

CASE STUDY

GRASS-FED BEEF (ESTONIA)

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1	Introduction: What is the case study about?	129
2	Definition of the social-ecological system (SES) studied.....	134
2.1	Figure of the SES, using the revised SES Framework	134
2.2	Description of the SES	136
2.3	Levels of ESBO provision, trends and determinants	138
2.4	Ancillary economic and social benefits provided ‘on the back’ of ESBOs.....	142
3	Shifting societal norms, collective learning and voluntary actions	143
4	Mechanisms, (collective) actions and governance arrangements to enhance the level of ESBO provision.....	144
4.1	Organisational capacities, leadership, networking and communication	144
4.2	Innovative governance arrangements and mechanisms supporting ESBO provision	144
4.3	The role and impact of policy in ESBO provision.....	145
4.4	The role of the private sector in ESBO provision and enabling factors.....	148
5	Potential pathways towards an enhanced provision of ESBOs.....	149
6	Suitability of the SES framework and ‘action-orientated approach’ in the analysis of ESBO provision	150
7	Main conclusions derived from the Steps 3-4 analysis.....	151
7.1	Key findings on the particular SES and the provision of ESBOs	151
7.2	Key findings on governance arrangements and institutional frameworks	152
7.3	Other enabling or limiting factors	153
7.4	Contributions to EU strategic objectives.....	153
7.5	How about the transferability of the approach/mechanism used?.....	153
8	References (including projects docs, evidence reports etc.).....	155
9	ANNEX: Reflections on the case study methodology used	158
9.1	Objectives and activities undertaken with initiative/stakeholders.....	158
9.2	Outcomes and further steps	158
9.3	Judgement on the process	158
9.4	Supporting data and statistics.....	158



1 Introduction: What is the case study about?

This case study (CS) is about the whole chain approach (production-processing-marketing) of organic grass-fed beef, targeting the following ESBOs: biodiversity, landscape, carbon sequestration/storage, rural vitality and animal welfare.

The main aim of this private initiative – led by farmers NGO Liivimaa Lihaveis (Beef of Livonia) – is to be independent from the mainstream processing and marketing system, to give more added-value to the products and to offer better prices for their members and related producers. The promotion of the consumption of grass-fed beef and the environmental benefits related to this (e.g. management of grasslands, including biodiversity-rich semi-natural grasslands) are very important for the whole approach.

NGO Liivimaa Lihaveis, the only NGO of its kind in Estonia, established in 2010, is a non-profit organisation led by producers of beef cattle from different locations across Estonia. The NGO was founded by 11 producers of Aberdeen Angus and Hereford breed beef cattle. Since 2014 all members are also certified organic. The NGO unites individual farmers and agricultural companies, different in terms of farm size and production volume: from smaller farms with about 50 animals, up to big farms with 2000 hectares of land and up to 500 beef cattle animals. In 2010, some founders of the NGO established also a private limited company (Nordic Beef) whose main function became distribution of grass-fed beef meat under the officially registered trade mark “Liivimaa Lihaveis”.

Figure 1: Logo of Liivimaa Lihaveis.



