Evaluation of the socioeconomic impact of the peat industry in Latvia, Lithuania and Estonia

Baltic Peat Producers Forum

September 19, 2024

About the evaluation

Context summary

- The peat industry is continuing to grow as a major economic force
- The understanding of peat industry's broad socioeconomic impacts remains limited
- At the EU level, the peat industry is critical supplier of raw materials for sectors such as horticulture, food production and forestry
- EU's strategy is to move towards self-sufficiency and shorter supply chains in response to climate change and food security concerns
- However, the EU and its Member States are also pursuing emission reduction targets, including sustainable use of natural resources

Main research questions

How does the peat industry influence the socioeconomic landscapes of Latvia, Lithuania, and Estonia?

- What qualitative and quantitative socioeconomic indicators characterize peat industry?
- Which socioeconomic indicators are possible to estimate based on data availability?
- What is the estimated socioeconomic impact of the peat industry?

Overview of the evaluation

Timeframe: 31.07. – 05.11.2024

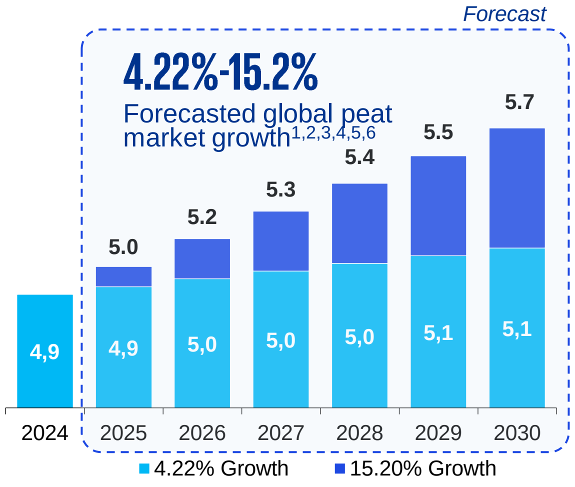
Progress:

- Development of the methodology has been completed, including the key indicators, consultations with industry stakeholders, and desktop research and preparation
- Data gathering for prioritised indicators has been finalized. Surveys have been sent out in all three countries
- The finalization of the evaluation results will be done during October
- **Preliminary results of the evaluation are outlined in today's presentation**

Global peat market growth is driven by agriculture industry and demand for substrates, for which there are limited effective substitutes

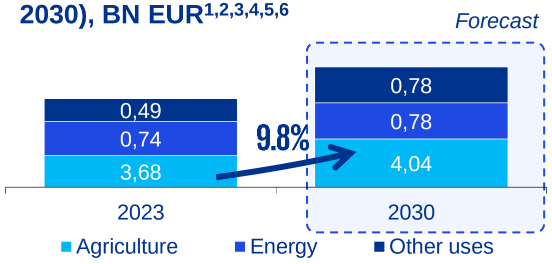
Global peat market* size (BN EUR)[1]

** Peat market – Raw peat and peat products*

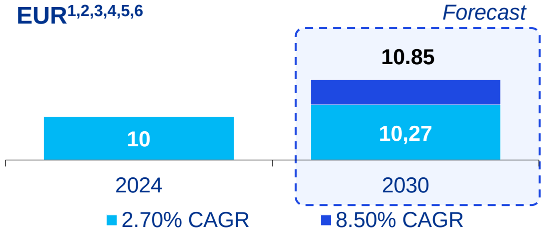


The global peat market is expected to experience steady growth, with various forecasts predicting growth ranging from 4.22% to 15.2% until 2030.

