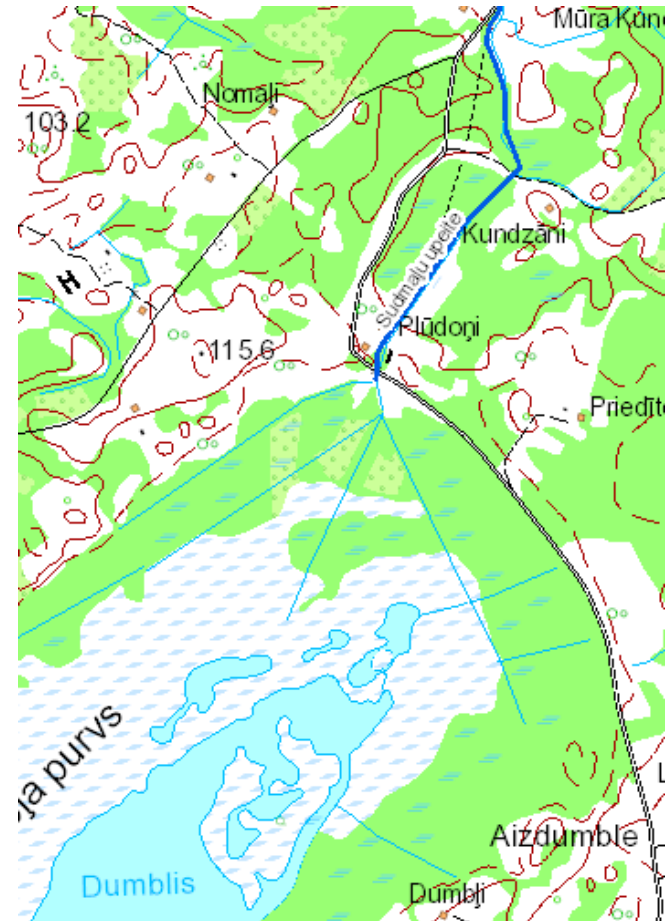




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## Lines of water courses describe the distribution of water course names

- 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 see.
- 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.





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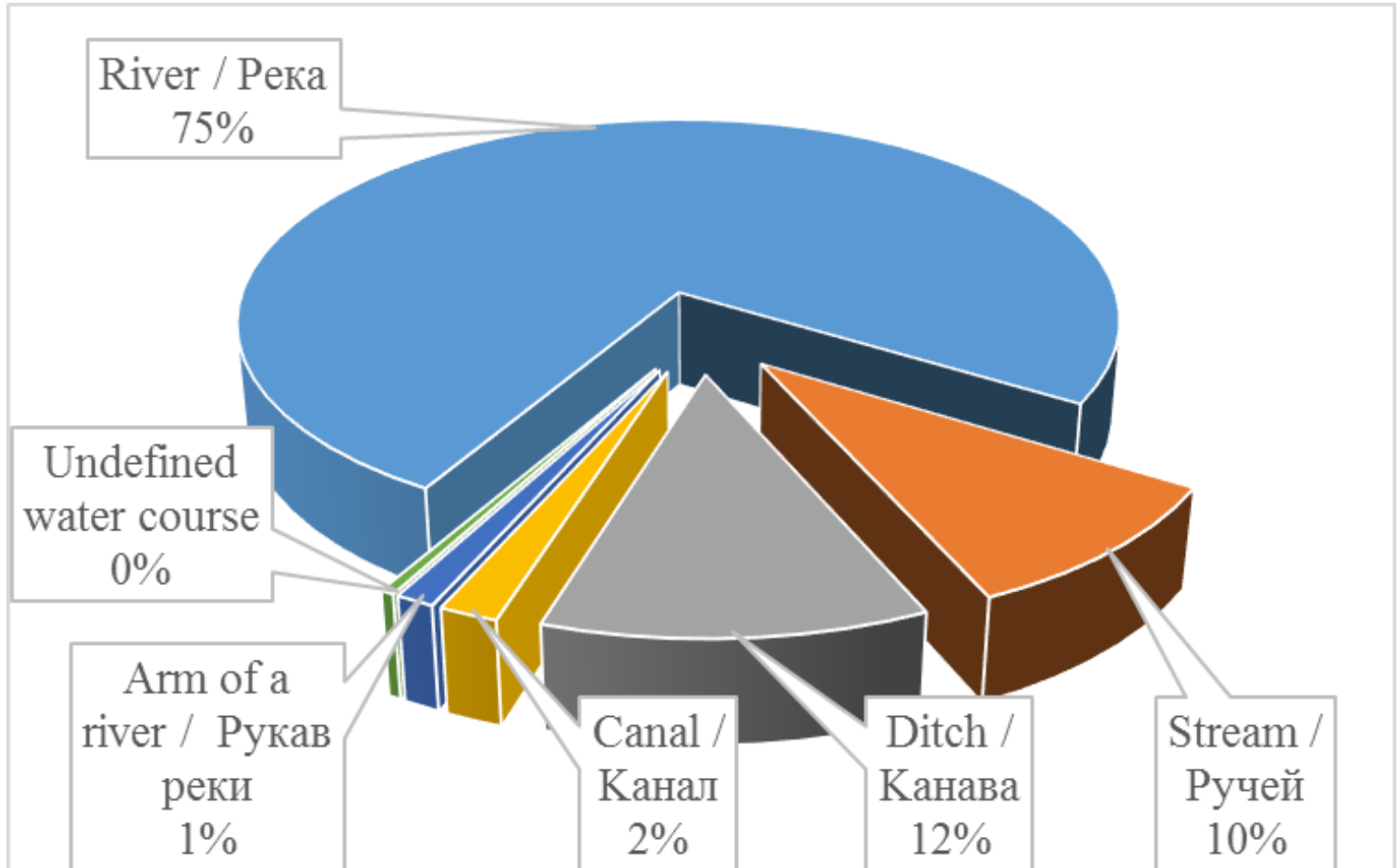
# Broken lines are used to show underground waters





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# Water course types in the Place Names Database





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## River *Suseja* near *Gārsene*