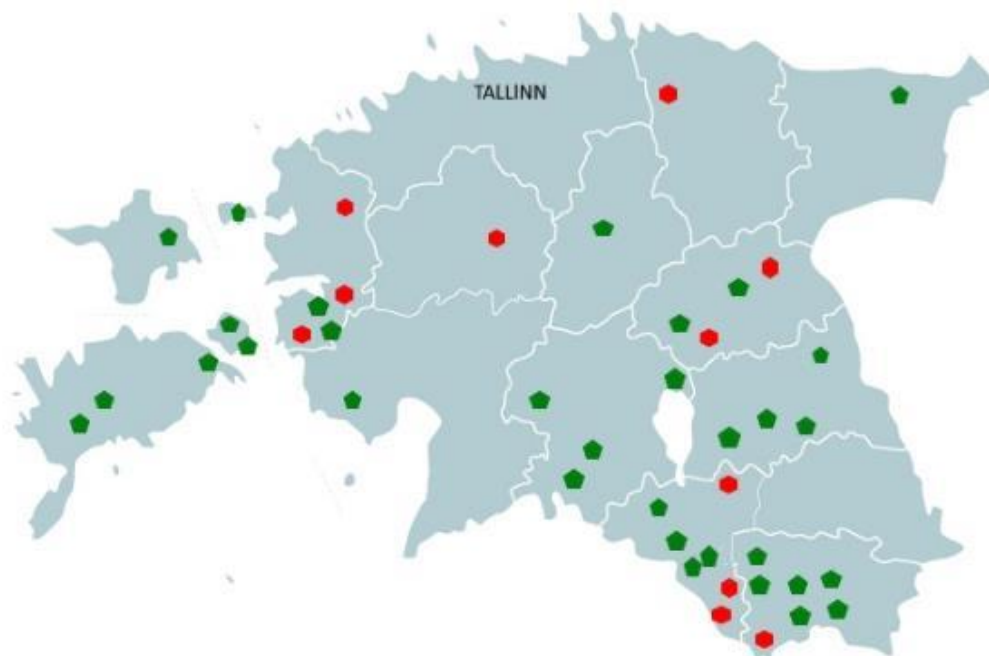
The NGO Liivimaa Lihaveis initiated and developed the national food quality scheme “Grass-fed beef” which was certified by the state in 2014. A good price for the beef provided by Liivimaa Lihaveis and the need to increase the marketing volume attracted other beef producers to join the grass-fed beef quality scheme. More than 30 organic farms/enterprises (in addition to the members of the NGO) from different parts of the country have joined the quality scheme since 2014 and the total number of farms who are part of the quality scheme and marketing their products under trademark “Liivimaa Lihaveis” is currently 43 (as of December 2016, see Figure 1)¹. The state certified grass-fed beef quality scheme is opened for new producers who follow the requirements of the scheme.

¹ In the following text “Liivimaa Lihaveis” is used for simplicity, but it consists of NGO Liivimaa Lihaveis (production), private limited company Nordic Beef (distributor) owned by some members of NGO, Luha meat factory, and all farms belonging to grass-fed beef quality scheme and marketing their products under trademark of “Liivimaa Lihaveis”.

Figure 2: Logo of grass-fed beef quality scheme.



Figure 3: Location of founders of NGO Liivimaa Lihaveis (red) and farms joined grass-fed beef quality scheme (green). Source: own compilation.



The grass-fed beef quality scheme² unites producers of Aberdeen Angus, Hereford and Simmental breed beef cattle (or cross-breeds). All farms must be certified organic. According to the quality scheme, cattle must be grazed on grassland throughout the grazing period, during the winter period they must have the freedom to move freely. 50% of pastureland used for grazing should be permanent (not ploughed or cultivated). Feeding any grain to the cattle is not allowed.

In 2016, some founders of NGO Liivimaa Lihaveis became owners of a meat processing private limited company (Luha Lihatööstus) where currently all the grass-fed beef products are processed. Luha Lihatööstus is now also owner of trade mark “Liivimaa Lihaveis”.

² http://media.voog.com/0000/0040/1347/files/Kvaliteedikava_koduleht_en.pdf.

The total area of organically managed farmland of these 43 farms is now about 16 000 hectares, including about 12 000 hectares of grasslands (mostly permanent grasslands), of which about 3000 hectares are valuable semi-natural habitats (about 10% from total area of managed semi-natural habitats in Estonia; EARC, 2015) located mainly on Natura 2000 areas. Farms belonging to the grass-fed beef quality scheme have in total more than 6000 beef cattle animals (about 8% of total number of Estonian beef cattle, see annex 9.4.1).

Figure 4: Beef cattle of Liivimaa Lihaveis on grassland.



Photo: Liivimaa Lihaveis

Products under the trade mark “Liivimaa Lihaveis” are sold in different retail channels and provided to restaurants/cafes and some schools, in more than 150 places in total. Recently they started introducing the products in the hotel/restaurant/café (HoReCa) sector of Latvia and Sweden. Around 50% of the produce is currently exported. Liivimaa Lihaveis is cooperating with more than 20 well-recognised Estonian, Latvian and Swedish chefs. Very high attention is paid to increasing the consumer’s awareness and of the benefits related to this type of production.

Figure 5: Product of “Liivimaa Lihaveis” brand for retail channels.