Peat market growth, by type of use (2023-2030), BN EUR[1,2,3,4,5,6]



Global Growing Media market growth, BN EUR[1,2,3,4,5,6]



Agriculture will remain the primary market for peat, projected to reach EUR 4 billion by 2030. **Growth in energy and other applications is expected to be minimal.**

3.7% CAGR

Global Berry Market[7]
(2024-2029)

5.97% CAGR

Global Tomato Seed Market[8]
(2024-2030)

4.5% CAGR

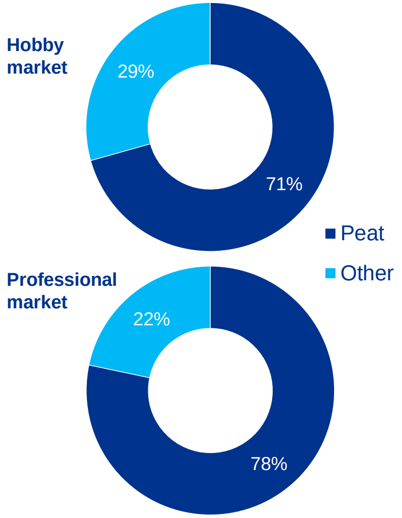
Global Cucumber Market[9]
(2024 – 2028)

5.3% CAGR

Global Paprika Market[10]
(2019-2025)

The food market is expected to grow until 2030 and **substrates will be essential in meeting future food demands.**

Average proportion of peat in substrates, Europe[1,11]

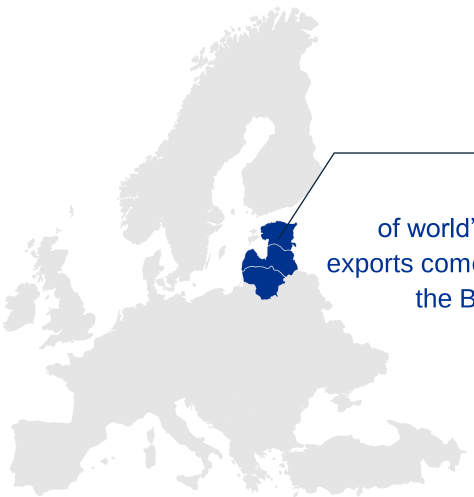


The proportion of peat in substrates will remain high, especially for the professional market.

Sources:

1. KPMG Analysis, 2. Maximize Market Research – Peat Market Size, 3. Market Research Future – Peat Market Size, 4. Market Reports World – Peat Market Size, 5. Medium – Peat Market Size, 6. Global Market Estimates – Peat Market Size, 7. Mordor Market Research – Global Berry Market, 8. Mordor Intelligence – Global Tomato Seed Market, 9. Research and Markets – Global Cucumber Market, 10. Grand View research– Global Paprika Market, 11. Peat replacement in horticultural growing media: Availability of bio-based alternative materials (econstor.eu)

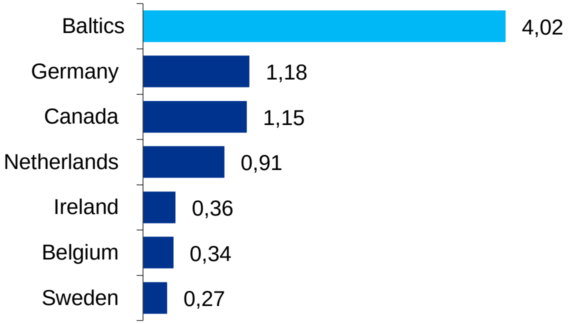
Baltic countries lead global peat exports with market focus on Europe, Asia, and North America



44%

of world's total exports come from the Baltics[1]

Peat exported, M t. (2023)



Top 11

	Average import volume 2019-2023, M t. [1]	Share of imports from Baltics[1]
Netherlands	**1,69**	*33% (Top 2)*
United States	**1,36**	*3% (Top 2)*
Germany	**0,95**	***63% (Top 1)***
France	**0,60**	*18% (Top 4)*
Italy	**0,56**	***44% (Top 1)***
Belgium	**0,54**	*39% (Top 2)*
United Kingdom	**0,51**	*13% (Top 3)*
Poland	**0,39**	***56% (Top 1)***
China	**0,37**	***88% (Top 1)***
Canada	**0,33**	*1% (Top 5)*

Makes up 70% of the total volume of world peat imports

- In the **Netherlands** there is a consensus on the importance of peat in the professional market[3].
- **China**'s growing horticulture sector is driving demand[4], while in **Germany**, a ban on new peat mining licenses could boost imports[5].
- **United States**' rely on peat imports from Canada, with demand expected to remain stable or increase[2].

