Skills needed in green entrepreneurship and business development for micro-entrepreneurs

Estonian summary report

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Introduction

There are 81,900 enterprises in Estonia from which 91% are micro-sized enterprises (Leesment, 2018). Most of them use natural resources for the purpose of generating revenue. The weather and climate are changing in the wake of human action, so it is necessary to look into more nature-friendly solutions of using natural resources. The current research report is published in Interreg Central Baltic cross-border cooperation project NatureBizz with a purpose to identify the necessary business skills and knowledge in green entrepreneurship of Estonian micro entrepreneurs. The research question is following: What kind of business skills and knowledge do green entrepreneurs need in order to develop their natural resource-based products and services. Based on the research an international curriculum will be developed.

Estonian Development Fund (Arengufond, 2010) published prognoses, how on 2018 public sector will set an example of following green principles and Estonian enterprises use actively opportunities provided by green economy. The discussion about sustainability in different sectors, that use natural resources, is still relevant and active but more companies could benefit from following the principles of green entrepreneurship in their everyday actions.

1. Data collection and analysis

1.1. Terms used in Estonia

The terms green economy, green entrepreneurship and bio-economy are not widely used in Estonia (the discussions were active around 2009–2012, when for example first Estonian green lifestyle portal Bioneer https://www.bioneer.ee/tags/roheline%20ettev%C3%B6tlus raised several topics regarding green entrepreneurship). Ministry of Rural Affairs (2016) states that bioeconomy (biomajandus) covers economical sectors, that use renewable biological resources (like wheat, wood, fish and biowaste) with a purpose of producing food, energy, materials etc. Bioeconomy is according to Kuldna, Peterson & Nõmmann (2012) an economy, that produces less CO2. In addition to agriculture, fishery, forestry, food and paper production, it also covers chemical biotechnology and energy production. Sustainable management in agriculture and fishing industry is combined using renewable natural resources and producing food, feed, bioenergy and biomaterials from waste. Bioeconomy is part of green economy.
Green economy (*rohemajandus*) combines economic activities that contribute into increase of humans’ wellbeing and social justice, that do not put pressure on natural resources and cause environmental risks. It is engaging, resource effective and with little CO2 emission (Kuldna, Peterson & Nõmmann, 2012).

According to Ministry of the Environment (2018), ecosystem services (*ökosüsteemi teenused*) are different environmental-protected, social and economical goods that ecosystems provide to humankind. Services are divided into 4 categories: supporting, regulating, provisioning, and cultural. Värnik et al (2012) also talk about green jobs that help to save energy, minimise waste production, avoid wasting natural resources etc. Today’s public discussion in Estonia concentrates more on waste management, recycling. Lately circular economy related topics are also actual.

**1.2. Secondary data collection and analyses**

In order to get an overview of the sector and map the important aspects, where the entrepreneurs could use additional skills, sector specific strategy documents were analysed. Several development documents contribute indirectly into development of bioeconomy and green economy. In 2018 Estonia does not have a bioeconomy or green economy strategy. On the other hand, Ministry of Rural Affairs (2016) has developed “**Analyses and suggestions for developing Estonian bioeconomy strategy**”, that brings out several problems regarding low added value per person in bioeconomy sector. It mentions national security in a context of providing enough food for people but also raising the export potential (while using available resources, producing sustainably and increasing productivity, together with well-functioning monitoring system). According to the document, it is important to use and implement scientific achievements into product development.

Estonian health tourism cluster (2013) emphasises in “**Development directions of health resort treatments. Health resort treatments’ development plan 2013–2020**” the changes and trends in population, adding that today’s niche is rehabilitation and preventing illness with procedures where local natural resources, like mud, peat and mineral water, are used. **National Tourism Development Plan for 2014–2020** (Ministry of Economic Affairs and Communication, 2013) sees, among many other skills, the need of using natural, historic and cultural heritage in product development, local food and product offering, but also knowing and implementing the principles of sustainable tourism development.