Photo: Argo Peepson

The case study is focussing on environmentally and socially beneficial outcomes (ESBOs) under the broad categories of: 1) high levels of **biodiversity**, 2) protecting **landscape character and cultural heritage**, 3) **climate change** mitigation through carbon sequestration/storage in managed grasslands, 4) preserving and enhancing **rural vitality**, 5) high levels of farm **animal welfare**. Other ESBOs to which CS is related include *sustainable and sufficient production of food, timber and energy; healthy, functioning soils; high water quality and ensuring water availability, and public recreation, education and health*.

The CS report will build on previous work carried out during WP4 steps 1-2 (Peepson and Mikk, 2016b). To deepen the analysis, additional literature review and data collection were carried out. The most important source of information came from the series of interviews and meetings with main actors and stakeholders, including:

- 18 farmers (members of Liivimaa Lihaveis/grass-fed quality scheme)
- 2 co-founders of Liivimaa Lihaveis/Members of the Board (Liivimaa Lihaveis/Nordic Beef)
- 4 restaurant chefs
- 4 retailers
- 1 agricultural adviser

In this report, all quotes and other information are sourced from interviews and meetings with key actors, unless cited otherwise.

BASIC FACTS

Table 1: Overview

Country	Estonia
Region	n.a.
Main Farming/forestry system	Agriculture: extensive organic grass-fed beef production
Area (ha) of initiative	~16 000 hectares (incl. ~12 000 hectares of grasslands, of which about 3000 hectares semi-natural habitats) (as of December 2016) across the country
Key ESBOs	Biodiversity, landscape character and cultural heritage, carbon sequestration/storage, rural vitality, animal welfare
Total no. of farmers/ foresters involved	43 (as of December 2016)
Other key stakeholders involved	Main actors: NGO Liivimaa Lihaveis, Nordic Beef Ltd, Luha meat factory Ltd, members of grass-fed beef quality scheme; other key stakeholders: slaughterhouses, retailers, restaurants and other caterers, chefs
Source(s) of funding	Private, CAP, other EU measures, national
Start date of initiative	2010



