Interreg Baltic Sea Region

Co-funded by the European Union

SUSTAINABLE WATERS WaterMan

The WaterMan project

Final draft of the regional water recycling strategy for Klaipėda Region

Valdas Langas, Vytautas Bernadišius

Klaipėda University

General data on the Klaipėda region

- The territory of the **Republic of Lithuania** is divided into 10 counties/regions and 60 municipalities.
- **Klaipėda Region** only Lithuanian region with access to the sea; population ~335k (12% of Lithuania).
- Third largest city **Klaipėda** (161,000 residents, 47% of region population), major ice-free seaport
- **Neringa Municipality** on the UNESCO-listed Curonian Spit; smallest population but high cultural landscape value.

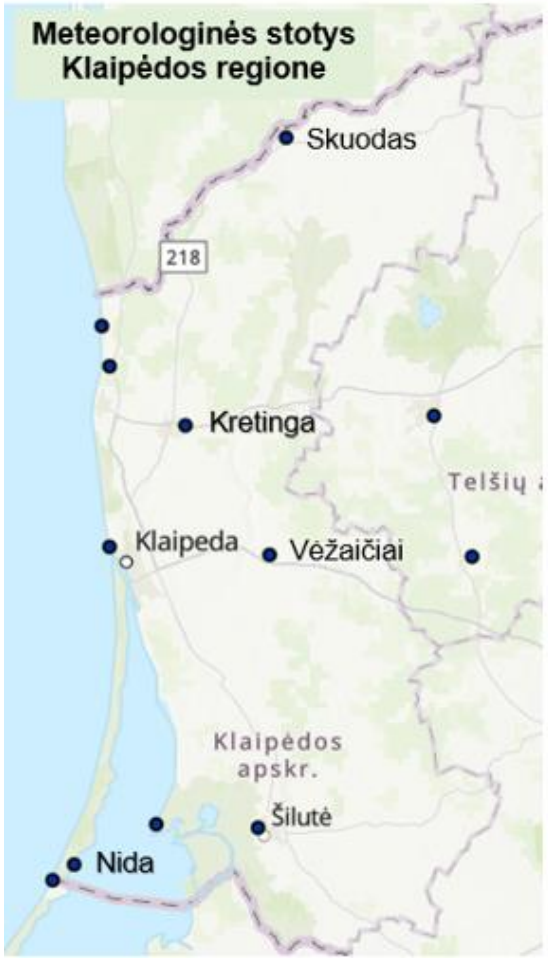
Municipality	Population, 2025	% of Klaipėda region population	Area of the territory, km ^{2}	% of Klaipėda region territory
1. Klaipėda city	160 979	4.8	98	1.9
2. Palanga city	18 556	5.4	79	1.5
3. Klaipeda district	69 256	20.1	1 336	25.6
4. Kretinga district	37 426	10.9	989	19.0
5. Šilutės district	38 181	11.1	1 706	32.8
6. Skuodas district	15 011	4.4	911	17.5
7. Neringa Municipality	4 453	1.3	90	1.7
Total	343 862	100	5 209	100
Lithuania	2 890 664	11.9	65 300	8.0

Climate changes

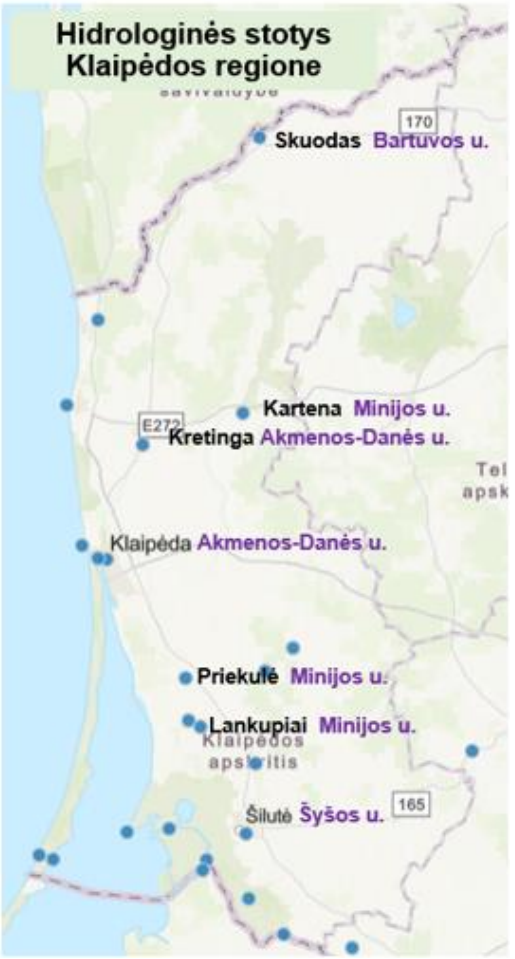
The climate change assessment used multi-year observation data from 6 meteorological and 7 water measurement - hydrological stations

	Weather stations		Water measuring stations		
	Station location	Year of establishment	Station location	River	Year of establishment
1	Skuodas	2009	Skuodas	Bartuva	1945
2	Kretinga	2009	Kretinga	Akmena-Danė	1991
3	Klaipėda	1881	Klaipėda	Akmena-Danė	2007
4	Vėžaičiai	1974	Kartena	Minija	1924
5	Šilutė	1949	Priekulė	Minija	2008
6	Nida	1898	Lankupiai	Minija	1905
7			Šilutė	Šyša	2006

Weather stations



Hydrological stations



Climate changes

Temperature

Climate changes according to standard climate normals in the Klaipėda region

WMO Climatological Standard Normals (CSN) are 30-year averages of a location's climate data, calculated and updated every decade.

These standard periods, like 1971-2000 1981–2010, 1991-2020, serve as a baseline to monitor climate change.