Considering EU's strategic goals deriving from the European Green Deal, **the peat industry holds an increasingly critical stake in achieving them**. For example:

European Green Deal[8]

Farm to Fork strategy [6]

Help ensuring healthy, affordable and sustainable food, reduce the use of pesticides and ultimately, help ensuring food security

EU Forest strategy[7]

Contribute to ecosystem restoration by recultivation and planting forests in abandoned peatlands

… and more

Sources:
1. International Trade Center and KPMG Analysis, 2. U.S. Geological Survey, Mineral Commodity Summaries, January 2023, 3. 'Reducing substrates' environmental footprint goes step by step', 4. HORTI+ 03: China Now a Key Market for Peat, 5. Climate Action Plan 2050: Principles and Goals of the German Government's Climate Policy. 6. Farm to Fork Strategy - European Commission (europa.eu) 7. Forest strategy - European Commission (europa.eu), 8. The European Green Deal - European Commission (europa.eu)

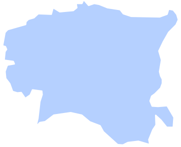
It is important to balance the Baltics' global dominance in peat industry and local economic impact against political shifts

Peat resources

Exported peat (2023)

Company revenues

Political direction

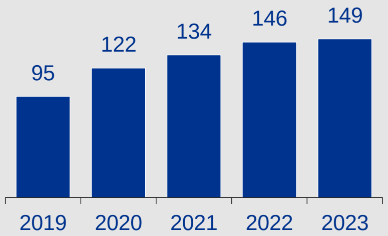


~**1.2 million ha**, containing **2.37 billion tonnes** of peat[1,2].

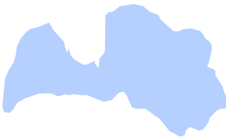
Value[3]: 148.44 th. EUR (**9% of global peat export value)**

Quantity[3]: 1275 th. t

Turnover 2019-2023 (M EUR)[4]



- Prioritization of peatland conservation, restoration of natural water regimes, and prevention of degradation. Avoiding of further drainage of mires.
- Potentially reduced extraction opportunities and higher compliance costs for the industry, impacting production and revenue[5].

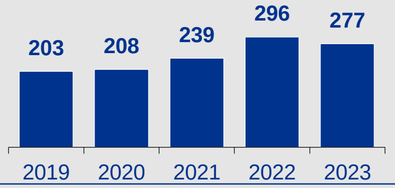


~**0.65 million ha**[7] containing **1.7 billion tonnes** of peat [6].

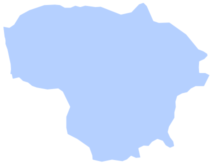
Value[3]: 256.32 th. EUR (**16% of global peat export value)**

Quantity[3]: 1888 th. t

Turnover 2019-2023 (M EUR)[8]



- National planning documents assume no annual increase in peat extraction volumes until 2030 and no increase in GHG emissions[9].

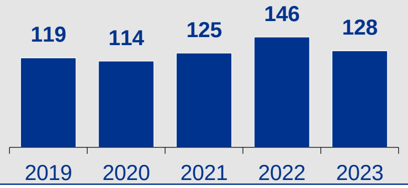


~**0.65 million ha** containing **0.9 billion tonnes** of peat[10]

Value[3]: 104.2 th. EUR (**7% of global peat export value)**

Quantity[3]: 859 th. t

Turnover 2019-2023 (M EUR)[11]