Among sector specific skills, entrepreneurs could use improvement in general skillset: accounting, financial management, marketing and budgeting, sustainable
management in energy and water usage, project writing. **Estonian Rural Tourism development plan 2015–2020** (Estonian Rural Tourism, 2014) brings out that one of the weaknesses of rural tourism entrepreneurs are lacking of knowledge how to use the latest IT solutions in their favour. It is also important to know how to sell natural environment in sustainable way.

“**Plan for introduction and promotion of Estonian food. Estonian Food 2015–2020**” (Ministry of Agriculture, 2014) stresses the need of using local raw materials for making and offering the food and compiling menus, but also developing the local food culture. The plan brings out several problems regarding creation of synergy and collaboration – entrepreneurs are concentrated on everyday life and don´t see the possibilities in collaboration. Small companies are often contrasted with big enterprises and there is no clear overview what is happening in the world. Estonian food sector also struggles with the problem of not differentiating from others and finding their USP (unique selling proposition). Both previously mentioned documents note that Estonian rural tourism and food providing companies need to find innovative ideas how to create additional value (*lisandväärtus*) to raw materials. There is not enough innovation in that sector.

**Development Plan for Estonian Rural Life** (Estonian Roural Tourism, 2014) stresses mostly the aspect of raising the competence of people working in rural tourism enterprises. The problem is also lack of innovation and using modern IT solutions. Part of their vision is having attractive, high quality tourism products and services that use natural resources and local heritage. Nature based tourism products need to follow sustainable principles.

**Development plan for Estonian horticultural sector for 2015–2020** (Ministry of Agriculture, 2014) focuses, in a context of entrepreneurship, to the skills how to add value to raw materials, how to find place to sell the products and how to differentiate. Lack of knowing the market, willingness to collaborate, wider use of sustainable cultivation technologies and need of keeping the certain quality level, are also mentioned. In addition to producing food from raw materials, horticultural enterprises have the potential to offer several public services, create profit and jobs but also to take care and protect local culture, environment and heritage.

**Development Plan for Estonian Rural Life** (2014) notes that the use of natural resources in agriculture has to be sustainable and it is important for entrepreneur to manage in the world of constantly changing prices. Increase in qualified workforce and investments into rural areas, but also scientific research that would help to improve societies’ attitude towards rural economy and sustainable use of resource, is
needed. The skills of workforce expire fast, but also locals need advice on how to, for example, manage their forest. The amount of agricultural households decreases, but the positive aspect is, that the area of organic farming is increasing. Micro entrepreneurship has to be supported, and in addition to sustainable management of natural resources, animal wellbeing has to be guaranteed.

**Estonian eco-agriculture development plan for 2014–2020** (2014) adds that eco production takes often place in small areas and is practiced among small enterprises. The knowledge in the field is limited because there are no higher or vocational study programs that would teach eco-agriculture in Estonia. In a smaller scale, honey and honey based product producers have developed a direct marketing strategy where they bring out importance of knowing the market, sales and communication skills (Valtin, 2016).

**Estonian Forest Development plan 2020** (2010) is assuring that the forests improve living quality, are lovely living environment and offer possibilities for resting and preventive healthcare. Forests carry a role of preserving cultural heritage and homogenous, sustainable, controlled management of them will bring wealth, but also keep the living environment and control the climate change. Plan concentrates widely on producing renewable energy from wood but mentions also that there are shortcomings in educating competitive forest managers, who would know the legislation and how to manage valuable biotopes and heritage objects. Instead of importing the wood, it should be turned into something with more value using new, knowledge based and effective technologies. In addition to using wood from the forest, the document covers usage of non-wood related materials. Problematic is how to save the forest-related cultural heritage, as the connection between generations is weak, generations change and the knowledge is not shared. It is important to inform and educate forest owners about the possibilities of using the forest in many different ways.

