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planning region

SOCIOECONOMIC FACTORS RELATED TO THE BALTIC BLUE GROWTH PROJECT

INTRODUCION

Development of marine aquaculture is of great importance in the Baltic Sea Region:

- **Employment**
- **Nutrient rich food and feed**
- **Reduce nutrient in the Baltic Sea**

Restricting factors:

- **National legislation**
- **Terminology**
- **Weather conditions**
- **Lack of experience**



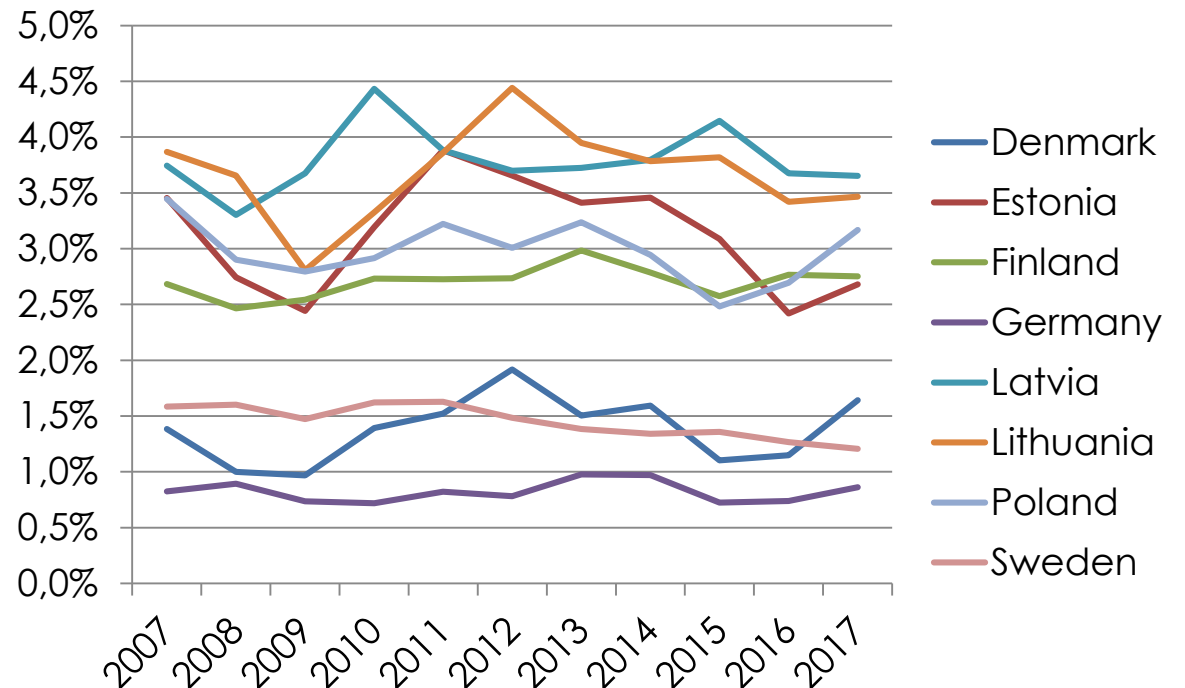
AIM OF RESEARCH

Investigate socioeconomic factors affecting mussel farming development in the Baltic Sea Region by **analysing views of public administrators, entrepreneurs and researchers** in selected Baltic Sea Region countries obtained in the survey and by analysing statistics