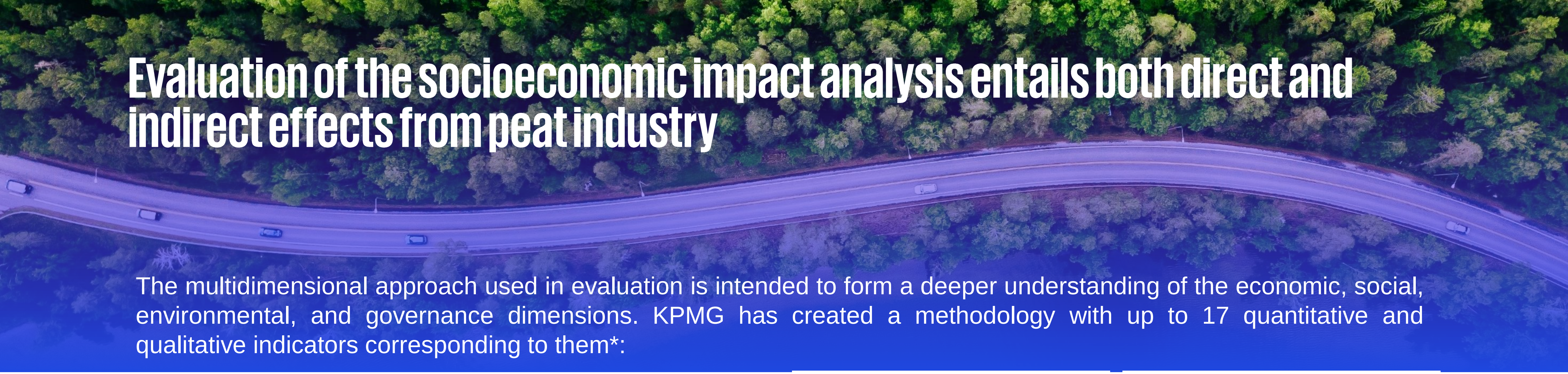


- Restoration of wetlands on arable peatlands, protecting permanent grassland cover, and promoting wetland conservation.
- The use of peat in energy supply is set to decrease[12].

*Preliminary results of calculations

Sources:

1. Sustainability Concept for Peat: Principles of Responsible Peat Production, 2. Peat (turbaliit.ee), 3. International Trade Center , 4. e-Äriregister, 5. General Part of the Environmental Code Act–Riigi Teataja, 6. Reserves and production (latvijaskudra.lv), 7. Bogs (www.latvijaskudra.lv),, 8. Firmas.lv, 9. Latvijas Vēstnesis (vestnesis.lv), 10. Peat is natural wealth of Latvia - Zelta, 11. Rekvizitai.lt. Įmonių katalogas, įmonės (vz.lt), 12. NATIONAL ENERGY AND CLIMATE PLAN OF THE REPUBLIC OF LITHUANIA 2021-2030



Evaluation of the socioeconomic impact analysis entails both direct and indirect effects from peat industry

The multidimensional approach used in evaluation is intended to form a deeper understanding of the economic, social, environmental, and governance dimensions. KPMG has created a methodology with up to 17 quantitative and qualitative indicators corresponding to them*:

01

Economic

Contribution to economy, including taxes, economic impacts on related industries

02

Social

Employment, income generation, poverty and demographic shift mitigation. Cooperation with local communities

03

Environmental

Sustainability efforts, including approaches to sustainability, reclamation, and environmental certifications

04

Governance

Access to advanced technologies and expertise, contributing to research and innovation.

*Preliminary results included in this presentation cover 11 of the indicators

Peat industry enhances regional and national economies through tax contributions (excluding VAT) to state and municipal budgets

Estonia[1]

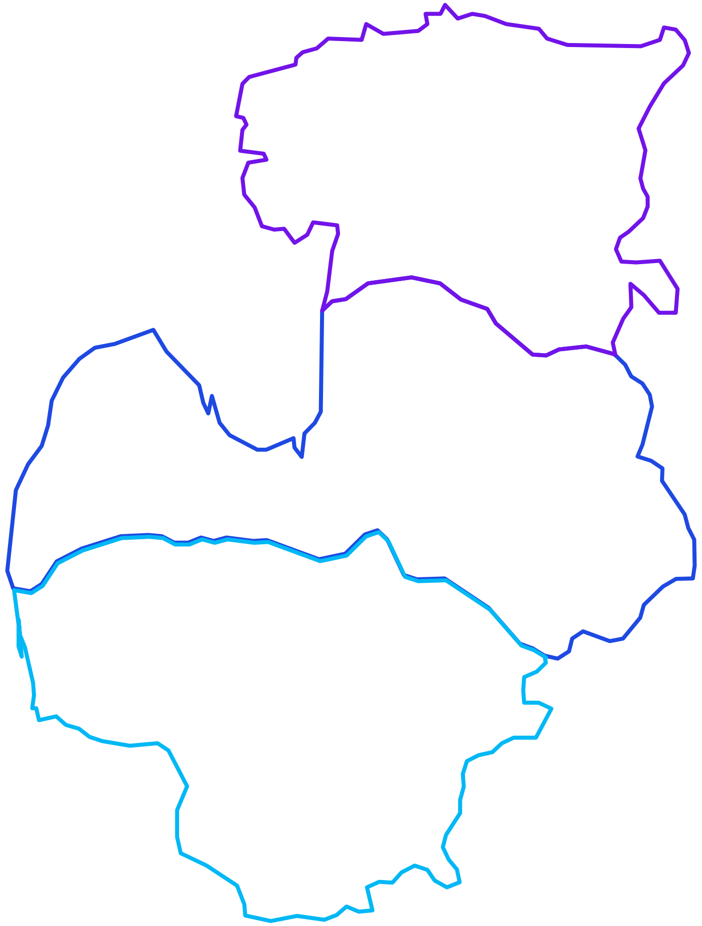
	Municipal	State
Natural Resource Tax*	-	814
Corporate Income Tax*	-	972
Personal Income Tax*	-	3 256
Social Contributions*	-	5 066
Total	**-**	**10 110**