2 Definition of the social-ecological system (SES) studied

2.1 Figure of the SES, using the revised SES Framework

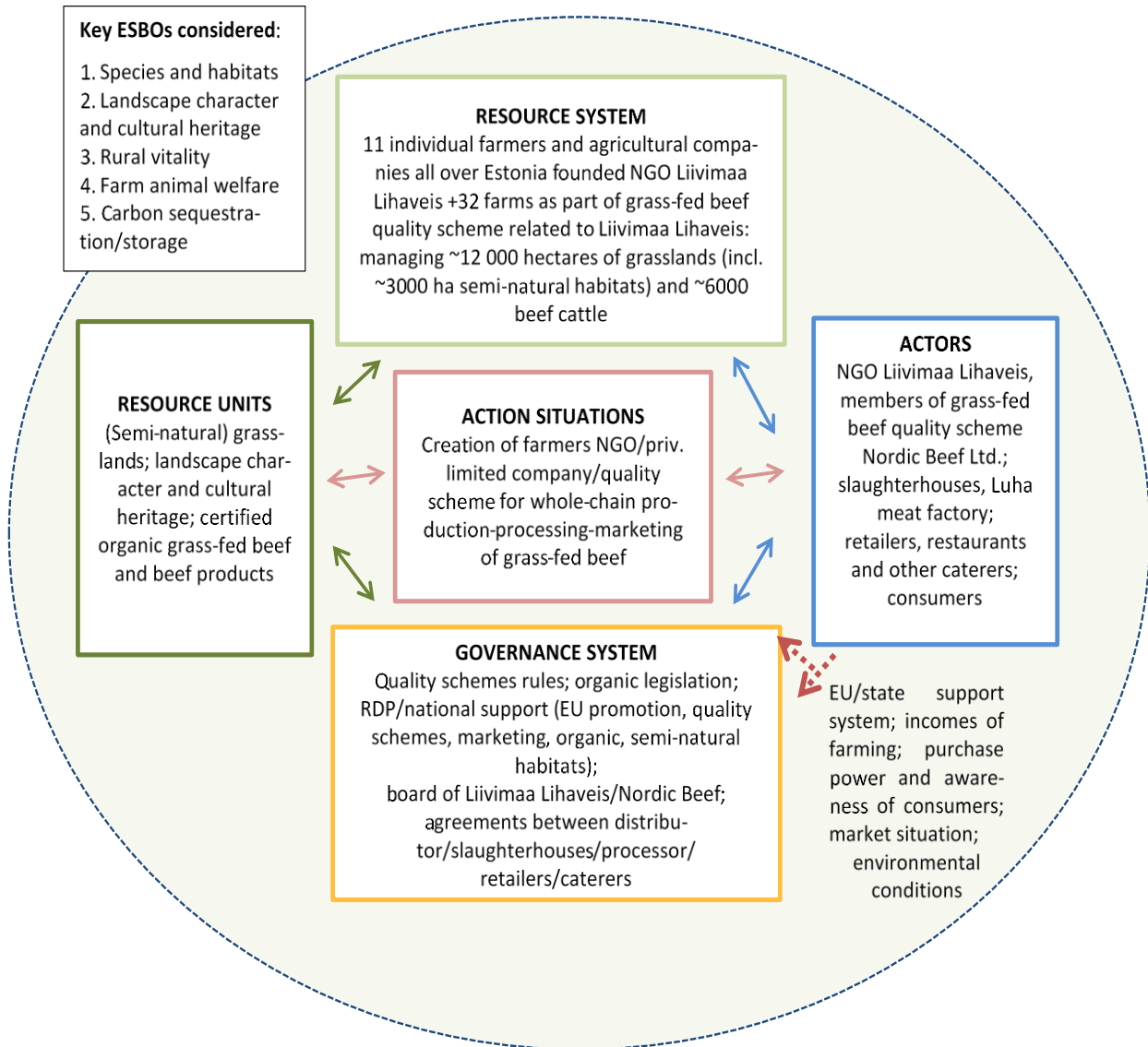


Figure 6:
Case study “Grass-fed beef” Social-Ecological system
(after McGinness and Ostrom, 2014)

The current CS is *not* directly related to a certain geographical area. We would not divide the system artificially into arbitrary parts and thus the resource system (RS) and resource units (RU) are considered as one complex.

Achieving (or maintaining) the presence of diverse and sufficiently plentiful *species and habitats* (ecological diversity) within RS/RU in this case is reached mostly through management of (semi-natural) grasslands. Farms related to this CS are managing more than 12 000 hectares of grasslands, from which a significant area (about 3000 hectares in total) are semi-natural. Semi-natural grasslands are the result of a centuries-long moderate human impact – mowing and grazing. The area of semi-natural habitats has decreased dramatically in Estonia during the last century for several reasons: intensification of agriculture (new machinery and techniques, amelioration), collectivisation of agriculture during the Soviet period and land reforms. At the beginning of 20th century, it is estimated that there were about 1 800 000 hectares of semi-natural habitats in Estonia. For now, about 130 000 ha have been preserved (State Audit Office, 2015; EMoE, 2013) and during 2007-2014 only less than 30 000 hectares of semi-natural grasslands were actively managed (and supported through Estonian RDP; Statistics Estonia 2015). These habitats are very rich in biodiversity and they are threatened in Europe as well as in Estonia. For example, about 700 plant species can be found on the Estonian semi-natural habitats and the biggest diversity of plant species has been found on wooded meadows – as high as 74 different plant species per m² (EMoE, 2014). Semi-natural habitats can be preserved only if continuously managed and beef cattle is very suitable for management of several of these habitats (e.g. coastal and floodplain meadows, wooded pastures). Currently around half of all managed semi-natural habitats in Estonia are grazed by beef cattle (Estonian Fund for Nature, 2014). Management of (semi-natural) habitats also has great value for protecting *landscape character and cultural heritage* while helping to preserve traditional open agricultural landscapes.

The governance system (GS) builds on organic farming, the quality scheme legislation and its rules. *Farm animal welfare* standards are higher in organic farming compared to conventional agriculture, and grasslands provide an excellent environment for grass-fed beef cattle.

The case is also significant in order to achieve climate change mitigation objectives through *carbon storage*. Grasslands act as carbon “sinks” and are therefore important in the effort to reduce levels of greenhouse gases (GHG) in the atmosphere. According to the Intergovernmental Panel on Climate Change (IPCC), 89% of agriculture’s global GHG mitigation potential is from carbon sequestration (IPCC, 2007). Grasslands store approximately 34% of the global stock of carbon in terrestrial ecosystems (European Commission, 2008). For example, in the UK, the potential sequestration is said to be 670 kg C/ha/year (Soil Association, 2009).