Meteorological stations	Average monthly and annual air temperature in the Klaipėda region according to CSN 1981–2010 and 1991–2020 Green colour marks the largest monthly increases, blue - decreases.													
	CSN/month	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Year**
Klaipėda	1981–2010, °C	-1.1	-1.4	1.3	6.2	11.4	14.5	17.7	17.8	13.6	9	3.8	0.5	7.8
	1991–2020, °C	-0.9	-0.9	1.7	6.7	11.6	15.3	18.3	18.3	14.2	8.9	4.4	1.1	8.2
	Difference, °C	0.2	0.5	0.4	0.5	0.2	**0.8**	0.6	0.5	0.6	**-0.1**	0.6	0.6	0.4
Šilutė	1981–2010, °C	-2.1	-1.9	1.2	6.9	12.3	15.2	17.8	17.3	12.7	8	2.8	-0.9	7.4
	1991–2020, °C	-1.8	-1.4	1.6	7.4	12.4	15.7	18.3	17.8	13.3	8	3.5	-0.1	7.9
	Difference, °C	0.3	0.5	0.4	0.5	0.1	0.5	0.5	0.5	0.6	**0.0**	0.7	**0.8**	0.5
Nida	1981–2010, °C	-1.3	-1.5	1.1	6.2	11.9	15.2	18.4	18.4	14.2	9.2	3.9	0.3	8
	1991–2020, °C	-1	-1	1.7	6.9	12.2	16	18.9	19	14.8	9.2	4.4	0.9	8.5
	Difference, °C	0.3	0.5	0.6	0.7	0.3	**0.8**	0.5	0.6	0.6	**0.0**	0.5	0.6	0.5
														Lithuania
Klaipeda region	1981–2010, °C	-1.5	-1.6	1.2	6.4	11.9	15.0	18.0	17.8	13.5	8.7	3.5	0.0	**7.7**	**6.7**
	1991–2020, °C	-1.2	-1.1	1.7	7.0	12.1	15.7	18.5	18.4	14.1	8.7	4.1	0.6	**8.2**	**7.4**
	Difference, °C	0.3	0.5	0.5	0.6	0.2	**0.7**	0.5	0.5	0.6	**0.0**	0.6	**0.7**	**0.5**	**0.5**

Climate changes

Temperature

The table below presents the available measurements for a longer period, i.e. **the average temperatures of five decades (1961–2010) and standard three decades (1991–2020),** at two stations in the region, Šilutė and Nida.

A more significant average annual temperature increase of 1.1 and 1.3 °C is also observed, determined by the cooler temperatures of the previous years over a longer period.

Average monthly and annual air temperature in the Klaipėda region according to CSN 1961–2010 and 1991–2020.

	SKN/month	1	2	3	4	5	6	7	8	9	10	11	12	Year
Šilutė	1961–2010, °C	-3.8	-3.3	0.3	5.7	11.7	15.3	16.7	16.3	12.4	8	2.9	-1.1	6.8
	1991–2020, °C	-1.8	-1.4	1.6	7.4	12.4	15.7	18.3	17.8	13.3	8	3.5	-0.1	7.9
	Difference, °C	**2.0**	1.9	1.3	1.7	0.7	0.4	1.6	1.5	0.9	**0.0**	0.6	1.0	1.1
Nida	1961–2010, °C	-3.2	-2.9	-0.1	4.9	11	15.3	17.2	17.3	13.7	9.2	3.9	-0.1	7.2
	1991–2020, °C	-1	-1	1.7	6.9	12.2	16	18.9	19	14.8	9.2	4.4	0.9	8.5
	Difference, °C	**2.2**	1.9	1.8	2.0	1.2	0.7	1.7	1.7	1.1	**0.0**	0.5	1.0	1.3

2024 became a crucial year for Lithuania, highlighting the impact of climate change. It was the warmest year in the entire history of almost 250 years of meteorological observations. The average annual air temperature rose to 9.5 °C, even 2.1 °C above the multi-year average. Almost all months of the year, except January, were warmer than normal, and natural disasters became increasingly frequent and intense.

Climate changes

Hot days

The table below shows the number of hot days at three meteorological stations in the Klaipėda region when the maximum temperature (T_(max)) reaches or exceeds 30 °C during four standard periods.

The largest increase in hot days was recorded at the Klaipėda station. In the period 1961–1990, the number of hot days was 14; then, from 1991 to 2020, it increased to 96 days — almost seven times more than in the 1961–1990 period. However, the highest number of hot days was recorded in Šilutė.

In the Klaipėda region, the average number of hot days increased by 3.4 times, from 27 to 93 days.

Number of hot days (Tmax >=30 °C) in the Klaipėda region over four standard periods					
	CSN	**1961-1990**	**1971-2000**	**1981-2010**	**1991-2020**
Klaipeda	Number of hot days (Tmax>=30 °C)	14	20	43	96
	Growing number of hot days since 1961-1990		6	29	82
	Increased in times since 1961-1990		1.4	3.1	6.9
Šilutė	Number of hot days (Tmax>=30 °C)	60	76	101	**144**
	Growing number of hot days since 1961-1990		16	41	84
	Increased in times since 1961-1990		1.3	1.7	2.4
Nida	Number of hot days (Tmax>=30 °C)	8	13	25	**40**
	Growing number of hot days since 1961-1990		5	17	32
	Increased in times since 1961-1990		1.6	3.1	5.0
Klaipeda region	Number of hot days (Tmax>=30 °C)	27	36	56	**93**
	Growing number of hot days since 1961-1990		9	29	**66**
	Increased in times since 1961-1990		1.3	2.1	3.4

Climate changes

Precipitation

The table below compares the average monthly and annual precipitation data from six meteorological stations (Skuodas, Kretinga, Klaipėda, Vėžaičiai, Šilutė and Nida) over two CSN periods (1981–2010 and 1991–2020).