Latvia[2]

	Municipal	State
Natural Resource Tax*	322	484
Corporate Income Tax*	-	3 215
Personal Income Tax*	2 130	6 914
Social Contributions*	-	16 389
Total	**2 453**	**26 480**

Lithuania[3]

	Municipal	State
Natural Resource Tax*	-	2 345
Corporate Income Tax*	-	3 111
Personal Income Tax*	-	9 710
Social Contributions*	-	9 659
Total	**-**	**24 826**



10.1 M EUR

Contribution from 4 tax indicators estimated in the evaluation thus far*

28.9 M EUR

Contribution from 4 tax indicators estimated in the evaluation thus far*

24.8 M EUR

Contribution from 4 tax indicators estimated in the evaluation thus far*

* Calculations in millions of EUR. During the further evaluation KPMG will also consider the impact from Immovable property taxes and rent paid, however the full dataset will be collected in further steps of the evaluation

Sources: 1. e-Äriregister, 2. Firmas.lv, 3. Rekvizitai.lt. Įmonių katalogas, įmonės (vz.lt),

ECONOMIC

The peat industry of Baltic countries contributes to empowering other industries in the upstream operations both locally and internationally

The peat industry's operational needs lead to outsourcing and contracting of many services both locally and internationally. This allows to observe and make qualitative assessment of the secondary economic impact of the industry to these sectors through economic activity (and as a result, also job creation)[1].

Estonia[2]

No.	Industry	Average amount spent locally (th. EUR)	Average amount spent internationally (th. EUR))
1.	**Machinery suppliers**	500 – 1 000	100 - 500
2.	**Inland transport companies**	100 - 500	500 – 1 000
3.	**Electricity producers**	0 - 50	-
4.	**Insurance companies**	0 - 50	< 50
5.	**Machine repairers**	50 - 100	10 - 50
6.	Port services	0 - 50	> 1 000
7.	**Fuel trading companies**	100 - 500	-
8.	**Packaging companies**	0 - 50	> 1 000

Latvia[2]

No.	Industry	Average amount spent locally (th. EUR)	Average amount spent internationally (th. EUR))
1.	**Machinery repair companies**	100 - 500	50 - 100
2.	**Machinery suppliers**	100 - 500	100 - 500
3.	**Packaging companies**	50 - 100	500 - 1000
4.	**Insurance companies**	< 50	< 50
5.	**Inland transport companies**	< 50	< 50
6.	**Logistics companies**	< 50	100 - 500
7.	**Fuel trading companies**	100 - 500	-
8.	**Electricity producers**	< 50	-

Lithuania[2]

No.	Industry	Average amount spent locally (th. EUR)	Average amount spent internationally (th. EUR))
1.	**Logistics companies**	500 – 1 000	50 - 100
2.	**Machinery repair companies**	100 - 500	-
3.	**Fuel trading companies**	> 1 000	100 - 500
4.	**Packaging companies**	100 - 500	-
5.	**Electricity producers**	100 - 500	50 - 100
6.	Pallet manufacturing companies	500 – 1 000	-
7.	Banks	100 - 500	-
8.	**Insurance companies**	100 - 500	-