According to the **Estonian fishing strategy 2014–2020** (Estonian Ministry of Agriculture, 2013), fishing industry is looking for possibilities to start using more innovative production methods. The wellbeing of the sector depends directly on unstable natural reserves, but also on the knowledge and (traditional) skills of people living in coastal areas. Education is needed in the subjects related to economy, entrepreneurship, languages, environment, project writing and implementation. Networking, collaboration and monitoring systems, logistics are important for sustainable development of the sector. The document covers mostly wider view of the sector, not concentrating on small scale production. Cooperation on e-marketing and logistics is offered as a possible solution for availability problems.
Pilter (2014), who researched Estonian natural cosmetics producers, found in her thesis that Estonian nature cosmetic products are often made from organic natural materials, packaged sustainably and the entrepreneur tries to follow the principles of the green economy. Big problem is how to distribute the products. Certificates and quality stamps are not commonly used and entering the foreign markets is a future plan. The analysis also showed the lack of cooperation between manufacturers themselves and the government.

Entrepreneurs in Pärnu Bay area have stated in their development plan (Pärnu Bay Partnership Committee Strategy, 2015) that the priorities are knowledge transfer, improving innovation in agriculture, forestry and rural areas (arranging food chain, improving animal wellbeing, developing quality plans, creating more value and shortening supply chain). Priorities are also to develop economy, to be more resource efficient and with limited CO2 emission. The network is interested in raising the competitiveness in entrepreneurship. Cooperation pays more important role because of the aging and decreasing population.

Based on the analysed documents the most needed skills for entrepreneurs would be:

- differentiating from others and finding their USP;
- knowledge how to use latest IT solutions;
- low added value;
- marketing;
- developing quality plans;
- project writing skills;
- distributing the products and shortening the supply chain;
- improving animal wellbeing;
- problems regarding creation of synergy and collaboration;
- sustainable principles, effective energy management, water usage and waste management;
- use and implementation of scientific achievements in product development;
- using natural, historic and cultural heritage in product development;
- accounting, financial management, planning the budget.

Science and knowledge based usage of natural resources is mentioned in several Estonian strategical documents, because it helps to solve problems related to balance
between using and preserving limited natural resources, aging population and issues of sustainability.

As several sector specific documents noted that educating the entrepreneurs is needed, one part of the secondary data analyses was mapping the schools providing education related to entrepreneurship with a focus on natural resources. The universities and applied higher education institutions, that teach curriculums containing the words management or entrepreneurship, business management, business administration were mapped. From the selected curriculums, the subjects related to sustainable management, environmental management, responsible management, green management, environment quality management, management of natural resources and development of nature based products and services were selected. The following table gives an overview of findings.

<table>
<thead>
<tr>
<th>Name of the school</th>
<th>Curriculum name</th>
<th>Environment (or natural product) related subjects</th>
<th>Web-page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonian University of Life Sciences</td>
<td>Production and Marketing of Agricultural Products From idea to business plan</td>
<td>Basic course of rural entrepreneurship</td>
<td><a href="https://www.emu.ee">https://www.emu.ee</a></td>
</tr>
</tbody>
</table>
| Estonian University of Life Sciences | Rural Entrepreneurship and Financial Management | • Bio-economy  
• Ecology and Environmental Protection | https://www.emu.ee |
| TALTECH (Tallinn University of Technology) | International Business Administration | • Environmental and Sustainable Development Economics  
• Fundamentals of life | https://www.ttu.ee |
| EBS (Estonian Business School) | International Business Administration | Environmental related subject was mentioned in program description | https://ebs.ee |

**Table 1.** Estonian schools providing entrepreneurship education including subjects related to the environment and natural resources

**Tallinn University** (https://www.tlu.ee) also provides a curriculum called Integrated Natural Sciences that contain subjects like Sustainability in Entrepreneurship, Ecosystem services, Ecotourism, Environmental sociology, Eco-design etc. **University of Tartu** (https://www.ut.ee) has also several entrepreneurship related curriculums
and also curriculums giving in depth knowledge about biology and fundamentals of nature but environment related subjects were not communicated or taught for the students studying about entrepreneurship. Nature Based Tourism taught at the Estonian University of Life Sciences (https://www.emu.ee) contains subjects related both to entrepreneurship and environmental sustainability.