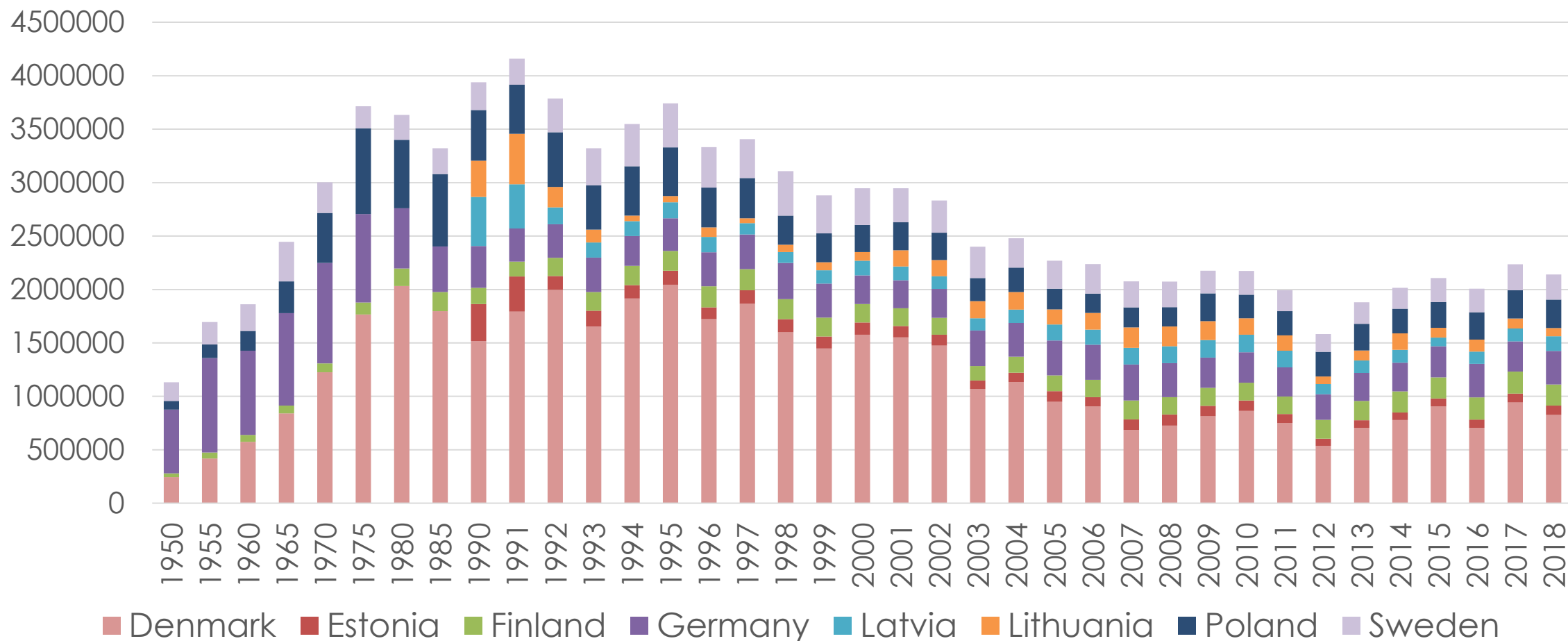
ECONOMIC FACTORS

- Gross domestic product growth rate and gross value added
- Importance of agriculture, forestry, and fishery in economy
- Fishery production amount
- Interest rates of loans
- Employment in fishery, aquaculture and in processing
- Inflation
- Financing

Share (%) of agriculture, forestry, fishery fishing gross value added within national economy 2009–2017 (Eurostat, 2019)