Source:

1. Kūdras ieguves un izmantošanas sociāli-ekonomiskais izvērtējums un ilgtspēja (2017, LLU, LKA). **2. Preliminary survey results (31 responses, collected until 16.09.2024)**

Peat industry is driving economic growth through job creation, competitive wages, and VAT contributions from employee spending

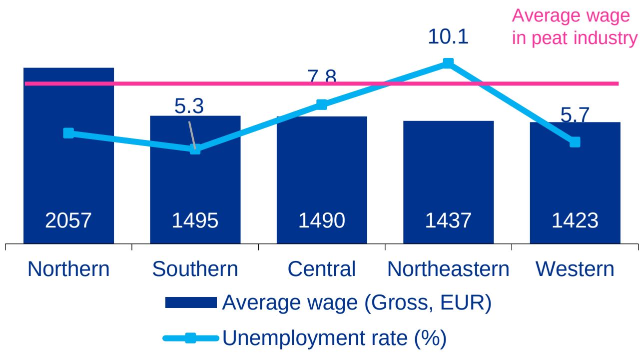
The peat industry contributes to regional development by creating jobs and offering competitive pay, in comparison to other important industries outside of major cities (agriculture, forestry, mining and quarrying). Higher income gives the workers more disposable income that is spent on consumer goods, thus allowing to evaluate potential expenditure on consumer goods and Value Added Tax paid in governmental budget[1].

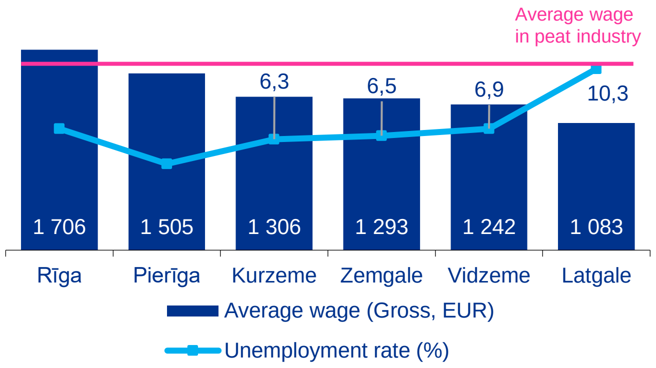
	Estonia	**Latvia**	**Lithuania**
Industry	**Average wage in 2023 (Gross, EUR)**	**Average wage in 2023 (Gross, EUR)**	**Average wage in 2023 (Gross, EUR)**
Peat industry[2]	1 791	1 568	1 787
Agriculture (Crop and animal production, hunting and related service activities)[3]	1 422	1 297	1 715
Forestry (Forestry and logging)[3]	1 667	1 748	1 686
Mining and quarrying[3]	1 941	1 703	2 081
Total average (All industries)[3]	1 832	1 537	2 010
Employees in peat industry	815	2 331	2 574
VAT contribution per employee in peat industry, annually (EUR)	3 535	3 035	3 359
Estimated VAT contribution from employees in peat industry	**2.8 M EUR**	**7.1 M EUR**	**8.6 M EUR**

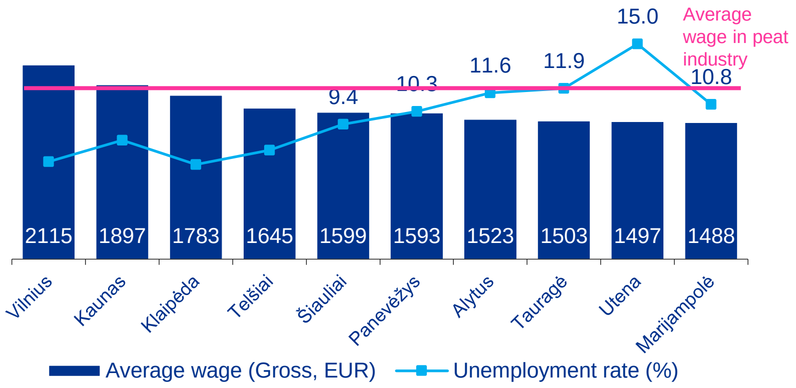
Sources:

1. Kūdras ieguves un izmantošanas sociāli-ekonomiskais izvērtējums un ilgtspēja (2017, LLU, LKA); 2. e-Äriregister, Firmas.lv, Rekvizitai.lt. Įmonių katalogas, įmonės (vz.lt); 3. National Statistics Data bases of Estonia, Latvia, Lithuania

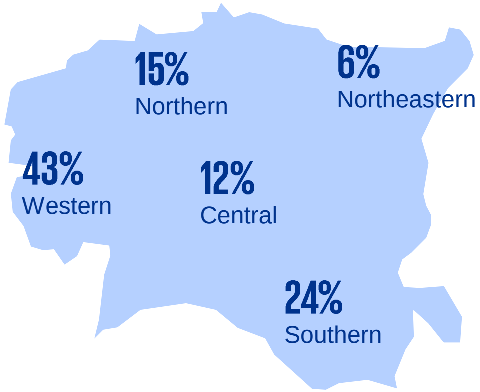
The jobs created by peat industry companies offer wages similar to most highly developed regions, despite operating further from them



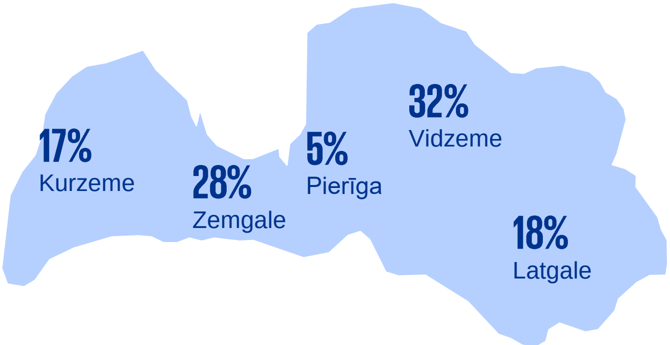




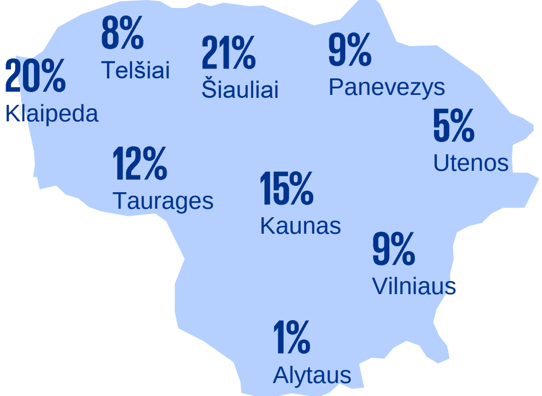
Breakdown of extracted peat by Estonian statistical regions (2023)[1]



Breakdown of extracted peat by Latvian statistical regions (2023)[2]



Breakdown of extracted peat by Lithuanian statistical regions (2023)[3]



Peat extraction is located in regions, where unemployment, low wages, and poverty risks are more prevalent. At the same time, data analysis show that wages in the peat extraction industry are above the regional averages, making it an important factor in reducing these socio-economic challenges in those regions

Sources: 1. Krājumu bilance (lvgmc.lv), 2. koondbilanss_2023.pdf (maaamet.ee), 3. 'Naudingųjų iškasenų gavyba 2019–2023 metais - Lietuvos geologijos tarnyba prie Aplinkos ministerijos (lrv.lt)

The presence of peat industry companies in regions provide benefits to local community development

Joint projects/initiatives carried out in cooperation with local authorities[1]

- Infrastructure projects
- Revitalization projects
- Unemployment mitigation projects

Best practice examples:
As part of the project, a municipality-owned road was reconstructed in Latvia, and a degraded area of 4.6 hectares was revitalized. The total investments in the participating companies reached 4 million, resulting in the creation of 19 new jobs.

Sponsorship/donation initiatives (support for education, culture, sport, social etc.)[1]

- Sports
- Education
- Events / Culture
- Charity activities

Best practice examples:
Over the past five years, Latvian company has contributed between €500 and €30,000 to various regional projects, including donations to schools, local sports clubs, and social welfare organizations. These targeted investments aim to foster sustainable development, create new job opportunities, and enhance the well-being of local communities.