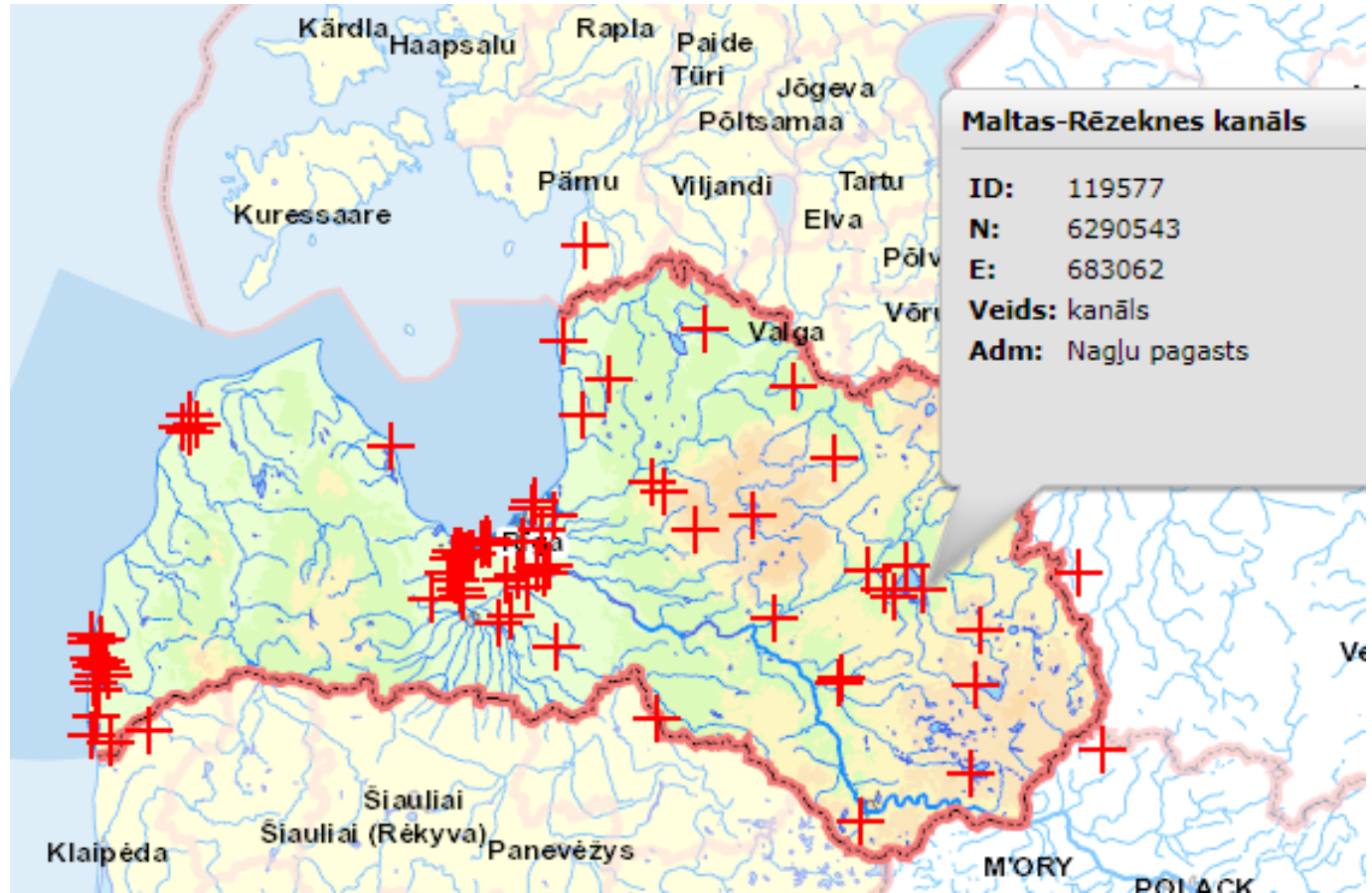


*Photo: J. Kluša, 2014.*



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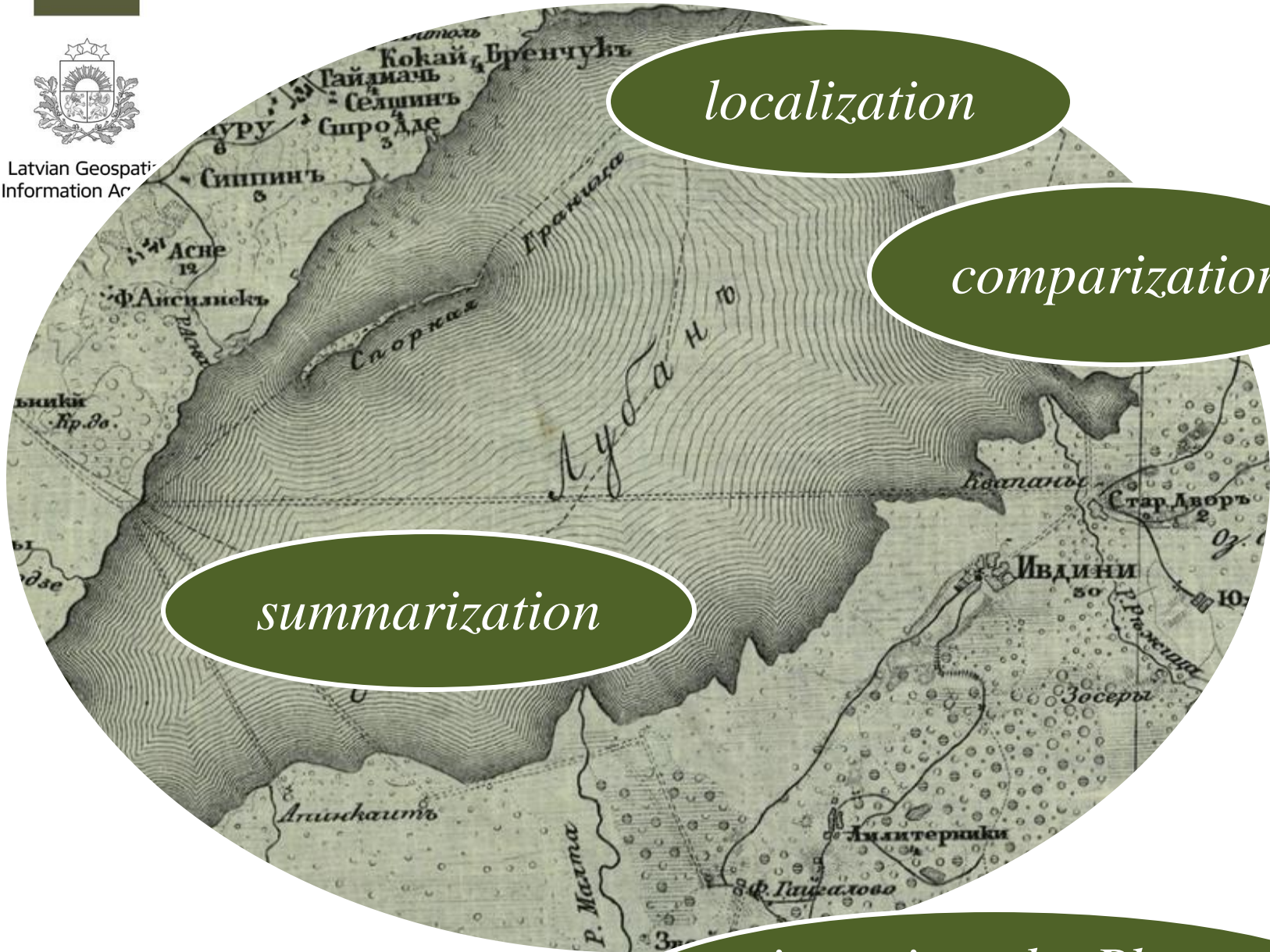
## 83 canals in the Place Names Database