Although the annual amount of precipitation in the coastal area exceeds the Lithuanian average by more than 100 mm, it decreased almost three times faster than in Lithuania, from 14 to 5 mm.

	CSN/month	1	2	3	4	5	6	7	8	9	10	11	12	Year	Lithuania
Klaipėda region	1981–2010, mm	67	44	49	33	43	66	72	**93**	**88**	**96**	**91**	74	**817**	**700**
	1991–2020, mm	69	50	43	33	42	59	77	**90**	**81**	**98**	**83**	78	**804**	**695**
	Difference, mm	2	**6**	-6	0	-1	**-8**	5	-3	-7	2	**-8**	4	**-14**	**-5**

The average number of days per year with snow cover >5 cm in three meteorological stations in Klaipeda region (Klaipėda, Šilutė and Nida) and Lithuania over four CSN periods

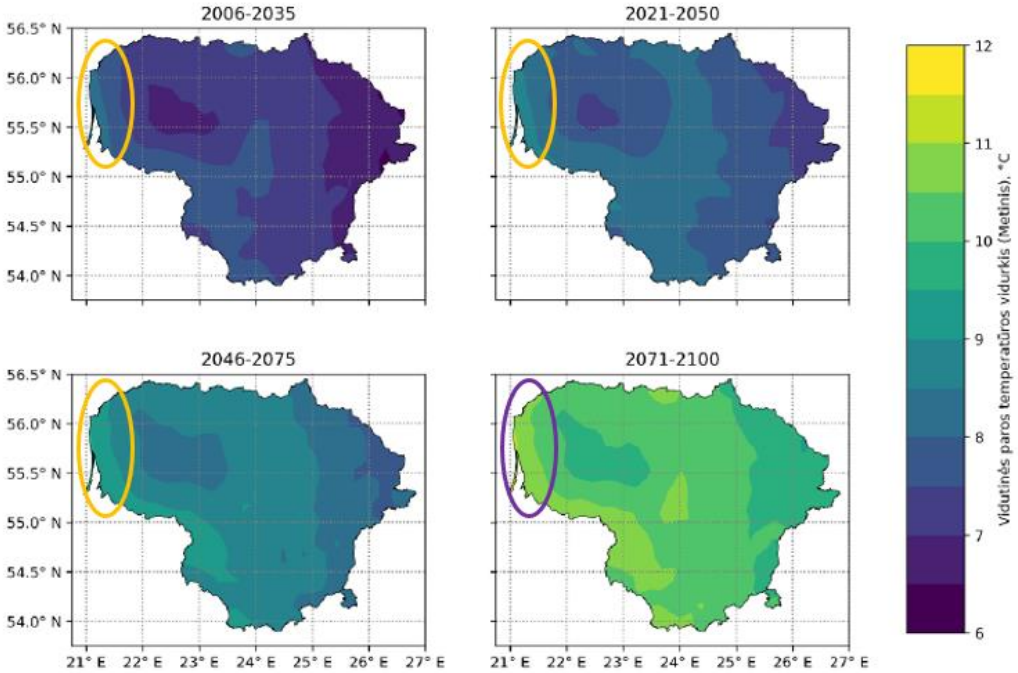
When comparing the 1961–1990 and 1991–2020 periods, it is evident that there has been a significant decrease in the number of days on which the snow thickness exceeds 5 cm. This decrease is as high as 16 days in the Klaipėda region and 21 days in Lithuania.

Average number of days per year with snow cover >5 cm				
	1961-1990	**1971-2000**	**1981-2010**	**1991-2020**
Klaipeda region	47	42	40	31
Lithuania	60			39

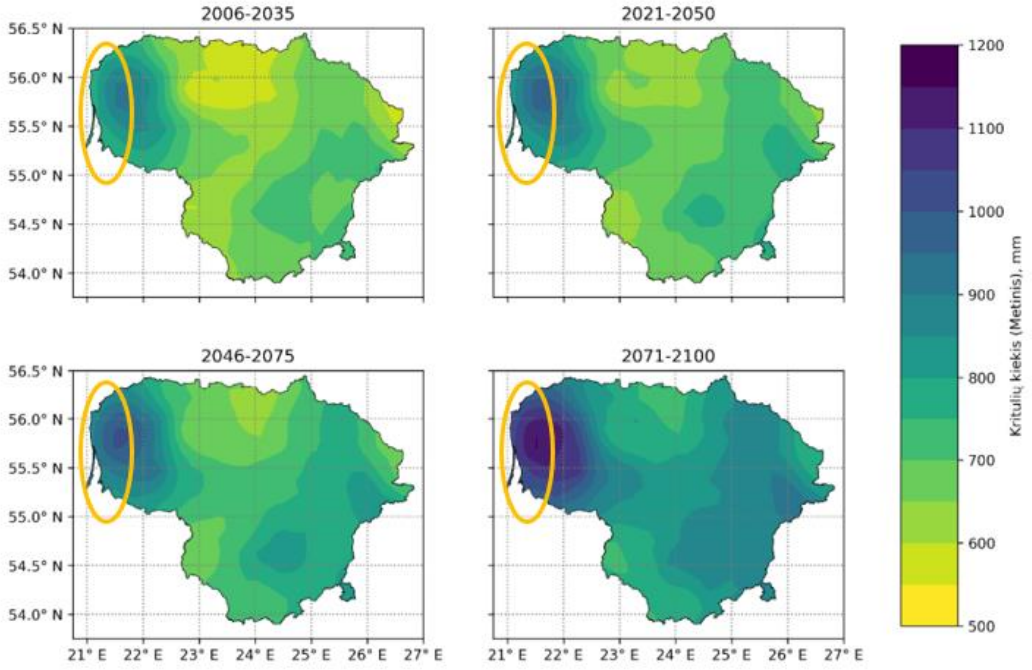
Climate changes

The forecast of key climate change indicators until 2100 in Lithuania under the 'worst case' RCP8.5 scenario of high emissions