The actors (A) and action situations (AS) of this approach support the preservation and enhancement of *rural vitality* through the provision of employment for local people who otherwise might leave the countryside. The higher prices the farmers get through this approach helps to sustain the production. Cooperation with local caterers helps to sustain local businesses.



2.2 Description of the SES

For better understanding of the functioning of the SES, it is important to mention that production and consumption of beef (and in particular grass-fed beef cattle breeds) has not been traditionally common in Estonia and is still relatively modest. Production of beef cattle breeds started more widely in Estonia only about 15-20 years ago. The case is thus developing the whole beef sector, including the culture and habits of beef consumption in Estonia.

Central to the SES has been the notion of the Estonian beef producers that in order to influence the current system of production and processing, common action, co-operation and initiative was needed. According to the representative of Liivimaa Lihaveis: *“The market situation in 2010 was unfavourable and the price provided by the market leader of the Estonian meat industry and the holder of the trademark “Estonian Beef” was very low, like for cull cows, breeds of Angus and Hereford did not meet the requirements dictated by the industry thus it was economically unprofitable to sell the animals there. We wanted to be independent from manufacturing pricing decisions and provide a more value-added and diversified production”.*

The high share of grasslands, especially semi-natural habitats, in Estonia and in all the farms who founded Liivimaa Lihaveis, was considered as a good basis for differentiation and marketing. Together with organic certification this ensures the highest possible price: *“Grass-fed beef and organic production is our opportunity and speciality which in the long-term provides the highest possible price”.* With the creation of the Liivimaa Lihaveis, they are able to control the whole chain and get a higher price for their products (about 20-25% higher compared to the market average price) This in turn safeguards continuation of production and is directly related to provision of ESBOs related to this approach.

This SES consists in total of 43 individual farmers and agricultural companies all over Estonia. Members of Liivimaa Lihaveis organise jointly the slaughtering, processing and marketing. The slaughterhouse service is bought in from 2 slaughterhouses, one of them in Latvia, and processing is taking place in newly owned meat factory. Liivimaa Lihaveis is providing training and information for its members and to other beef producers interested in joining the grass-fed quality scheme. For example, study trips to USA, Argentina and Uruguay were organised for learning and to *“widen the horizons”*. A common interest of the Liivimaa Lihaveis is to develop the domestic market, especially the HoReCa sector, and also expansion in Latvia and Sweden and to start development of the market in Lithuania and Finland.

NGO Liivimaa Lihaveis as beef cattle provider, Nordic Beef as distributor and Luha Lihatööstus as processor are led by the board (2 board members of all organisations are the same) implementing strategic decisions taken by the general meeting of the NGO (organised once or twice a year) and responsible for everyday management of the organisations, including communication and making agreements with butcheries, retailers, caterers and other customers, and organising promotional activities. Day to day communication with members of the NGO is by phone and e-mail.

Liivimaa Lihaveis is taking an active part in different networks and is a member of several organisations such as the Estonian Chamber of Agriculture and Commerce, Estonian Organic



Farming Platform and NGO Maitsev Lõuna-Eesti (a local small-scale producers` network). Several recommendations and notes (e.g. related to quality schemes, cooperation measures, water regulation) made by Liivimaa Lihaveis have been taken into consideration by ministries. Members of the quality scheme are not only selling their beef cattle through Liivimaa Lihaveis, but are also involved in development of the whole production side of the approach.

The whole system is organically certified by the state and inspected by the Agricultural Board (production) and the Veterinary and Food Board (processing, marketing). As for the production side, management of grasslands in protected areas is regulated by environmental law, the authorities involved are those under the Ministry of Environment (Environmental Board, Environmental Inspectorate). Several of the semi-natural grasslands used by the farms are rented from the state (State Forest Management Centre).

A good synergy within the SES is achieved through co-operation with restaurants providing high quality meat and through organising different events in order to promote grass-fed beef consumption and cooking. A restaurant chef who was interviewed said: *“Although the average Estonian consumer is looking for cheaper products and is not used to consuming beef, the number of more aware people who appreciate food produced sustainably and responsibly is increasing. We have many loyal customers asking especially for organic beef from grassland.”* At the same time the knowledge of most chefs about the production methods of the raw ingredients they use in their food (and its quality) needs further development.