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*localization*

*comparization*

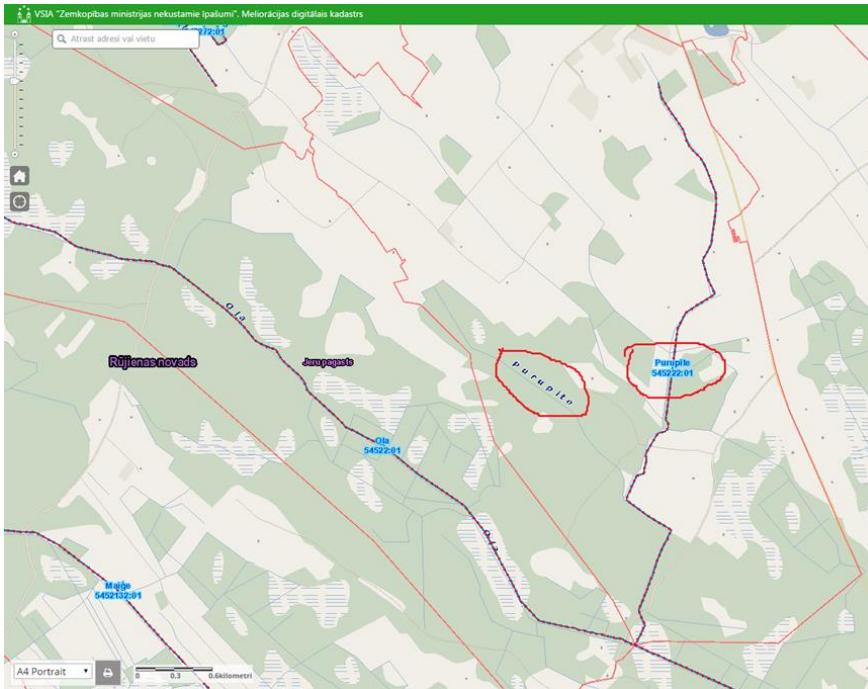
*summarization*

*input into the Place  
Names Database*

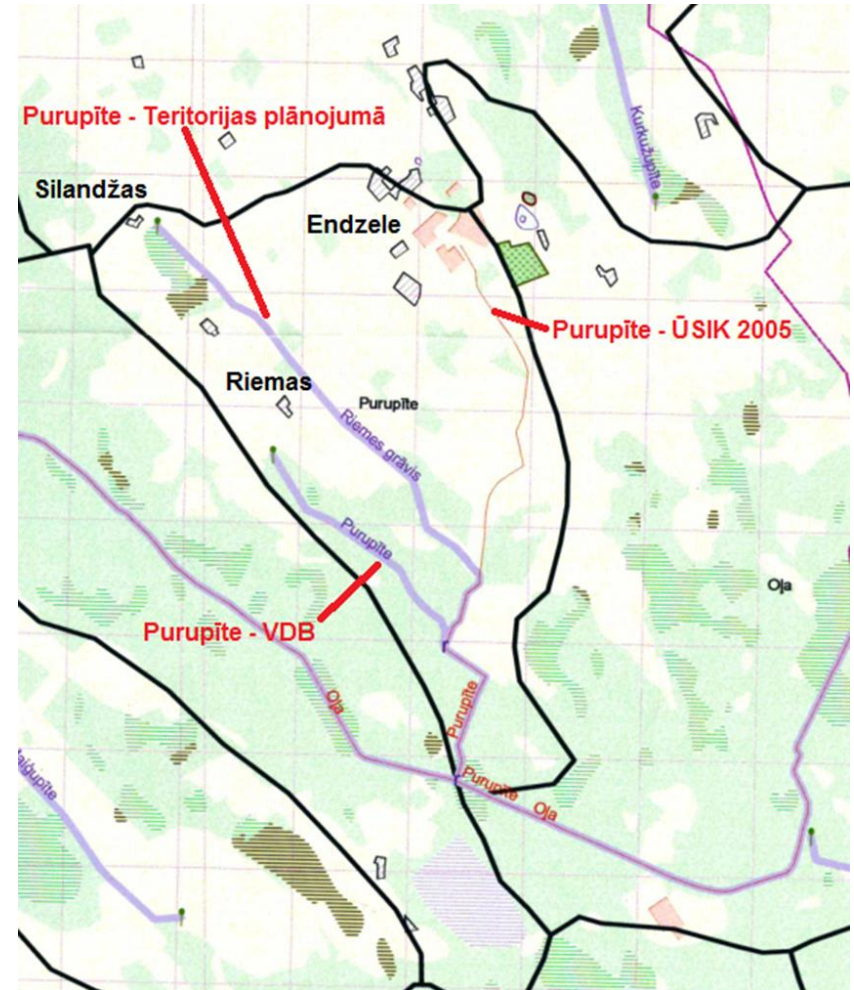


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## *Purupīte* in different sources



<http://www.melioracija.lv>



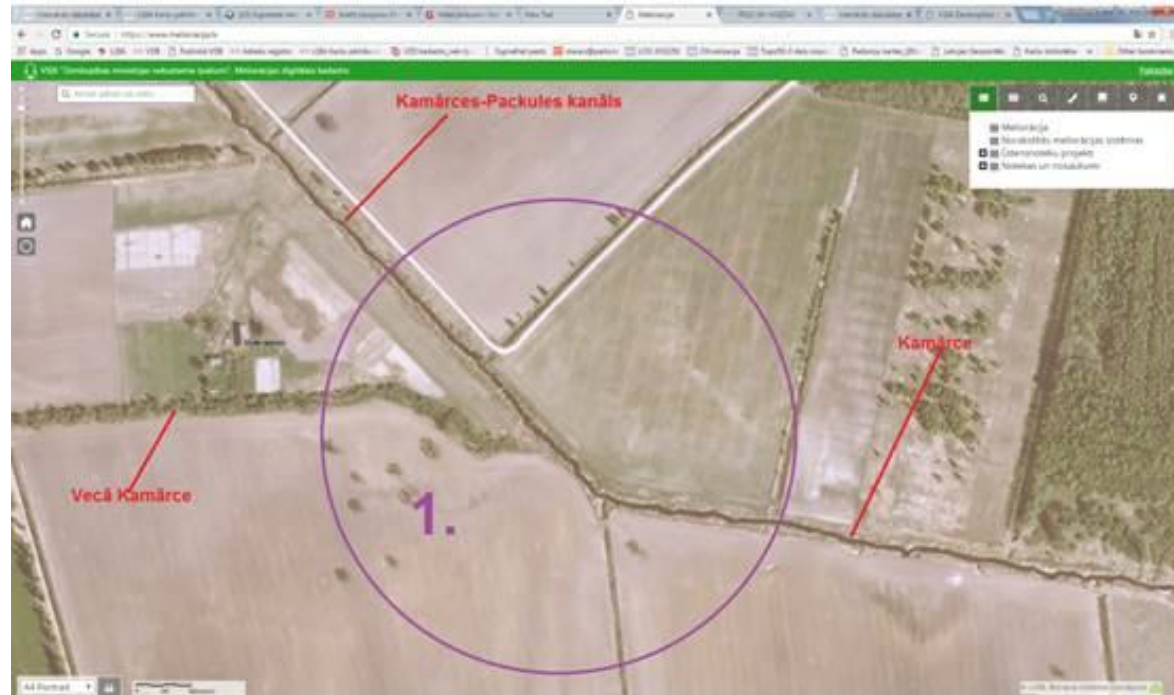
Classifier of Water Management Districts



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*The river Kamārce is ameliorated (see Nr. 1. violet ring) and it's waters flow into the canal Kamārces-Packules kanāls. The old river until the river Venta bears the name Vecā Kamārce.*

## *Kamārce*





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## 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.

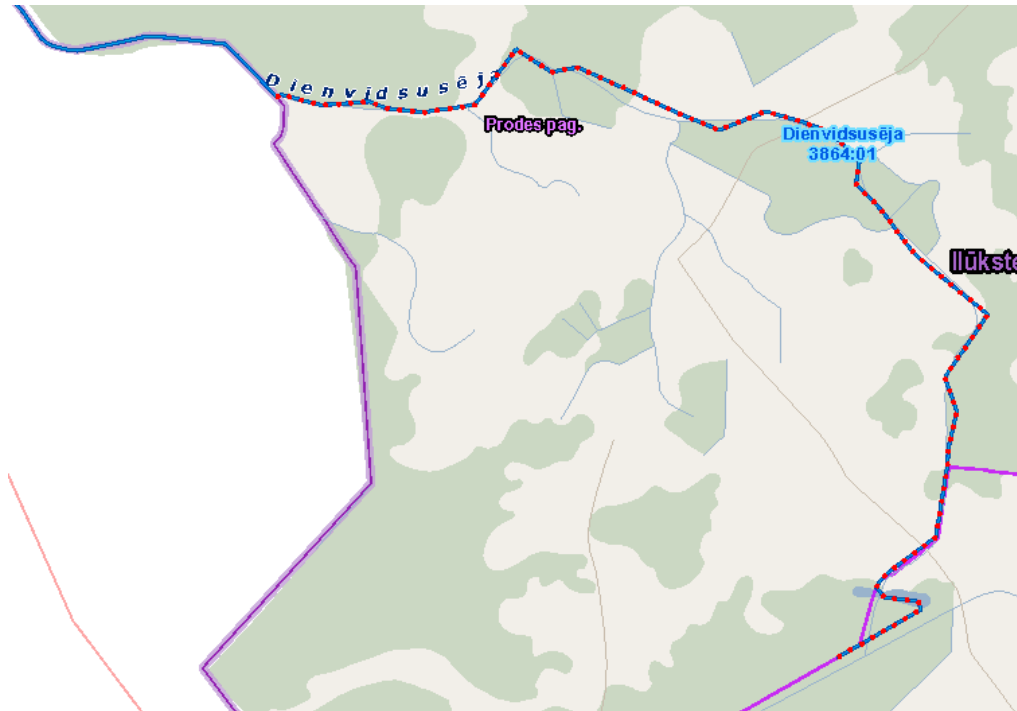
➤ ***Latvian Geospatial Information Agency***  
(<http://www.lgia.gov.lv>, e-mail: [info@lgia.gov.lv](mailto:info@lgia.gov.lv))

provides expert opinions on geospatial identity of geographical names (the relationship between the geographical name and the particular geographical feature and its location thereof).