ICHEC RCA rcp85



MPI RCA rcp85

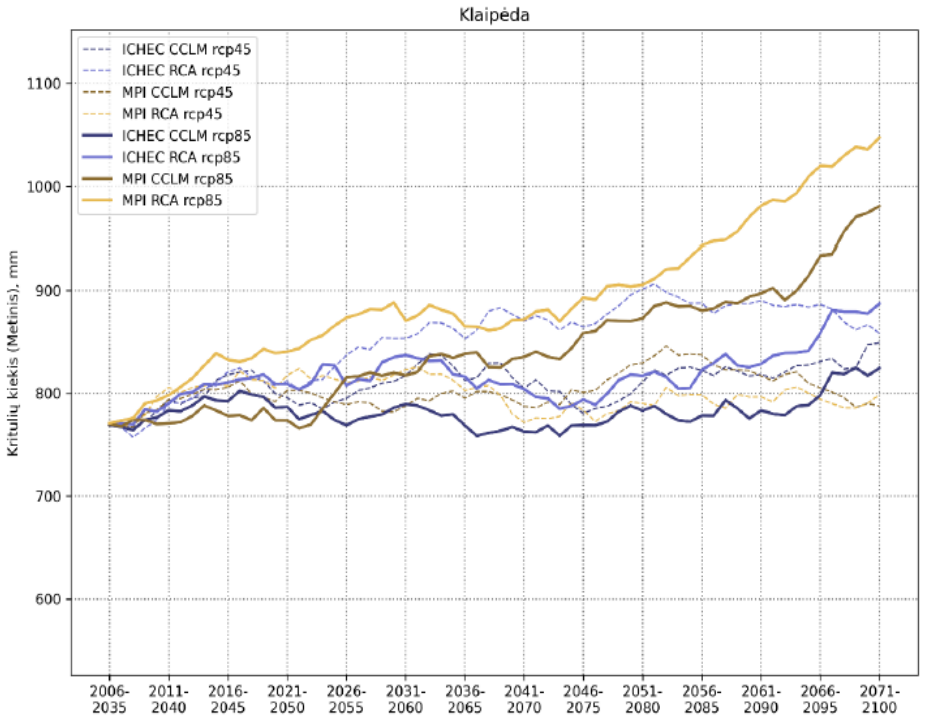


The average annual air temperature in Lithuania is expected to increase by between 1.2 and 2.8 °C compared to the current average of 7.4 °C.

Precipitation in Lithuania is projected to increase to 98 mm or 14% (RCP8.5). Annual precipitation will reach 782 mm. The highest precipitation will be recorded in the Samogitian Uplands, including the municipalities of the Klaipėda region.