Värnik et al (2012) suggested combining teaching green skills within basic subjects with a purpose of achieving sector-specific knowledge and skills. Subjects should cover topics related to saving energy and other resources, evaluating environmental impact, effective and sustainable production, analyses of life cycle etc.

Since nature related topics are still not heavily taught in entrepreneurship education, entrepreneurs using natural resources were interviewed in order to understand what are the topics they would like to know more about. The summary concluding the findings of current chapter will be analysed together with findings from empirical research in chapter 2.1.

1.3. Empirical research by conducting semi-structured interviews

In addition to analysing recent sector-related reports, the research design involved collecting information from several other stakeholders – business development organisations and sectorial agencies and micro entrepreneurs active in green business with a main purpose of understanding what could be topics where entrepreneurs need and would like to improve their knowledge and skills. Sample was combined by using snowball methodology – project team selected informants, who suggested candidates for interviews.

Empirical research took place between May and August 2018. During this period, 11 micro sized entrepreneurs and 6 representatives of different organisations active in the field of green entrepreneurship support and consulting, were interviewed using semi-structured interview form (16 face to face and one telephone interview). Enterprises were mostly operating in West-Estonia, researched organisations were representing enterprises from all around Estonia.

Interview questions (see appendix 1) were combined by all project NatureBizz partners based on the topics identified in the secondary data analyses, covering topics from previous training and daily functioning issues, to the future of the sector. Interviews were conducted in Estonian, recorded, transcribed and systemised. Final results of the analyses were translated into English and can be found in chapter 2.1.
2. Mapping the skills and knowledge needed for micro entrepreneurs using natural resources

2.1. Skills and knowledge needed, identified in secondary document analysis

Analysed documents provided researchers with several important aspects that should be paid attention when developing educational programs for micro-entrepreneurs. To generalize the outcome of reading through many sector-specific development plans and strategies - needed knowledge could be classified into four main categories.

**Innovation and development.** Need to learn basic product development strategies, use of latest IT technology. Innovative ideas, how to create more value (added value) using raw materials, are needed. Not enough innovation in sector. They don´t see their USP and don’t know how to be different from competitors. Need to use scientific discoveries in small enterprises. Changing customers´ behaviour and buying habits. Knowing your client/customer (needs, wishes, preferences – collecting and analysing data, reading statistics). Target group-based services. Using natural, historic and cultural heritage in product development. New business models (in nature tourism sector). Synergy and collaboration.

**Strategic view** of the sector and synergy from cooperation is missing (exchanging experiences help to understand the problems better), seeing the big picture. How to use heritage? Power of nature in products. Customer service and guidelines for service providers how to offer quality service, hospitality, service culture. Measuring service quality and evaluation (quality programs), environmental certificates (ISO 14001), eco labels (Green Key, Nordic swan etc.). Skills how to research the customers. Packaging, calculations, accounting, financial management, planning the budget, customer journey, knowing legislation, shortening the supply chain. Cooperation activities and project writing skills. Locality as an important factor.

**Marketing.** Need to improve the communication skills and find the marketing possibilities. How to tell their story? How to research customers? How to go to foreign markets, how to use the latest IT solutions in their favour (marketing, marketing in social media)? Knowledge about logistics. Organizing events for marketing purposes.
Preserving the resources for the future. Sustainability issues and following the quality criteria (at the moment actions are project-based). Effective waste management, using current resources at the maximum possible way and adjusting with climate change and changes in the population. Protecting local natural and cultural landscape. Food safety. General wellbeing and healthy lifestyle, also improving animal wellbeing. Saving natural resources and using the latest technology. Social Corporate Responsibility, sustainable entrepreneurship. Developing local food offering. Compiling natural powers and resources with heritage (using it in product development). Taking into consideration actions causing climate change and over population. Knowing and using sustainable ways of production/providing services.

According to analysed documents, entrepreneurs working with natural resources and nature-based materials, could use additional knowledge on getting to know the customers, developing innovative products and services according to customer needs and marketing the results in both virtual and real environment. More knowledge is also needed in macro level about so called “big picture”, based on what strategies of company can be improved.