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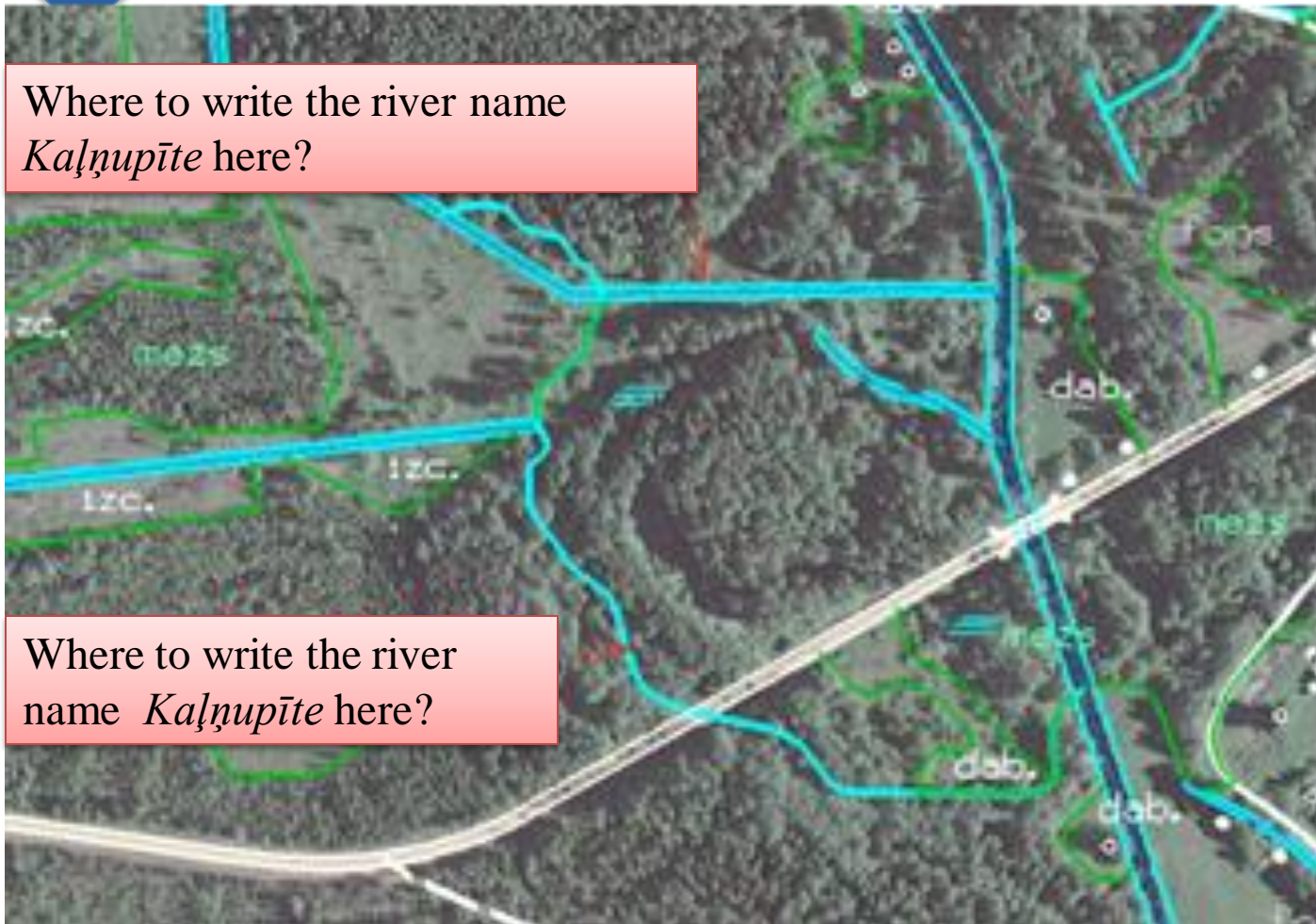
# Source of the river Suseja



<https://www.melioracija.lv>

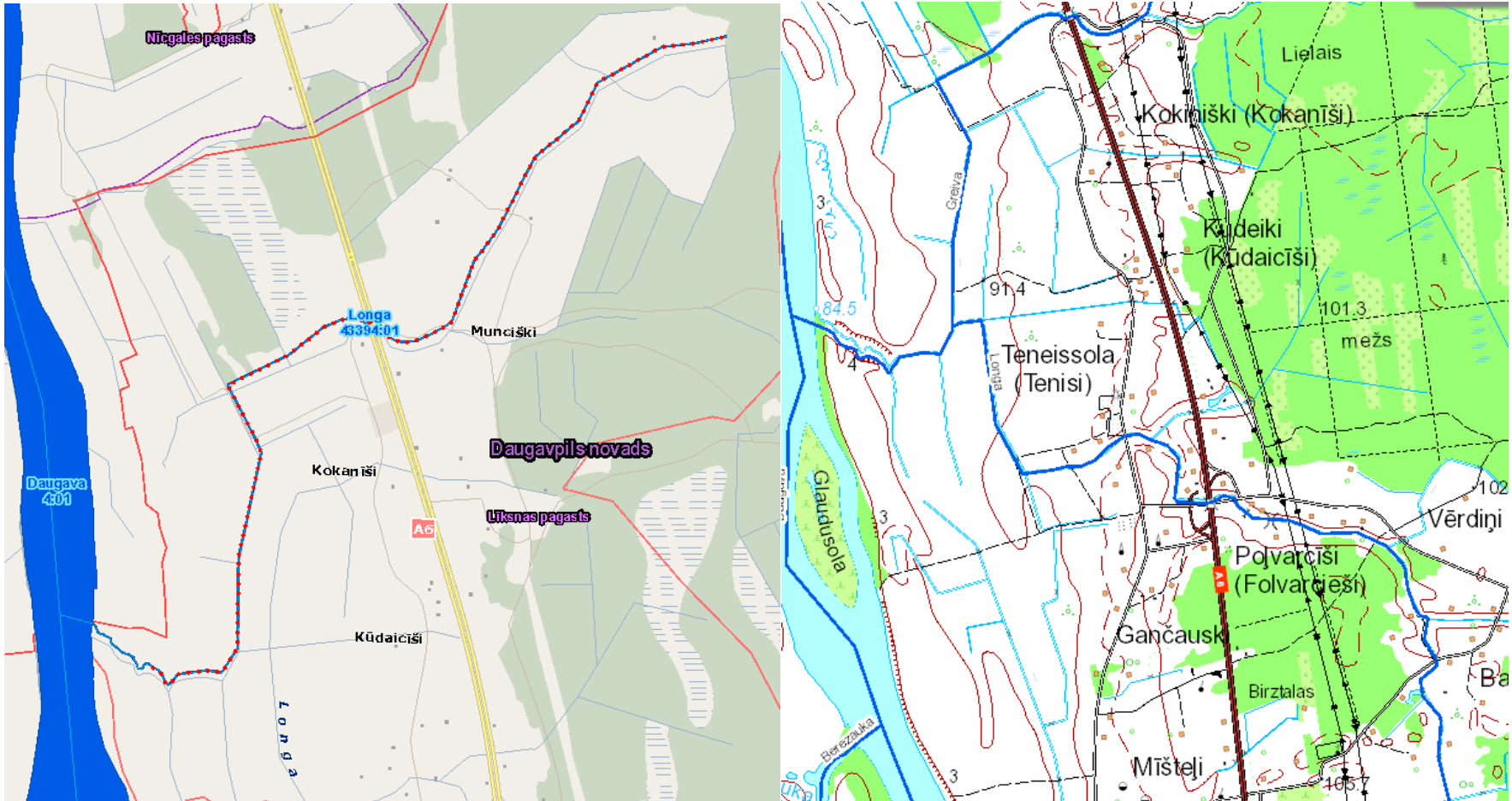
<http://ezerai.vilnius21.lt/suseja-v13617.html>