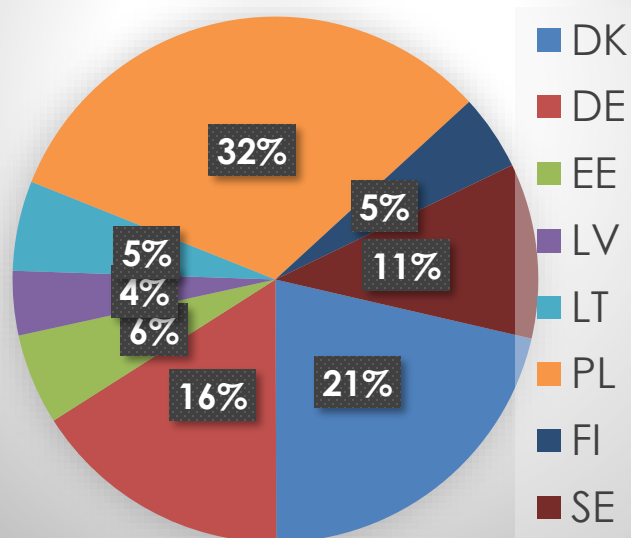


Fishery production amount 1950–2018, million tonnes (FAO, 2020)*

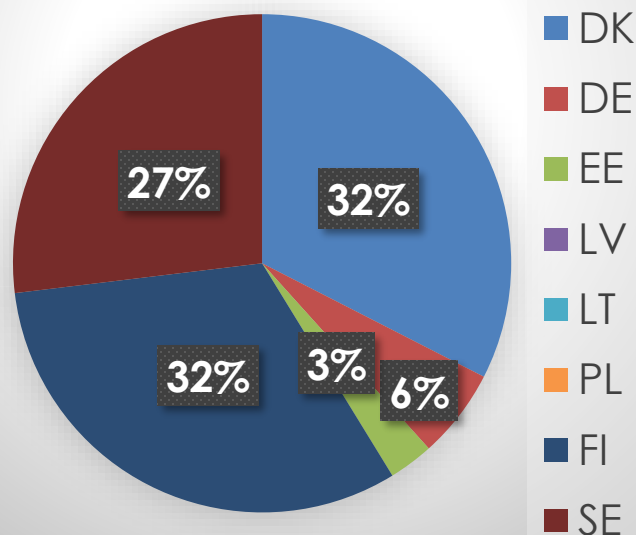


EMPLOYMENT

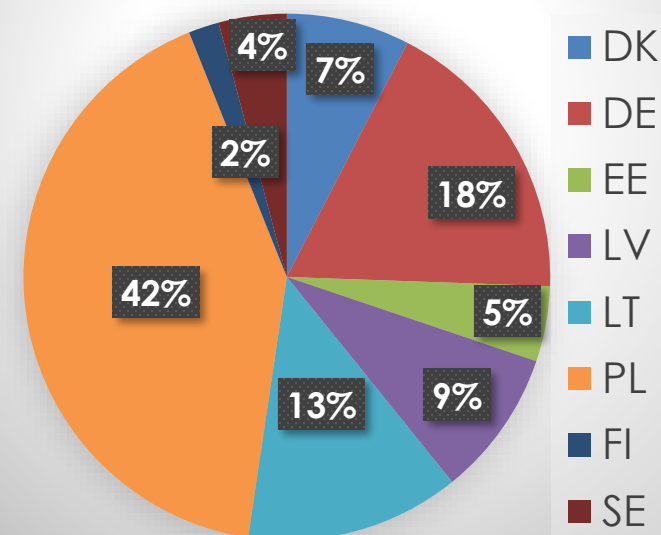
Employment in the fisheries in 2015 (7359 employees)



Employment in marine aquaculture* in 2014 (1033 employees)



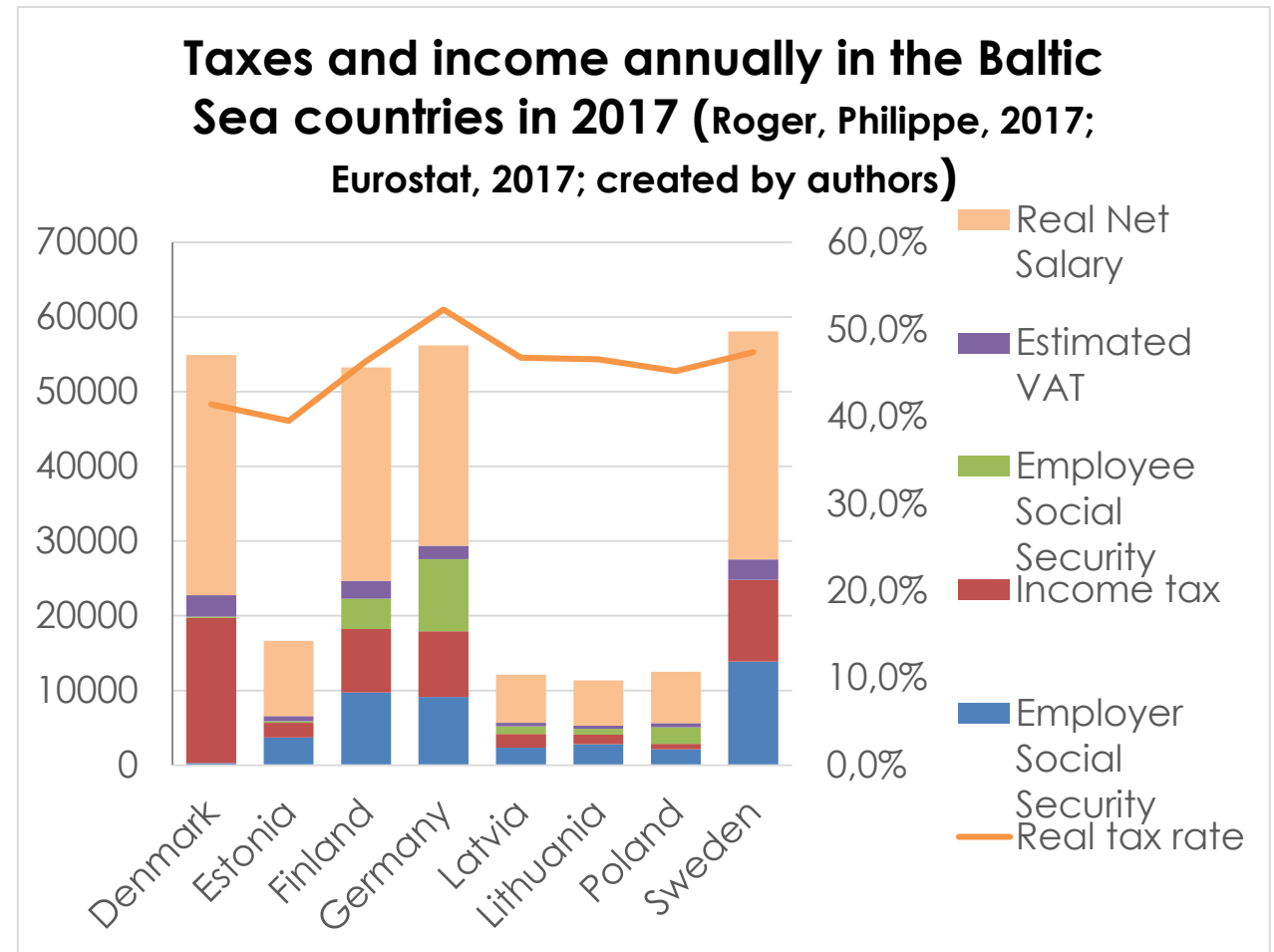
Employment in processing, 2016 (39829 employees)