There are some tensions in the SES about the contribution by everyone to achieve the common goals. Successfully reaching the commercial goal of the approach – i.e. to give more added-value to the beef they produce – depends largely on farmers` willingness and motivation to concentrate (and invest) into increasing the value of their animals. Export of young living animals does not need much investment and gives quite a good price thus many farmers are often choosing the “easiest way”. Also there are rising concerns about animal welfare issues when exporting living animals over long distances, and also the political instability of some export markets (Turkey, Lebanon). Some farmers of the quality scheme seem unsatisfied with the current payment period (up to three months) provided for their cattle by Liivimaa Lihaveis. It is a known issue and the leaders of Liivimaa Lihaveis are aware of it. Still, to keep farmers motivated, this obstacle needs to be solved.

Tensions related to the SES are also related to a dispute on the use of a label for grass-fed beef (a green coloured label with beef cattle). As the label of the quality scheme is not a trademark and it is not possible to register it as trademark, one of the Estonian meat factories took advantage of it and has registered a trade mark extremely similar to one used by Liivimaa Lihaveis (state certified grass-fed beef). While products marketed by Liivimaa Lihaveis under the label ensure that beef cattle is feed with grass only, the competitor allows a proportion of grain in the feed. That is why Liivimaa Lihaveis considers it misleading to the consumers (Äripäev, 2016c). Therefore, Liivimaa Lihaveis had to stop using the previous label and introduced a new one. The whole situation is further complicated by the fact that the meat factory involved in the dispute was previously a cooperation partner of Liivimaa Lihaveis (slaughtering service provider). On the other hand, this dispute shows that grass-fed beef is already well known in market, trusted by the consumers and there are competitors willing to “pick up the fruits” of the hard work of developing the whole grass-fed beef sector by Liivimaa Lihaveis.



2.3 Levels of ESBO provision, trends and determinants

ESBO provision

No specific data is available in order to assess the quality and quantity and level of provision of ESBOs provided *specifically* by this case, therefore assessments and judgements are based on interviews with stakeholders or general data and statistics available at country level. Quantitative data collection on key ESBOs studied within this CS would require intensive special field work (e.g. species diversity and abundance of semi-natural habitats, landscape character assessments etc.) and this was not possible within this project.

The status of the Estonian environment is monitored through the state environmental monitoring programme, which includes among other aspects monitoring of air, ground- and surface water, biodiversity, landscapes and soils. Valuable information about the environmental and socio-economic status and trends is also collected through on-going evaluation of Estonian RDP measures conducted by the Agricultural Research Centre (Axis 2 measures) and the University of Life Sciences (Axis 1 measures).

For the judgement on levels of **biodiversity** (species and habitats) provision, the national monitoring data of semi-natural habitats and related species could be used. The general state of some types of the habitats (e.g. coastal and floodplain meadows) has improved in recent years thanks to management and restoration works (ARC, 2015). The CS actors have made significant contribution herein. As many semi-natural habitats have been left out of management (overgrown with trees and bushes), biodiversity related to these habitats has declined. Data shows for example, that a decline has been registered in the abundance of some species related to semi-natural habitats (e.g. Natterjack Toad). The abundance of birds on coastal meadows (e.g. Common Dunlin, Ruff and Common Redshank) is moderately declining, the abundance of Northern Lapwing and Common Ringed Plover is stable, and the abundance of Black-tailed Godwit and Black Turnstone is strongly decreasing (ARC, 2015).

Grasslands store rather significant amounts of carbon and are therefore important for reducing GHG levels in the atmosphere. Inventories and research on soil **carbon sequestration and storage** has been done by several research institutions (e.g. Estonian Environmental Research Centre/Estonian Environment Agency, Estonian University of Life Sciences, University of Tartu, Agricultural Research Centre). A study by Kõlli et al (2007), indicates 39.9 ±8.0 Tg of soil organic carbon (SOC) is sequestered in Estonian grassland soils. And a study of University of Tartu, SEI Tallinn and Estonian Fund for Nature (2013), indicates carbon storage of grasslands reaches up to 160 000 t CO₂-eqv.