Source:

[1] Preliminary survey results (31 responses, collected until 16.09.2024)

Recently, an increasing number of peat industry companies in the Baltics are strengthening their sustainability through key certifications

Understanding and managing the environmental impact of the peat industry is crucial for maintaining market access, meeting regulatory requirements, and enhancing the industry's sustainability reputation. Key certifications help to position the peat industry as a responsible supplier, supports long-term viability by protecting natural resources, and aligns with growing consumer demand for environmentally friendly products[1 , 2].

Certificate	Description[3,4]	Impact[3,4]	No. of certificates[5]
responsibly produced peat	• The RPP certificate is a sustainability standard that ensures peat extraction is conducted responsibly, minimizing environmental impact. Its objectives are to promote sustainable production practices, conserve biodiversity, and require the restoration of peatlands after extraction. • Companies with RPP certification adhere to strict environmental guidelines and engage with local communities, demonstrating a commitment to environmental stewardship. • Issued by Foundation Responsibly Produced Peat (a non-profit organization)	• RPP certification enhances market access by appealing to consumers who value sustainability and builds trust with partners. It contributes to the long-term viability of the peat industry by aligning companies with environmental regulations and promoting responsible resource management.	13
RHP	• The RHP certificate is an international quality mark that guarantees peat-based growing media meet high standards essential for professional horticulture. It ensures product quality, safety, and performance, providing substrates that optimize plant growth and yield. • Companies holding the RHP certificate implement rigorous quality management systems and maintain product traceability to deliver reliable growing media to the global market. • Issued by Regeling Handelspotgronden (a non-profit organization)	• RHP certification enhances competitiveness by meeting the demands of professional growers and building customer trust. It strengthens a company's reputation by differentiating it from competitors and contributes to agricultural advancement through superior product quality.	11

Source:
1. Greenhouse impact due to different peat fuel utilisation chains in Finland — a life-cycle approach, 2. Sustainability | Free Full-Text | Benchmarking Environmental Impacts of Peat Use for Electricity Generation in Ireland—A Life Cycle Assessment (mdpi.com), 3. Responsibly Produced Peat, 4. Home – RHP **5. Preliminary survey results (31 responses, collected until 16.09.2024)**

Peat industry companies across the Baltics are actively participating in R&D activities, which helps to build public trust and develop new approaches

Contribution to industry development[1]

Investment in research and development (R&D)

- Environmental and ecological studies
- Product development and expert consultations
- Demonstration sites for applied research

In addition, there are awareness-raising, education and public relations campaigns carried out

Best practise example:
«Establishment of "demonstration plots" for the study of scientific processes» in Latvia and «Investigation of product characteristics» in Lithuania

Best practice example:
«Visits to peat extraction sites for schoolchildren, local communities, NGOs, etc., to learn about the peat extraction process in both production and environmental contexts» in Latvia and «Presenting the company's activities to communities, educational and scientific institutions» in Lithuania

Research[1]

Research partnerships with academic institutions

- Environmental and conservation efforts («Wetlands Restoration and Protection Foundation»)
- Academic and research institutions
- Student and educational engagement

In addition, there are publications and articles produced in collaboration with academic institutions

Best practice example:
Collaboration with students on Bachelor Thesis' in Latvia

Best practice example:
Presentation "Sustainable Management of Peat Bogs" at the 82nd International Scientific Conference of the University of Latvia.

Source:

1. Preliminary survey results (31 responses, collected until 16.09.2024)

Conclusions

01

International role

- The international trade data and forecasts highlight the critical role of Baltic countries in the stable functioning of the peat industry market, as well as viable use of peat resources in food production and other purposes

02

Direct impacts

- The estimation of quantitative economic and social indicators demonstrate evidence that peat industry companies in Baltic countries contribute several millions of EUR to national economies

03

Indirect impacts

- The collected evidence of qualitative indicators confirm that peat industry companies in the Baltics take increasing role in supporting local communities, achievement of sustainability goals, as well as higher investments in research and development activities

Thank You!

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