Employment in the fisheries, aquaculture and processing sectors (measured in full-time equivalents) in the Baltic Sea region (Kouvelis, 2017). * No data from LT, LV, PL.

SOCIAL INDICATORS

- *Salary and taxes*
- *Average annual wages and salaries of people employed in fisheries in Latvia*
- *Population changes in the Baltic Sea region*
- *Social culture*
 - *Knowledge*
 - *Non-monetary benefits*
 - *Transferring*



FACTORS

Expert opinion on importance of aquaculture sectors in national economy. Evaluation scale: 1 – highly unimportant to 10 – highly important. Expert survey results in 2018 (survey conducted by Z. Ozolina)

Evaluation n 1–10; 1	Fishery	Marine aquaculture	Mussel farming
1	1%	17%	30%
2	4%	15%	15%
3	5%	8%	10%
4	5%	13%	6%
5	18%	10%	2%
6	8%	5%	5%
7	16%	15%	1%
8	17%	6%	2%
9	8%	5%	1%
10	16%	2%	0%

Factors affecting mussel farming development

	Mean
Labour force/Human resource	5,29
Financing (subsidies, loans)	8,00
Formal, also informal education	6,31
Climate change	6,19
Marketing activities	6,83
Taxes	6,25
End-use market	7,96
Government support	8,13
Environmental pollution	6,58

EXPERT SURVEY RESULTS EVALUATING THE MUSSEL FARMING DEVELOPMENT STAGE BY PERIODS IN THE BALTIC SEA REGION

Share (per cent)	Today	In 5 years	In 6–10 years	In 11–15 years	In 16 years and over a longer period of time
Introduction stage (Sales are low, although they will be increasing. The costs for market launch are high.)	43–44%	24–32%	22–27%	2–3%	2%
Growth stage (Sales volume is growing, and the company has a profit from the sale of products. The company plans to invest in development.)	5%	23–27%	35–44%	18–23%	10%
Maturity stage (The company plans to maintain the existing market share; the company considers investing in product upgrading activities.)	2–5%	2–5%	25–27%	34–35%	32–33%
Decline stage (The sales volume starts to decrease, probably the market is saturated, probably the product brings profit.)	0–2%	02%	2–5%	13–18%	76–81%
Not started / will not be launched	70–71%	10–13%	5%	0–3%	11–13%

FORECAST - MUSSEL FARM IN PAVILOSTA, LATVIA

- 360 tons per year
- Revenue 180 TEUR
- ~ 10% of total turnover in fishery sector
- 11-48% share of total tax payments of companies operating in fishery sector in Pāvilosta, EUR

	% in fresh whole	Weight, kg	EUR/kg	Revenue, EUR
Nitrogen	0.8	2880	30*	86400
Phosphorus	0.05	180	360*	64800
Mussel shell			0.08	28800
Turnover of companies operating in fishery sector in Pāvilosta, EUR Harvested amount 360 tonnes				180000



CONCLUSIONS AND SUGESTIONS

- New workplace
- Combination with other fields (algae farm, wind farms etc.)
- Tax payment from mussel farming
- Reduction of nitrogen and phosphorus in the Baltic Sea

- Co-operation between mussel farmers ought to be strengthened at local, regional and transnational levels.
- Aquaculture sector has great potential to involve young enthusiasts with great ideas
- Communication – value of product

THANK YOU FOR YOUR ATTENTION!



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