Climate changes

Comparison of climatological standard normals (CSN) with modeling results

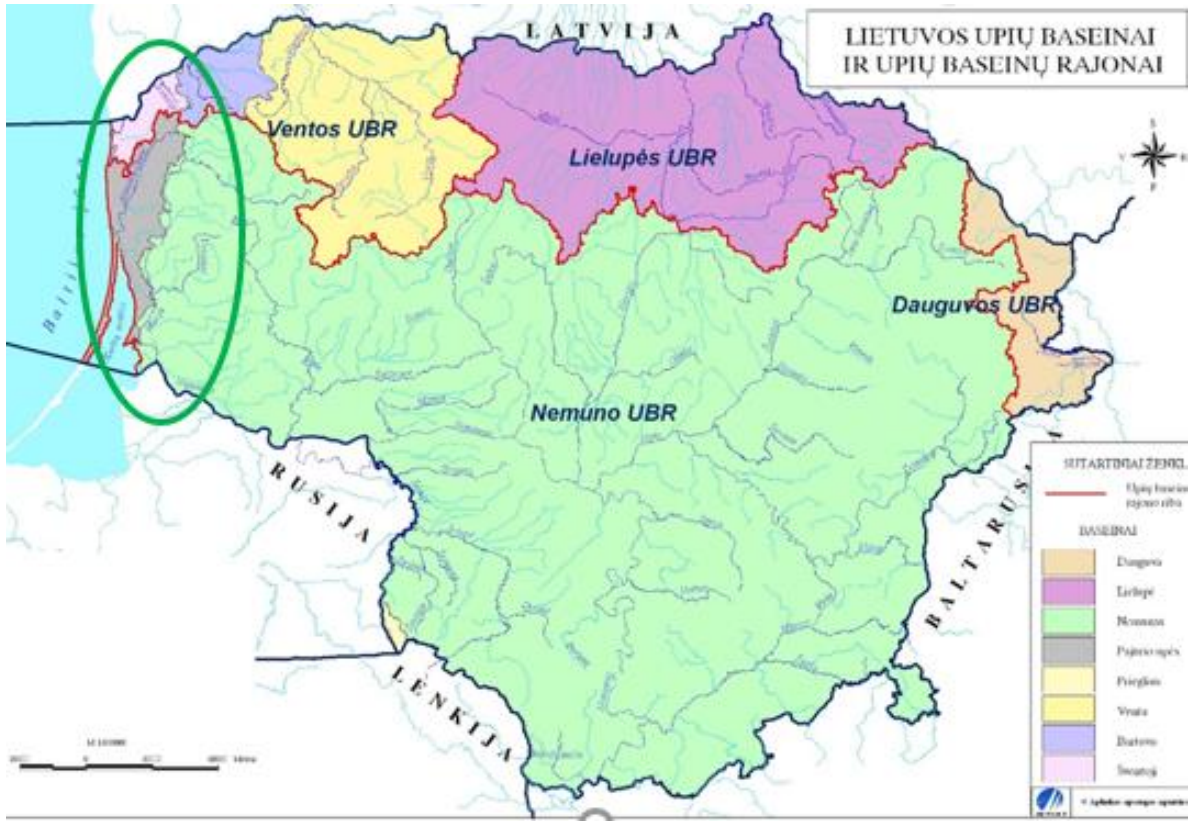


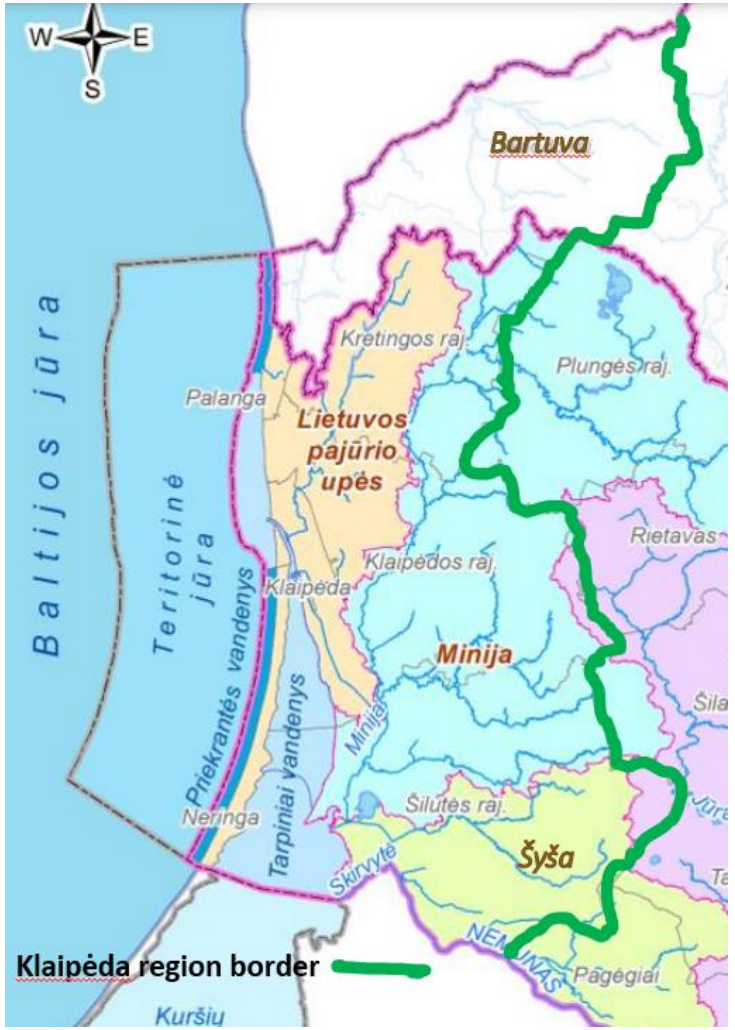
Global models show a faster increase in precipitation in Klaipeda only at the end of the century

Both the calculated data from the WMO Climatological Standard Normals (CSN) for the Klaipėda region and the modelled projections for Lithuania indicate rising average annual temperatures, an increase in the number of heat waves and a decrease in the number of days with snow cover. While models suggest an increase in national precipitation, the Klaipėda region has already experienced a decline over two CSN periods (1981–2010 and 1991–2020), highlighting regional differences and uncertainties that can only be verified over time.

Analysis of surface water demand vs. availability

Of the four RBDs identified in Lithuania, the Klaipėda region falls into two: the **Nemunas RBD** and the **Venta RBD** (picture below). These two RBDs contain four main river basins: The **Minija river,** the **Lithuanian coastal rivers**, the largest of which is the **Akmena-Danė river**, as well as the **Bartuva and Šyša rivers** (right). The Minija and the Lithuanian coastal river basins belong to the Nemunas RBD, while the Bartuva river basin belongs to the Venta RBD.





Analysis of surface water demand vs. availability

The **Bartuva River**, shared by Lithuania and Latvia, has a total length of 101.3 km and a basin of 2,020 km², with 37% of the basin in Lithuania, where it dominates the Skuodas district. The **Lithuanian coastal river basin**, largely within the coastal plain, is led by the ***Akmena-Danė River*** (580 km² basin, 7.6 m³/s discharge), alongside smaller streams and canals. Other key rivers include the **Minija River** (201.8 km, 2,940 km² basin, 38.5 m³/s discharge) and the **Šyša River** (57 km, 392 km² basin, 4.7 m³/s discharge), the entire basin of which falls within the Šilutė municipality

	Basin area (total/of which in Lithuania), km ²	River length (total/of which in Lithuania), km	Average annual flow rate m³/s	Share of the basin area in municipalities, %
Bartuva River	2020/749.54	101.3/55.3	12	Skuodas district – 92 Kretinga district - 5
Minija River	2939.97	201.8	38.5	Skuodas district – 3.4 Kretinga district – 31.5 Klaipėda district – 58 Šilutė district – 29.9
Lithuanian coastal river basin (AD -Akmena-Dane River-main river	Coastal - 902 AD - 580	62.5 Akmena-Danė	7.6 Akmena-Danė	**Area in coastal river basins , %** Neringa municipality - 99.4 Klaipėda city – 89.9 Palanga city - 49.0 Kretinga district – 41.7 Klaipėda district – 31.4 Šilutė district – 2.9
Šyša River	392	57	4,7	Šilutė district – 100

Analysis of surface water demand vs. availability

In Lithuania, the majority of surface water abstraction depends on energy needs, consuming 94–97 per cent of the total amount abstracted. The fisheries sector uses around 2 per cent and industry uses around 1 per cent of the total amount of surface water abstracted. Water used in the energy sector is returned to the water body after use with slightly altered properties. To better understand the proportions of water withdrawn for other economic needs, the water extraction statistics for the Klaipėda region are provided below, excluding the electricity sector. According to EPA data, no water users have been identified in the Bartuva and Šyša river basins