# Which is the mouth of river *Kaḷṅupīte*?





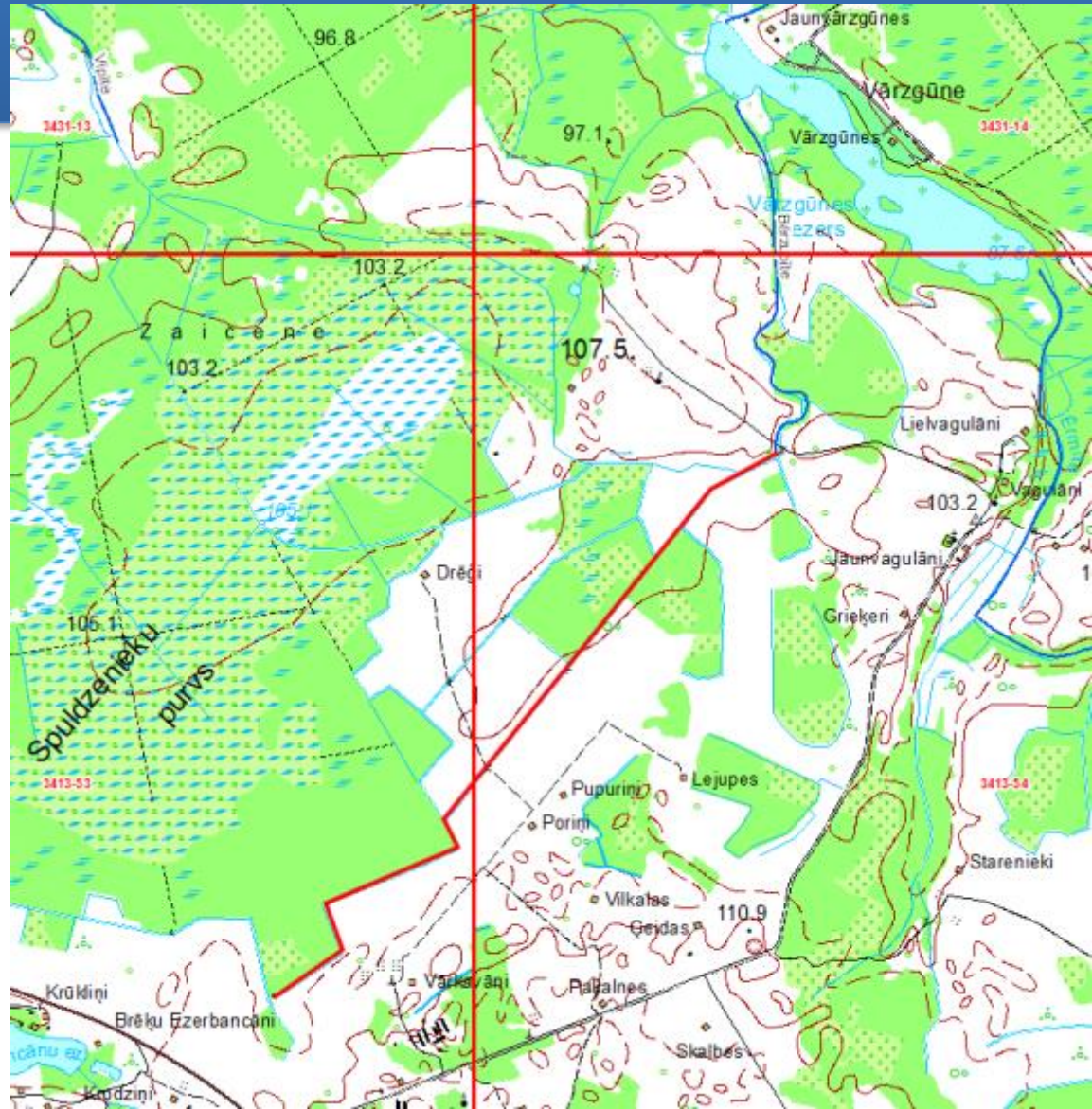
# River Longa



Digital Cadastral of Amelioration:  
<http://www.melioracija.lv>

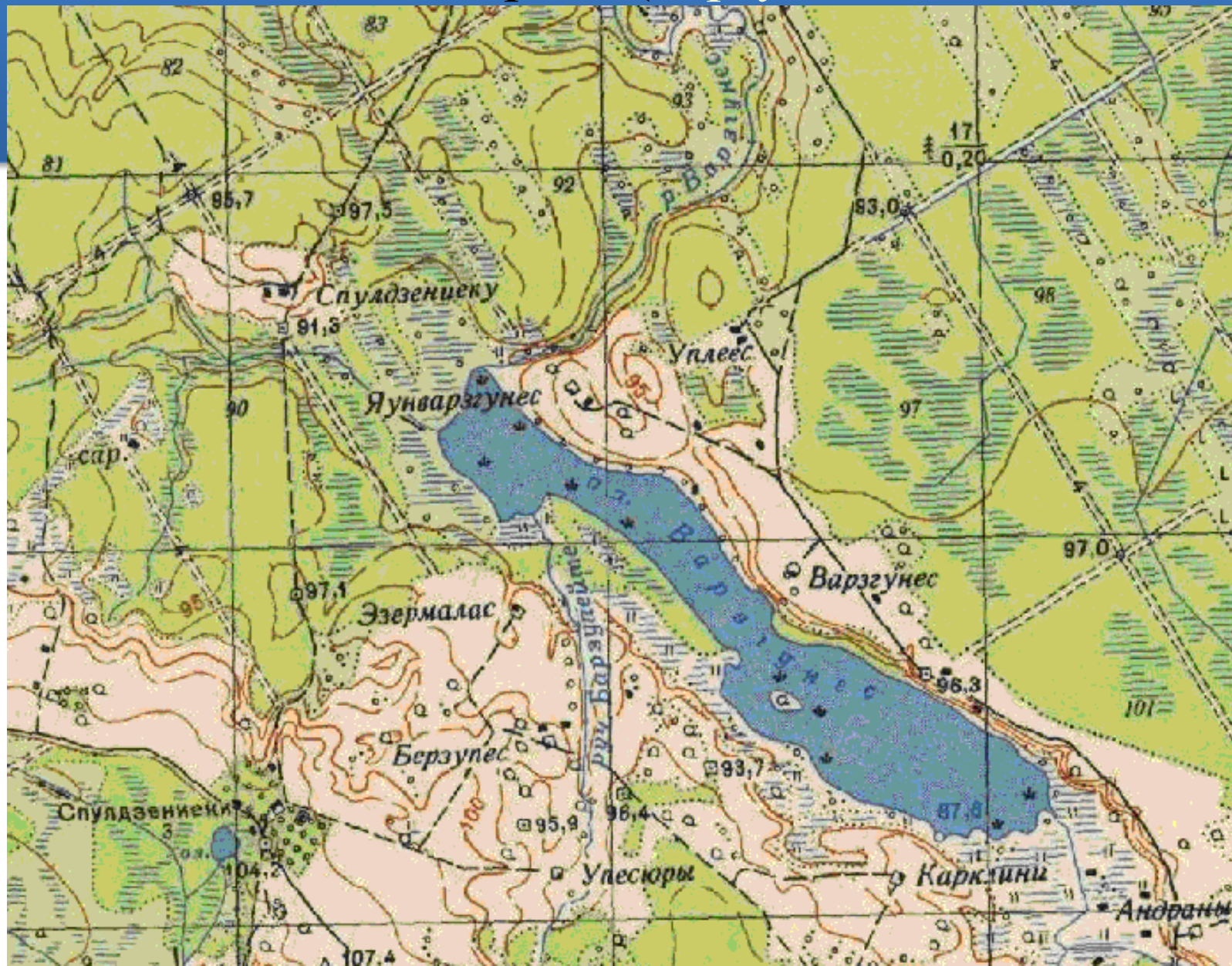
# *Bērzupīte, Bārzupeite, Bērze*

Digital Cadastr of  
Amelioration: *Vārzgūne*.  
Map browser: *Bērzupīte*





# Topographic Map of Latvian SSR, scale 1:25 000: Bārzupeite (Барзупейте)



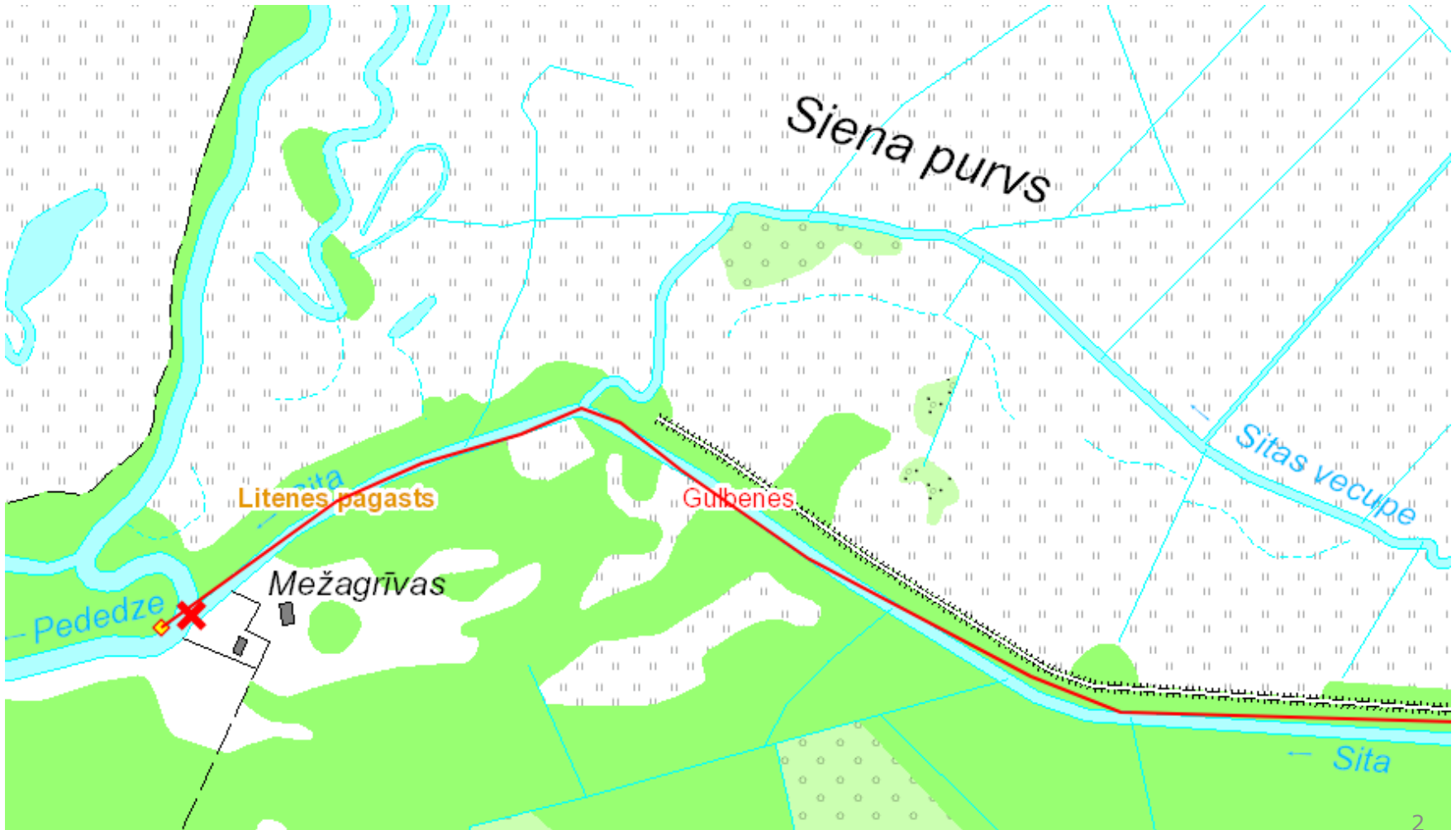
## Topographic Map of Latvia, scale 1:75 000: *Bērze*

- *Vārzgūne* flows from the lake *Vārzgūnes ezers*,
- *Bērzupīte* (*Bārzupeite*) — flows into the lake *Vārzgūnes ezers*.





# A flow of the river has changed location, for instance the river *Sita* and the arm of the river *Sitas Vecupe*





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## Old+rivername New+rivername

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*

Photo: A. Jansons, 2007.



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### 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*