The need for the maintenance of **rural vitality** is commonly appreciated and agreed in Estonian society. The preservation of rural vitality consists in the provision of employment and income, and also maintaining local communities, knowledge and traditions – keeping people in rural areas. The case study actors contribute through their activities (provision of employment and income, management of grasslands etc.) to the maintenance of vitality. Without marketing opportunities, many of them would have to stop farming and move to towns and cities which would have direct impact on rural vitality. Marginalization of rural areas – i.e. impoverishment in part of the territory and the movement of the population to the cities or



abroad – has been accelerated significantly in the last few decades in Estonia, mainly due to the loss of jobs, the aging of the rural population and negative population growth. More than 50% of Estonian municipalities (with a total population of 140 000) and more than 50% of Estonian territory can be considered as marginal (Raagmaa, 2011). The number of agricultural holdings has decreased substantially in Estonia, from 2003 to 2013 by about 49% (from 36 792 to 18 755 agricultural holdings respectively; Statistics Estonia). There are several surveys conducted in order to assess the marginalisation process in Estonia (Estonian Ministry of Internal Affairs, 2009; Estonian Co-operation Assembly, 2010) which include assessment of social viability in rural areas. Kliimask and Sepp (2015) have made analysis of socio-economic data and indicators for assessing the vitality of settlements using the *settlements vitality index*³ which includes several population parameters (number of inhabitants, age structure). However, the population trends, assessments and analyses conducted are not capturing the social characteristics related to rural vitality like the sense of community, social capital and trust, and “sense of place”.

Appreciation and demand of ESBO provision

According to the most recent environmental awareness survey (EMoE, 2016) 89% of the population see Estonia's state of the environment as good and 7% as very good. Among the three environmental areas needing the most attention, the most frequently mentioned were purity of the inland waters and the sea, followed by protection of natural values, forest management and sustainable use of natural resources. Although biodiversity is considered to be one of the policy priorities when talking about the environment, surveys do not confirm that this is also important for the wider public. The Eurobarometer survey (European Commission, 2015) shows that only 11% of respondents in Estonia see the decline and possible extinction of animal and plant species, habitats and ecosystems as a very serious problem and around half (49%) think that this is a serious problem to some degree. Agriculture and forestry, intensive farming, intensive forestry and over-fishing are considered as very much threatening biodiversity by 33% respondents in Estonia.

The Agricultural Research Centre (ARC) has conducted a study (2015) to collect the opinions of farmers receiving support from RDP Axis 2 measures, notably agri-environment measures, incl. support for the management of semi-natural habitats. Most of the producers who were responding to the survey (86%) considered livestock grazing important for the management of habitats. At the same time about 50% of farmers thought that the increase of biodiversity was not needed on their own agricultural land, as it is high anyway and only about 30% of farmers felt that biodiversity could be higher on their agricultural land while about 20% did not have an opinion on that issue.

For the case study actors, the most important ESBOs provided are the environmental benefits related to sustainable production based on grasslands management (biodiversity, landscape), healthy and high quality food and animal welfare, the latter two are especially important for consumers while the farmers interviewed mentioned landscape management the most. Also,

³ http://bef.ee/wp-content/uploads/2015/06/VivaGrass-Lymanda-2015_KalevSepp.pdf.



rural vitality is considered to be important as the “*higher price and increased marketing opportunities of the produce sustain production for more farms in rural areas*” and “*farmers should get for their work what they deserve*”.

Main determinants of improvements in ESBO provision and key limiting factors

Consumer’s awareness is crucial throughout the beef supply chain. By increased consumer awareness there is good potential that more and more consumers choose beef and the whole concept of this case can be widened. The organic label gives additional benefit, as organic is becoming increasingly popular despite higher prices.