Surface water users in Klaipėda region					
River basin name, municipality	**Average annual flow, m³/sec**	**Number of water users**	**Water users**	**Volume of water used**	
				m³/day	**m ³ /sec**
Akmena-Dane River Klaipeda city municipality	7.6	1	AB "Klaipėdos mediena" for production needs	329	0.004
Minija River Šilutė district municipality	38.5	2	1. Filling of UAB "Kintai" aquaculture ponds with water	Total volume: 4 000 000 m³ or 133 m3/day per month	1.15 in spring in 1 month.
			2.Natural person	2 500	0.03
Klaipeda Strait	~ 850	8	Klaipėda port companies	23 272	0,3

Note: around 4,000,000 m³ of water is used to fill the 'Kintai' ponds during the spring flood, when the river's flow rate increases severalfold. If the ponds were filled for a month in spring, for example, the water withdrawal would reach approximately 1.5 m³/s, assuming an above-average river flow rate of 38.5 m³/s.

No significant negative impact of surface water extraction on rivers ecosystems in the Klaipėda region has been identified.

Analysis of groundwater demand vs. availability

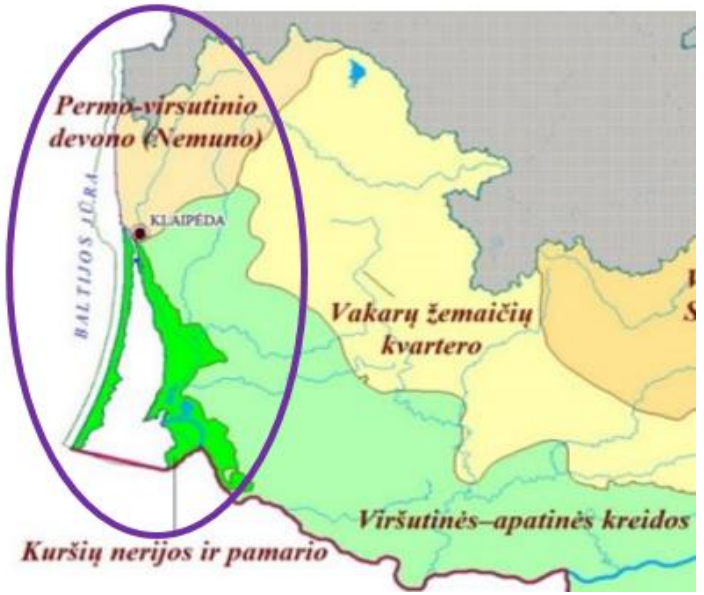
In Lithuania, 67–69% of all groundwater extracted is used for domestic purposes (i.e., households), 10–14% for industrial purposes, and a small proportion (2–4%) for agriculture and fisheries. Approximately 14–18% of the water extracted is lost in water supply networks due to leaking pipelines and accidents.

Similar levels of groundwater use from four groundwater basins should be observed in the Klaipėda region, where extraction accounts for around 12 per cent of the country's total.

Quantitative indicators of groundwater extraction :

- Annual production (m³/d or m³/year) compared to approved recoverable resources;
- Water level trends – assessed based on monitoring,
- Hydraulic connection with surface water/ecosystems;
- Quantitative risk is considered dangerous for further use if extraction is > 70–90% of the predicted resources.

Groundwater basins in the Klaipėda region	Available resources, thou. m3/d	Average amount of groundwater extracted in 2018-2019, thou. m3/d	Amount of water extracted as % of available resources
Permian - Upper Devonian (Nemunas RBD) 61 16.84	76.16	18.34	**24.1**
Western Samogitian Quaternary (Nemunas RBD)	207	11.76	**5.7**
Upper - Lower Cretaceous (Nemunas RBD)	102.95	13.15	**12.8**
Curonian Spit and Pomerania (Nemunas RBD)	84.3	20.51	**24.3**
Permian–Upper Devonian Venta (Venta RBD)	144.41	20.9	**14.5**



No threat to the region's groundwater resources, the 70–90% threshold is not exceeded.

Analysis of groundwater demand vs. availability

The largest amount of groundwater in the region is used in the Klaipėda city municipality. Extraction and use amount to around 60 per cent of the total in the region. Around 10 per cent is accounted for Palanga city and Klaipėda district municipalities, and around 8–9 per cent by the municipality of Šilutė. The amount of groundwater used depends mainly on the number of inhabitants and how much is needed for household and industrial purposes.

Municipalities of Klaipėda region	Groundwater extracted		Groundwater consumed	
	Thou. m^3 /2023	% in Klaipėda region	Thou. m^3 /2023	% in Klaipėda region
Klaipėda city municipality	10 559	58.4	9 484	57.8
Palanga city municipality	1 910	10.6	1 784	10.9
Klaipėda district municipality	1 702	9.4	1 948	11.9
Šilutė district municipality	1 584	8.8	1 392	8.5
Kretinga district municipality	1 548	8.6	1 217	7.4
Skuodas district municipality	515	2.8	340	2.1
Neringa municipality.	271	1.5	238	1.5
KLAIPĖDA REGION	18 089	100.0	16 405	100.0

Extreme hydrological phenomena in Klaipėda region

Over a period of 19 years (2005–2023), the Hydrometeorological Service's observations of the four main rivers in the Klaipėda region (Bartuva, Akmena-Danė, Minija, and Šyša) recorded 45 cases of extreme water levels (approximately 2.4 cases per year). Of these, nine cases of very low extreme water flows were recorded only in the Bartuva river. Only floods were observed in the remaining three rivers. All cases occurred twice as often during the period 2017-2023 than during the 2005 to 2012 period.

The extremely low water flow of the Bartuva River is caused by a mismatch between the flow of water from three hydropower plants turbines and the natural flow regime in the river's baisin.