2.2. Skills and knowledge needed, identified in empirical research

With the main research, objectives and secondary data analyses in mind, real stakeholders also gave an input to the research. Umbrella organisations have information about several companies, and an opportunity to analyse the schooling needs within the sector. One of the interviewees was the representative of Leader group, two were mainly active in mentoring and supporting, one is bringing together different stakeholders in rural areas and two represent enterprises who bring together camping and nature-tourism providers.

Representatives of 6 different organisations involved in green entrepreneurship thought, that the main aspects that need to be considered when educating their members, are:

- sustainability in using natural resources (ability to see the big picture – how the whole supply chain is built up and what is entrepreneurs role in it);
- overall knowledge about environment, green economy and circular economy;
- waste management and from tourism entrepreneurs perspective: ecological toilets should be installed in natural environment;
- best practices (what others have done, what went well, what went wrong);
(joint) product development and marketing activities (with virtual marketing it is important to have a mentor or someone who would “hold their hand” and that something practical would be an outcome);

- legislative advice and skills how to operate according to the laws;
- how to get to know the customer.

Three interviewed people from organizations also noted that micro entrepreneurs are getting tired of fighting against the system and big companies (that have more resources). Two noted that research has to be behind every product if the entrepreneur wants to be successful. Courses have to be practical (the entrepreneur has to have something that they can use right away in their activities), based on best practices. It would be good if at least half of the courses would be eye to eye.

11 micro entrepreneurs using natural resources were also interviewed. 8 of them collect natural resources straight from the nature (e.g. collect nettle, berries, insects, plants, mushrooms, herbs, dandelion, hay, reed, wood) or grow the necessary resource (apples, berries, herbs, honey from bees, wool, skin and meat from sheep, milk from cows), 3 use resources indirectly (provide tours in natural environment, photograph nature, use solar power). When asking about understanding the concept of green entrepreneurship most commonly used words were: sustainability, recycling, composting and waste management in general, saving energy and not wasting other natural resources. All of the entrepreneurs consider themselves being sustainable, because this is the only way they can and want to operate, few doubted about being green.

Regarding the question about going to international market, entrepreneurs were divided: half said that they are interested on going to international markets, another half wished that the customers would come to buy the products directly from them. Entrepreneurs understand that the market is in need of natural and pure products. Only one entrepreneur out of 11 has collaborated with the university and developed its product based on a scientific research. Same entrepreneur is also active in several markets abroad. In most of the cases the micro entrepreneur knows the natural materials they work with, very well (and has also educational background in that field). Motivation for working comes from the values that they believe in and want to share with the world.

Most of the interviewed entrepreneurs are also familiar with their customers. They ask directly from the customers and change/develop the products according to the feedback. If asked about wellbeing, everybody finds several aspects how their product provides wellbeing to their customers. The entrepreneurs are also active in wider
level, they involve locals and provide wellbeing also to the community. Collaboration pays an important role in their activities, yet few admit that it can be hard sometimes.

When asked about the future, few are really optimistic and few hope that they are still in business. It is acknowledged that the sector will be more important in the future and customers demand more pure, ecological products (and that the market is growing). Several mentioned that they will not be mass production company but hope they earn a decent living.

The topics of courses that would interest entrepreneurs: specific natural material related topics, trends in customer behaviour and marketing, product development. One entrepreneur mentioned law related aspects and language skills were also a topic that was mentioned several times. Learning in English can be problematic.

Courses have to be practical – learning by doing (they need some sort of a result after the course, something that they can take and start using), mentoring is important (somebody whom they trust and who understands the field, motivates and helps). 4 entrepreneurs said that they would not participate in e-course and the rest suggested that it has to be combined with practical face-to face time (preferably containing company visits, learning from others, both success and failure stories). Location of the courses should be close to where the micro entrepreneurs operate. Time is really valuable, so the entrepreneur has to see direct use of the course in order to participate.