Photo: A. Jansons, 2010.



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



Photo: A. Jansons, 2010



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# Rudņa, Bukupe, Tartaka, Izvalta

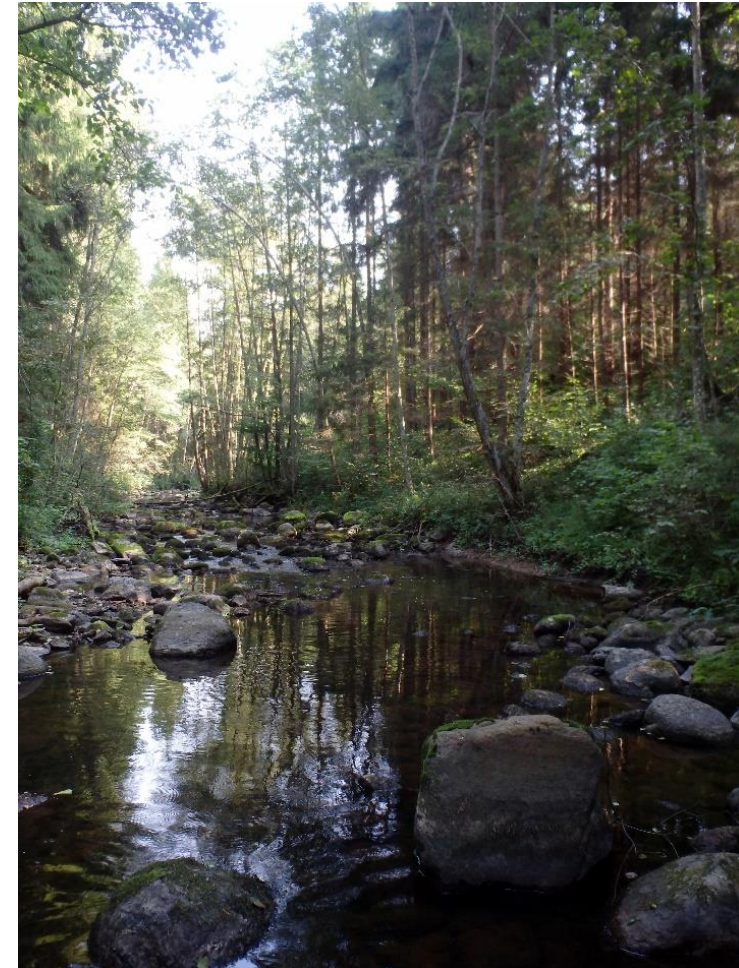


Photo: A. Jansons, 2018.



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

Objekta ID:

Pamatnosaukums: **Rudņa**

Pamatnosaukums pārbaudīts:  (05.09.2013)

Nosaukums lietošanai kartē: **Rudņa**

Nosaukums Adrešu klasifikatorā:

Nosaukumi:  
**Bukupe**  
**Izvalta**  
**Rudna**  
**Tartaka**

Ietilpst (ietek) objektā: **Daugava (ID=636)**

Objekta veids: **upe**

Obj. stāvoklis: **pastāv**

## Administratīvā vai teritoriālā piederība:

**Ūdrīšu pagasts, Krāslavas novads, agrāk Krāslavas rajons**

## Skaitliskais raksturojums

Vērtība: **23 km**

Avots: **Latvijas ūdens saimniecisko iecirkņu klasifikators. - Latvijas Vides aģentūra, 2005. (ŪSIK 2005)**

Apraksts:





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# Rudņa, Bukupe, Tartaka, Izvalta in different sources