River flow	River name (number and location of hydrological stations)	2005-2012	2017-2023	Total
Flow rate below the established ecological limit (low flow)	**Bartuva** (one near Skuodas)	1	8	9
Very high water level (floods)	**Akmena Danė** (two water stations: in Kretinga and Klaipėda)	5	7	12
	Minija (three: in Kartena, Priekulė and Lankupiai)	6	6	12
	Šyša (one near Šilutė)	3	9	12
Klaipėda region	Low flow			9
	Floods			36

Three hydropower plants in the Bartuva river basin

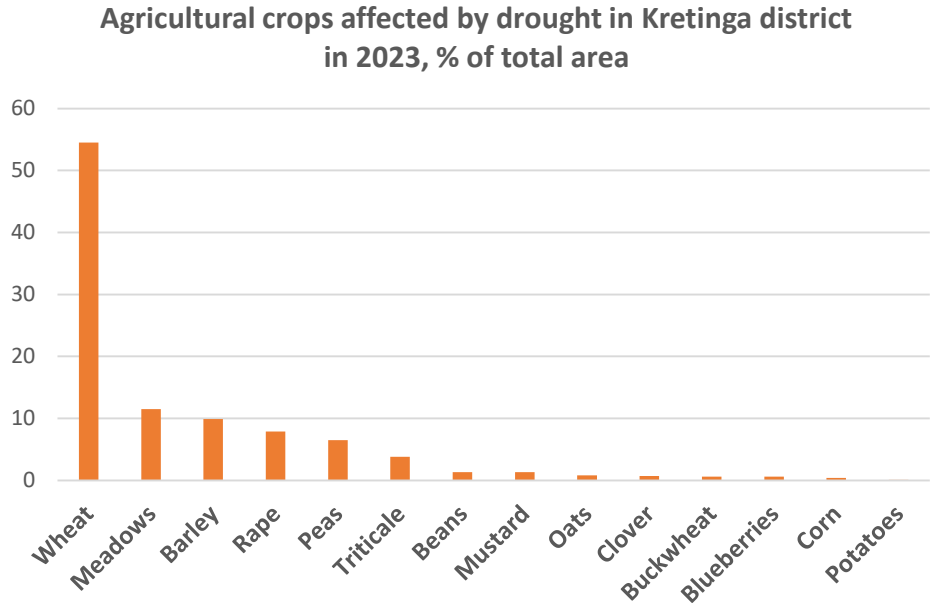
Emergency situations in agriculture

Loss of agricultural crops caused by droughts	Loss of agricultural crops caused by heavy rains
August 4, 2006 state emergency was declared	**September-October 2017** municipal and state level was declared: • Šilutė district 09-20), • Kretinga district (09-22), • Klaipėda district (10 03) • State (10-04)
June-July 2018 municipal and state emergency was declared: • Šilutė district (06-09), • Kretinga district (06-28) • State (07 04)	
July 3, 2019 state-level emergency was declared.	
June 2023 municipal emergency was declared: • Šilutė district (06-09), • Kretinga district (06-14)	

Four emergency situations have been declared in the agricultural sector in the Klaipėda region due to drought-related losses, while one was caused by heavy rainfall in the 2006-2023 period.

Summary of 2023 drought Impacts in Klaipėda Region

- **Klaipėda district**: 20 farmers affected, including fruit growers (5.35 ha of strawberries and quince) and 461 ha of various field crops.
- **Kretinga district**: 55 farmers reported drought damage across **1 840 ha**; likely most farmers in the district were impacted.
- **Šilutė district**: severe losses – **11 596 ha of crops**, **25 811 ha of meadows**, and **100.46 ha of orchards/berry plantations** affected.
- **Skuodas district**: no formal applications for drought damage assessment between 2018–2023.



Municipal survey: questionnaire scope

Focus Areas:
Urbanized areas – opportunities for water reuse
Agriculture – water use and reuse measures, irrigation, groundwater use legal framework

Included in questionnaire text:

- National Climate Change Management Agenda (short-, medium-, long-term goals)
- WaterMan project objectives, activities, pilot measures
- Municipal responsibilities in water management
- Stormmwater use in private households and urban green areas
- Preliminary assessment of water reuse in the industrial sector
- Potential funding sources for water reuse projects and research
- Drought-related emergencies in agriculture and impacts on crops
- Sources of irrigation water and regulations on their use
- EU Regulation 2020/741 main provisions
- Examples of water reuse in Northern European agriculture
- Irrigation of agricultural land in Lithuania (statistical data)
- Economic aspects of irrigation
- Municipal wastewater treatment plants (WWTPs), main characteristics and location map

Summary of the municipal survey: reuse in urban areas

1. Need for water reuse
Most municipalities recognize the need, mainly to save drinking water
2. Plans/strategies for reuse
Klaipėda city: yes, not specified, others – none.
3. Water sources & use
Kretinga: Public irrigation in relies on mixed water sources: Akmena – Danė river water (for parks, stadium, traffic roundabouts), municipal water supply (for cemeteries and city flowerbeds), and wells (for cemeteries). Municipal water use for irrigation costs around **€3,000–4,000 annually**, with consumption reaching over **1,800 m³/year**. Additionally, about **716 m³/year** of groundwater is used for dust suppression and **513 m³/year** of municipal water is provided free for firefighting.
Neringa: groundwater for flowerbeds, urban green areas. For fire-fighting - groundwater and from the Curonian Lagoon
Šilutė: some WWTPs treated wastewater for washing networks
4. Rainwater storage plans
Largely absent from current plans, but potential seen in reuse from ponds water – **Kretinga**.
5. Industrial water
Mainly drinking water or Curonian Lagoon. Potential for stormwater reuse: **Klaipėda city** - FEZ and two enterprises. Šilutė two enterprises (treated wastewater).
6. New building standards (rainwater use)
Consensus that water sector laws/construction standards should be updated to promote reuse in buildings, especially private homes.
7. Legislation to change
Consensus that water sector laws (wastewater, surface water, planning rules) should be updated to promote reuse.
8. Suggested measures
Guidelines & rules, demonstration projects, scientific studies, advanced treatment.
9. Flood/drought management
Support for integrated river basin-level planning to store flood water for later use during droughts. **Klaipėda district**: Priekulė town study ongoing.
10. Stakeholders
Municipalities, water suppliers, industry, utilities, schools, residents, planners.
11. Foreign expertise
Yes – on best practices, retention ponds, flood management, safe reuse of treated wastewater.
12. Groundwater availability
All: available for now.