Based on the research conducted among entrepreneurs it could be said that micro-sized entrepreneurs who use natural resources would most like to have a mentor from who they could get mostly advice related to virtual marketing. They acknowledge the need of improving their skills and knowledge but are doubtful if they could find time from their busy schedule to participate in an on-line course.
3. Summary of skills and knowledge needed for micro entrepreneurs using natural resources

Based on the analysed documents in the first chapter, interviewed entrepreneurs and support organisation representatives, the key topics to consider when educating micro entrepreneurs who use natural resources are:

1) big picture about the environment, green economy and circular economy (also developing a supply chain);
2) important topics to cover are also sustainability in using natural resources, waste management;
3) trends in customer behaviour and marketing, how to get to know the customer;
4) product development and specific natural material related topics;
5) (joint) product development and marketing activities (with virtual marketing it is important to have a mentor or someone who would “hold their hand” and that something practical would be an outcome).
Legislative advice and skills how to operate according to laws and language skills were also topic that was mentioned several times (by entrepreneurs). In addition to not being able to communicate with international customers, lack of English can be also a problem from the point of view of expansion to new markets, learning new skills and getting new knowledge provided thru internet.

From the entrepreneurs point of view, best and worst practices (what others have done, what went well and what went wrong) from the field are an important opportunity to learn from, therefore practical learning and company visits are important source of knowledge.

The researchers hope that the results of Estonian country report are a valuable input for achieving project NatureBizz’s objectives, among them developing important education modules for entrepreneurs.
Used documents


Appendixes

Interview questions for entrepreneurs

General information
1. When was your company established?
2. How many employees are in your company?
3. Please name your main products/services. (Tell me about your products)

Nature & green approach
4. Do you use natural resources in your business activities?
   If yes, please mention _____________________________________________
5. What is your opinion, is your business connected with nature?
6. What does green business and green entrepreneurship mean to you
   Green business _____________________________________________________
   Green entrepreneurship ______________________________________________
7. How responsible/sustainable/ethical is your business in your opinion? How about use of natural resources?

Development of business, sales, marketing, communication
8. How do you find out if there are any new customer needs?
9. Are you thinking about expanding (local, regional, national, international)?
   Into new customer segments? New products/services?
   Possibilities and challenges for expansion/growth/development?
10. What is your target market? Who is your client?
11. How do you
   a) market-
   b) communicate-
   c) sell your products/services/brand/ and
   a ....... sustainability of your...?

Products
12. What kind of value does your products create for the consumer? Why are your products better than the ones provided by competitors?
13. How do you design/develop your products and services?
14. Does your products provide wellbeing? Local community, human health, animal wellbeing etc. How, in what ways?

Needs for training
15. What kind of additional business skills and knowledge do you need to be able to use natural resources in your business activities? NB!
16. How do you communicate the sustainability of your products and services?
17. With whom do you collaborate (clusters, networks)? What are the benefits and challenges of cooperation?
18. How would you like to develop your business? What are the challenges?
19. Do you plan to use more natural resources in your business? Yes/No
   Do you think you would need more knowledge, skills or competences for that?
   Please, mention __________________________________________________
20. What are the proportions of green products in the your total income?
21. What training/education have you participated in? What kind of training do you need? How should it be organized and delivered (in what formats)?
22. How should the study program be implemented?
23. Will it be realistic for you to participate in all 4 on-line courses? when? how? time-period? content? purpose? What is your view on university credits for the participation (if possible)? What is your views on a diploma/certificate?
24. We have planned a study trip for entrepreneurs piloting the courses. Where would you like to go? How much are you willing to pay extra for participation of a 3-4 day study trip? Background info about possible alternatives? When? Why? Purpose?
25. How do you view your company in 5 years? In 10 years?
26. Anything you would like to add?

Interview questions for organisations
1. What kind of micro size entrepreneurs using natural resources are represented by your organisation/ are in your area?
2. What kind of natural resources are they using in their business activities?
3. What kind of additional business skills and knowledge do they need?
4. How do you see the state of art of the sector now and how do you see the development of the sector in the future? Why?
5. SWOT of the sector
6. Have you provided trainings for micro size entrepreneurs related to the topic (business skills/natural resources)?
7. How should we implement the trainings?