Avota saīsinājums	Avota pilns nosaukums	Sējums, lappuse vai individuāli avota pieraksts	Citāts no avota
Eksped.	Ekspedīcija	1995	Rudņa, Bukupe, Tartaka, Izvalta
1785_Dinab	План генерального межевания Динабургского уезда 1780-1790 гг., М 1:84 000 (2 версты в дюйме).		ре: Саргажъ
LT 75	Latvijas topogrāfiskā karte M 1:75 000. Armijas štāba ģeodēzijas un topogrāfijas daļas 1922.-1940.g. izdevums.		пав
M 250	Mantnieks P. Lielā Latvijas karte. M 1:250 000 un Alfabetisks Latvijas vietu vārdu saraksts. – R.: P. Mantnieks, kartogrāfisks institūts, 1930.		Rudņa
Pag 25	Latvijas pagastu kartes M 1:25 000. – R.: Zemesprojekts, 1990.		Rudņa
Šūberts 1:126 000 (3 v.)	Трехверстная военная топографическая карта Российской империи М 1:126000. Авт. Ф. Ф. Шуберт. Реконг. 1867 г., печатано 1915 г.		река Бука
T 10	Топографические карты Латвийской ССР М 1:10 000. ГУГК, съёмка 1950–1952, 1971–1982 гг., изд. 1976–1977 гг.		Рудня
T 25	Топографические карты Латвийской ССР М 1:25 000. ГУГК, съёмка 1948–1952, 1971–1982 гг., изд. 1976–1983 гг.		р. Рудня
Brežgo 1943	Brežgo V. Latgolas inventāri un ģenerālmēreišonas zem'u apraksti, 1665.-1784. – Daugavpils, 1943.	103, 112	Ужвальда, Саргажа
E	Endzelins J. Latvijas vietu vārdi. I-II daļa.– R.: A. Gulbja apgāds, 1922.-1925.	301	#rudne
IP	Manteuffel G. Inflanty Polskie poprzedzone ogólnym rzutem oka na siedmiowiekową przeszłość całych Inflant. – Poznań, 1879, 168 str.	25	Użwałda
Ld	Latvijas daba. Enciklopēdija. 1.–6. sēj. – R.: Latvijas enciklopēdija, 1994–1997.	V 19	Rudņa, Bukupe, Tartaka
Lpag	Latvijas pagasti. Enciklopēdija. 1.–2. sēj. – R.: Apgāds „Preses nams”, 2001–2002.	II 504	Rudņa
Sapunov 1893	Сапунов А. Река Западная Двина. – Витебск, 1893.		Бука, Ужвальда, augštecē: Рубеж
Spis. 1906	Список населенных мест Витебской губернии. Издание Витебского Статистического Комитета и Губернской Типо-Литографии, под ред. А. Сапунова, Витебск, 1906.	135	р. Рудня
Ūd-teces	Latvijas PSR ūdensteču nosaukumi. 1.- 4. burtn. Sastādītājas: R. Avotiņa, Z. Goba. - R.: P. Stučkas Latvijas Valsts universitāte, 1986.	III 41	Rudņa (р.Рудня), Rudna, Bukupe
Kovajevska 1997	Kovajevska O. Krāslavas rajons. Ģeogrāfisko nosaukumu vārdnīca. – R., 1997.	33	Rudņa, Bukupe, Tartaka, Izvalta
Meliorācija	Meliorācijas digitālais kadastrs. <a href="http://www.melioracija.lv">http://www.melioracija.lv</a>	skatīts 10.04.2015.	Rudņa
ŪSIK 2010	30.03.2010. MK noteikumi Nr.318 "Noteikumi par ūdens saimniecisko iecirkņu klasifikatoru" ("LV", 54 (4246), 06.04.2010.) [stājas spēkā 07.04.2010.]	Kods 43732	Rudņa no iztekas līdz ietekai Daugavā



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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.

## 4. Utilization of expert knowledge in the production of maps



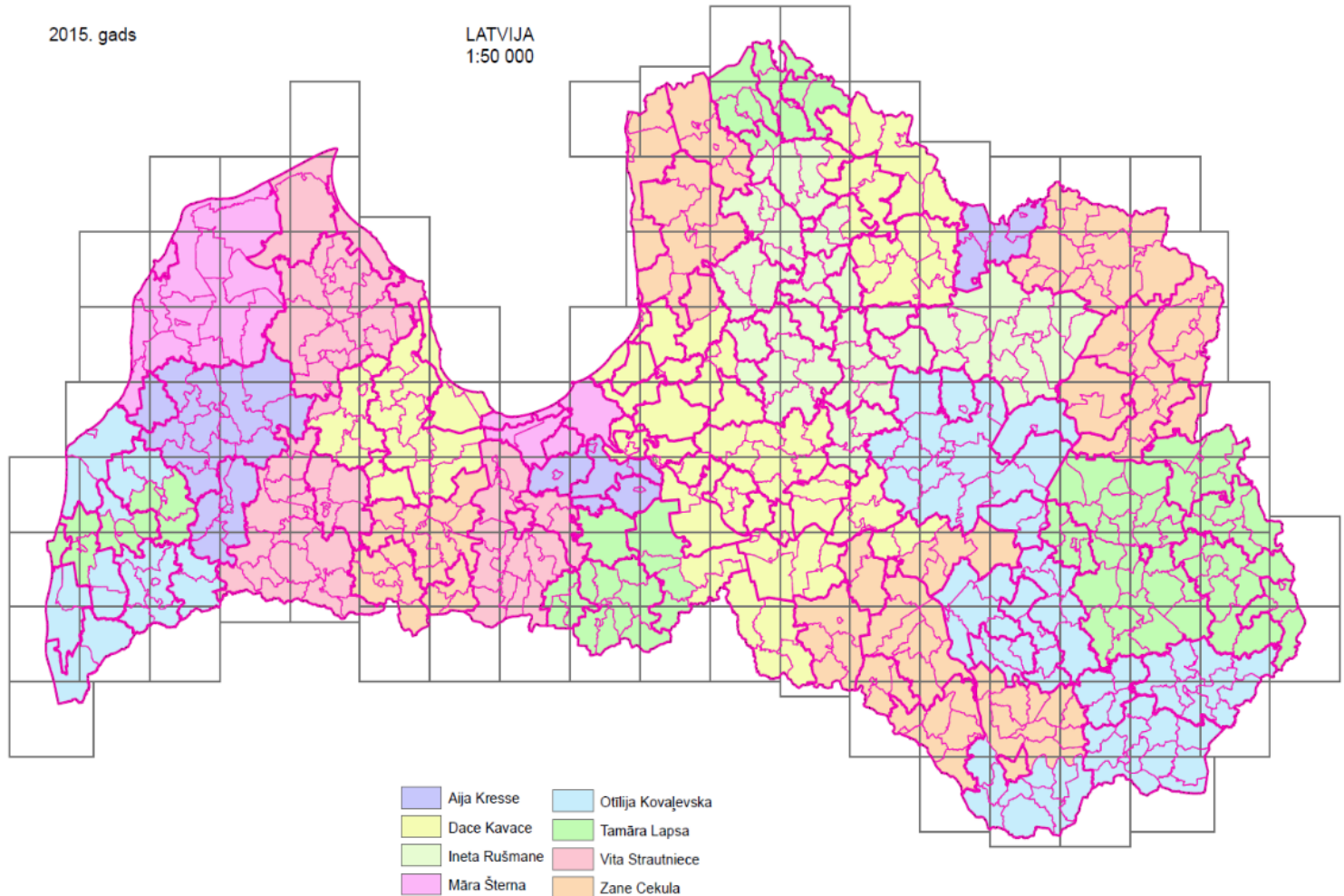
**Laboratory of Toponymy:** from the left Māra Šterna, Otilija Kovaļevska, Aija Kresse, Ineta Rušmane, Zane Cekula, Dace Kavace, Vita Strautniece

Photo: V. Strautniece, 2018



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Each toponymist works with place names in a definite area of Latvia (the whole territory of country – 64 000km<sup>2</sup> ). Almost all of them have gathered more then 20 years experience in the work with place names. This experience is invaluable.

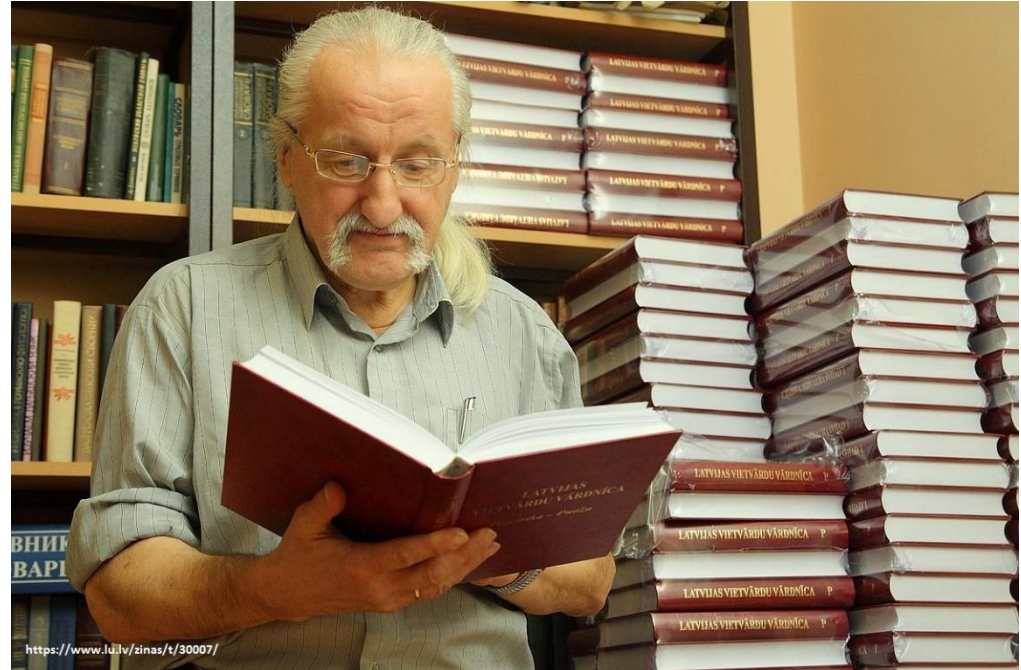




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## The Place Names Sub-commission of the Latvian Language Experts Board was re-established at the State Language Centre in 2012.