Summary of the municipal survey – water use and reuse in agriculture

(four rural municipalities: Klaipėda, Kretinga, Šilute and Skuodas disticts)

1. Current irrigation practices

Klaipėda, Šilutė: Farmers mainly use artificial ponds, **surface water**. Priority crops –berries, vegetables, strawberries, fruit trees, greenhouse plants, potatoes.

2. Water demand

Highest need in **June–July vegetation period** and during droughts.

3. Water permits and policy

Klaipėda: Skeptical about groundwater use; suggests more reliance on surface water.

Šilutė: suggest simplifying permits. Current **taxes on water abstraction are too high**, discouraging irrigation, proposes exemptions if no ecological impact.

4. CAP and funding

Klaipėda highlights CAP 2023–2027 measures supporting **regulated drainage systems, not for efficient use of water or reuse for irrigated agriculture.**

5. Wastewater reuse potential

Šilutė: Minor potential. Only **milk processing company** was mentioned as a possible source.

6. Cooperation and monitoring

Klaipėda: Prefers surface water over groundwater for cooperation schemes.

Šilutė: Open to cooperation.

7. Obstacles

Main barriers: **high infrastructure costs, distance to water bodies,** large irrigated areas. Klaipėda stresses irrigation should focus on **strategic food crops** during droughts.

8. Other remarks

Klaipėda: irrigated agriculture in Western Lithuania has **low returns due to poor soils**, requiring external funding.

Šilutė: Crop insurance (up to 70% premium support) introduced in 2024 for drought losses compensation.

Stakeholder engagement and consultation process

Municipalities: Survey participants, local implementers, facilitators, end-users,

Ministry of Environment: Policy, regulation, EU 2020/741 implementation,

EPA: River basin & water resource management,

Hydrometeorological Service: Climate & hydrology data, rainfall measurements in Gargždai,

Civil Protection: Risk & disaster management, emergency data,

State Data Agency: Groundwater & water statistics,

Agricultural Data Center: Irrigated agriculture data,

Water Suppliers Association: Knowledge-sharing & awareness

Klaipeda city water company AB "Klaipėdos vanduo“: stormwater chemical tests,

National Public Health Laboratory Klaipėda Branch: stormwater microbiological tests

Main assumptions for promoting water saving and reuse

1. **Water Scarcity or Stress Exists (or is Expected)**

Currently, there is no water scarcity or stress, except during periods of drought in agriculture and significant increase drinking water use in large cities. LT water exploitation index values in LT is about 1 percent (total water use as a percentage of the renewable freshwater resources (groundwater aquifers and surface water).

2. Economic Viability

For example, the cost of water supply in Klaipėda city is approximately €1.20, while the cost of wastewater treatment is around €1.40. Therefore, accurate information on drinking water use and wastewater treatment would make it possible to compare the costs of alternatives for surface water, wastewater or stormwater use, including a technological assessment. This was one of our goals when we formulated questions for municipalities, and this information could be used to conduct preliminary feasibility studies.

3. Regulatory & Institutional Framework

When analysing Lithuanian water sector legislation, the concept of *water reuse* was not identified. We believe that refining legislation could be key to promoting water reuse in a country with abundant water resources. However, the Lithuanian authorities have postponed the implementation of wastewater reuse under EU Regulation 2020/741.

4. Stakeholder Awareness and Acceptance

All municipalities responded positively to the question "*Do you recognize the need for water reuse in your municipality, region, and Lithuania*?" Nevertheless, informing all stakeholders at various levels would help to promote water conservation and reuse.

Remaining main tasks

- Further communication with the Ministry of the Environment regarding the transposition of the new Urban Wastewater Directive, i.e. the incorporation of the concept of water reuse into LT law.
- Additional communication with municipalities, requesting answers to outstanding questions and comments on the final draft of the water reuse strategy.
- Contributions to the preparation of the Water Recycling Toolbox and its translation into Lithuanian.
- Preparation of an article on water reuse pilot measures and practices in other EU countries for the publication in the Lithuanian Water Supply Association journal, 'Water Management'.
- Together with Lithuanian partners, organise a meeting with Klaipėda region and other stakeholders to discuss the final draft of the strategy, including a pilot site visit in Gargždai.

Interreg
Baltic Sea Region

Co-funded by
the European Union

Klaipeda
University

SUSTAINABLE WATERS
WaterMan

Helpdesk / Contacts for further information:

Valdas Langas

vlangas@hotmail.com

+370 688 749 25

Interreg Baltic Sea Region

Co-funded by the European Union

SUSTAINABLE WATERS
WaterMan

The „BSR Water Recycling Toolbox" was elaborated as part of the WaterMan project, which is co-financed by the European Union (European Regional Development Fund) and implemented within the Interreg Baltic Sea Region Programme. More information:

eurobalt.org/WaterRecyclingToolbox
interreg-baltic.eu/project/waterman

WaterMan promotes a Baltic Sea Region-specific approach to water recycling, which makes use of the alternation of too much and too little water that has become typical for humid areas in the EU to strengthen the resilience of local water supply. Building on this approach, the project supports municipalities and water companies in adapting their water supply strategies.