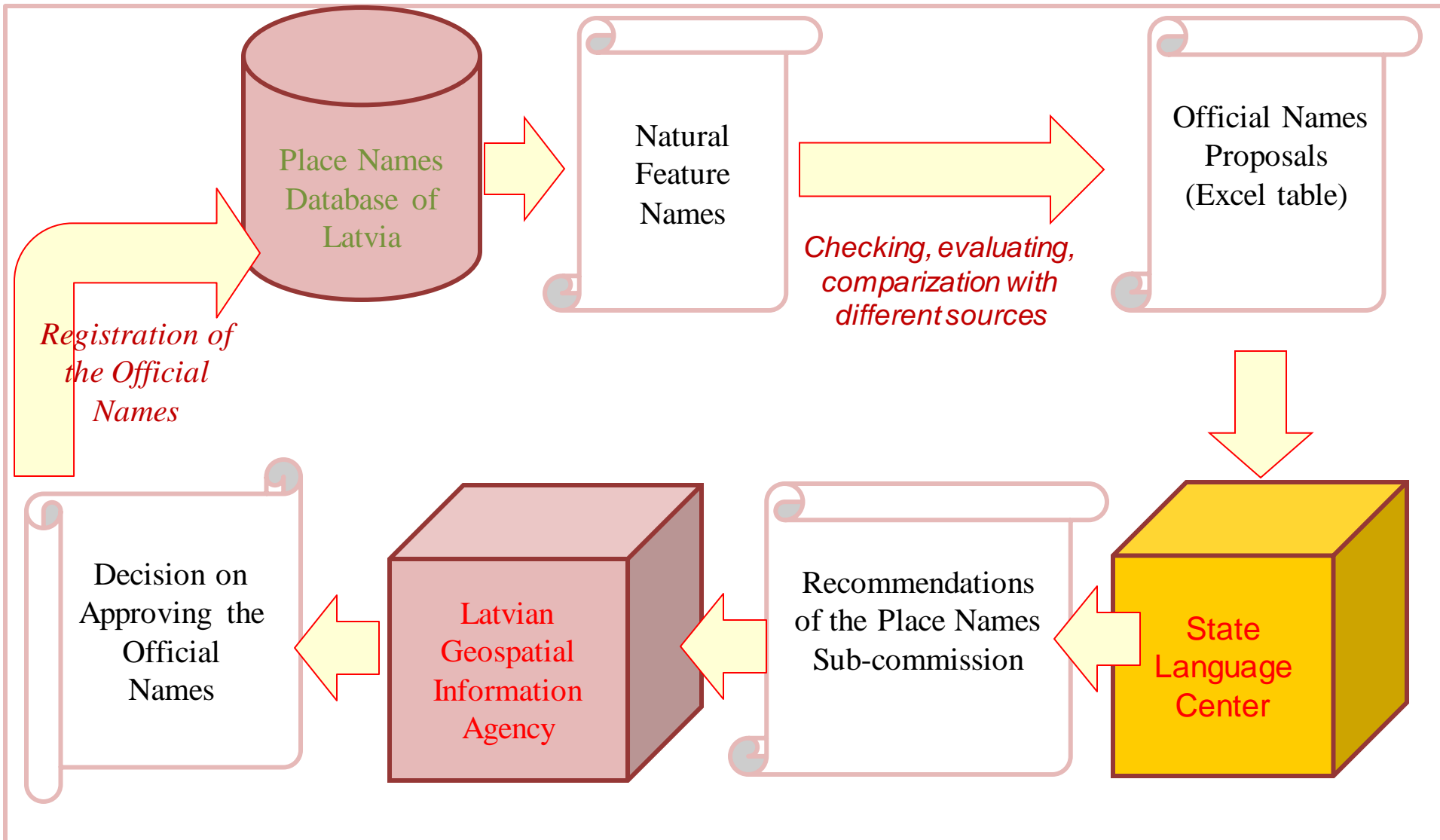
From 2014 the State Language Centre has been working on a voluminous list of recommendations and conclusions regarding the official names proposals (for more than 4.000 natural features) submitted by the Latvian Geospatial Information Agency.





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# Standartization of natural feature names





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# Recommendations of the Place Names Sub- commission

Objekta ID	Pamatnosaukums (LĢIA priekšlikums oficiālajam vietvārdam)	Objekta veids (VDB Veids 3)	Pilsēta, novads	Pilsēta, pilsētas daļa, pagasts	LĢIA atbildīgais par vietvārdu datiem	LVEK Vietvārdu apakškomisijas ieteikums	Pamatojums / papildinformācija	Avotos fiksētā vietējā forma	
2									
18	66408	Kaņieris	ezers	Engures novads	Lapmežciema pagasts	Dace Kavace	<b>Kaņieris [iē]</b>		Kaņieris [bez gada]
19	66409	Papes ezers	ezers	Rucavas novads	Rucavas pagasts	Otilija Kovaļevska	<b>Papes ezers</b>		Papes ezers 1972
20	66419	Iecava	upe	Jelgava	Jelgava	Vita Strautniece, Tamāra Lapsa, Dace	<b>Iecava [iē]</b>		Iecava E II 157, PI II 441
21	66428	Bērze	upe	Jelgavas novads	Līvberzes pagasts	Vita Strautniece, Zane Cekula	<b>Bērze [ē]</b>		Bērze 1959
22	66429	Misa	upe	Ozolnieku novads	Cenu pagasts	Vita Strautniece, Tamāra Lapsa	<b>Misa</b>		
23	68820	Abava	upe	Kuldīgas novads	Rumbas pagasts	Aija Kresse, Dace Kavace, Māra Šterna	<b>Abava</b>		
24	69305	Dūrupe	upe	Kuldīgas novads	Vārmes pagasts	Aija Kresse, Vita Strautniece	<b>Dūrupe [ū]</b>		Dūrupe 1957, 1962
126	92065	Pluču tīrelis	purvs	Ventspils novads	Usmas pagasts	Māra Šterna	<b>Pluču tīrelis</b>		Pluču tīrelis [bez gada]
127	93108	Skutskalns	kalns	Auces novads	Ukru pagasts	Zane Cekula	<b>Skutskalns</b>		
128	93125	Stērķu mežs	mežs	Auces novads	Ukru pagasts	Zane Cekula	<b>Stērķu [ē] mežs</b>		Stērķu mežs 1958
129	93196	Skolas kalns	kalns	Dobeles novads	Naudītes pagasts	Zane Cekula	<b>Skolas [uō] kalns</b>		
130	93527	Dievkalns	kalns	Jaunpils novads	Viesatu pagasts	Dace Kavace	<b>Dievkalns [iē]</b>		Dieva kalns PI II 509
131	93556	Dziru mežs	mežs	Kandavas novads	Matkules pagasts	Vita Strautniece	<b>Dziru mežs</b>		Dziņas E II 115, PI I 202
132	93698	Klūgu mežs	mežs	Skrundas novads	Skrundas pagasts	Aija Kresse	<b>Klūgu [ū] mežs</b>		Klūgu mežs 1976
133	94596	Lāņupe	upe	Durbes novads	Durbes pagasts	Tamāra Lapsa	<b>Lāņupe [ā]</b>		Lāņupe [bez gada]



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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](mailto: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](mailto:latv@lza.lv))

which provides information on writing, pronunciation, etymology, history, and rendering of place names.



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## 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-commission (linguists, geographers, cartographer) evaluates official names proposals and gives recommendations.





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Map browser: <http://kartes.lgia.gov.lv/>

Place Names Database of Latvia:

<http://vietvardi.lgia.gov.lv/>

zane.cekula@lgia.gov.lv