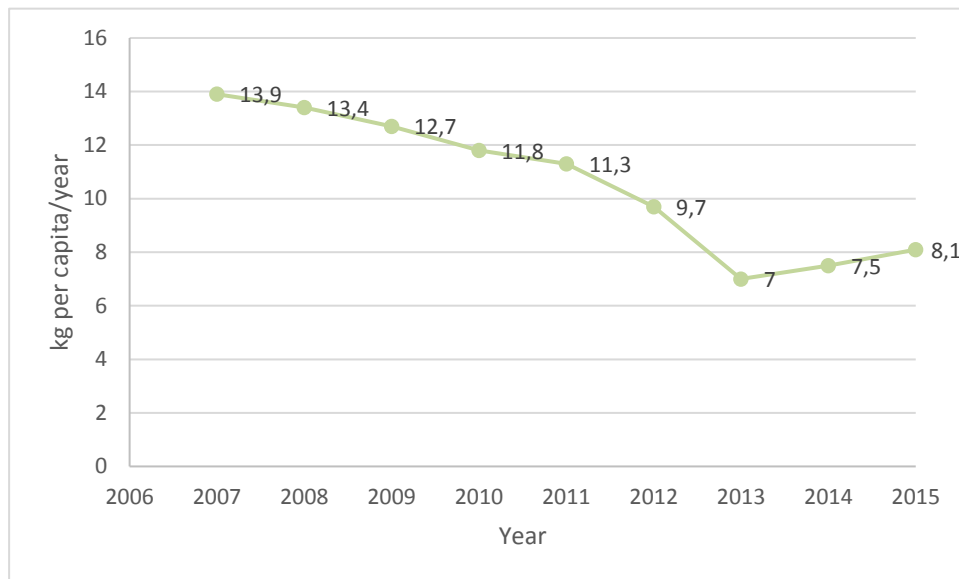
Consumer’s interest in high quality beef meat is not very high in Estonia for many reasons. Beef is not commonly eaten, consumers do not have knowledge about the preparation of beef and have preconceptions about beef meat. Also, the retail price of beef is relatively high, especially compared to pork or chicken and the purchase power of the consumers is at the same time relatively low. The awareness of the “average” consumer about the advantages of beef (e.g. environmental benefits, animal welfare) is relatively low.

At the same time consumers have become increasingly aware of what they are buying and appreciate the domestic quality products – 74% of Estonian consumer’s claim to prefer domestic food (Estonian Institute of Economic Research, 2017). However, Estonian consumers are price sensitive and the price is still one of the most important aspects when making buying choices. The price of beef cattle meat has been increased 30% compared to 2010 (Äripäev 2016a) and the price has increased much faster compared to other meat: beef is 1.9 times more expensive than pork and 3.9 times more expensive than poultry (EMoRA, 2016).

Specific data on grass-fed beef consumption in Estonia is not available – nor any other specific statistics related to beef cattle breeds of meat (e.g. amount of production and consumption etc.). Data is only collected about the whole cattle sector. Consumption of beef (incl. beef meat from dairy cattle) in total has decreased about 50% in Estonia from 2006 to 2013, since 2013 consumption is increasing slightly again and amounts to 8.1 kg per capita per year (Figure 3), but is still significantly less than eating of pork (41.8 kg per capita/year) and poultry (24.7 kg per capita/year). Eating of both pork and poultry has increased compared to 2006, especially poultry, which has increased about 50% (Statistics Estonia, 2016).



Figure 7: Consumption of beef in Estonia 2006–2015 (kg per capita/year)



Source: Statistics Estonia, 2016

Currently considerably more beef is produced than consumed in the domestic market. The predominant current market of beef cattle in Estonia is the export of live animals. One of the reasons here is that retail channels often prefer to sell imported beef with lower production costs and better prices (e.g. from South-America). In 2015, the export of live animals accounted for more than 9000 heads, therefrom nearly 5000 young animals (EMoRa, 2016; Noorkõiv, 2016). Live animals were exported to 12 different countries, mostly to Turkey, Poland, Lithuania, Slovenia, Hungary, the Netherlands, but also Lebanon, Uzbekistan and Georgia (EMoRa, 2016). Selling living animals to Turkey and other countries has increased prices in the Estonian market and interest in raising beef cattle.

- Main determinants of improvements in ESBO provision include:
- availability and stability of available support measures and incentives, especially related to organic farming, quality schemes, co-operation, promotion and marketing, innovation and export;
- shift in farmer's attitude towards recognising the importance of domestic market, organic grass-fed beef production is speciality and niche, providing best price for the products in long term. This leads to expanding the number of farms of grass-fed beef quality scheme, which in turn enables increase in area of sustainably managed grasslands (incl. semi-natural grasslands), helping to enhance also related ESBO provision;
- shift of policy from agricultural policy towards food policy with support systems and legislation supporting environmentally, economically and socially sustainable supply chains;
- changes in consumer's behaviour and knowledge about the origin and production methods of the food and related benefits.

Key **limiting factors** in ESBO provision include:

- selling living animals to Central-European countries and Turkey which has increased prices in Estonian market (and thus negatively affects the purchasing power of consumers) and interest in raising beef cattle with the aim to export of young living animals;
- lack of strategic long-term thinking in agricultural sector and missing of more foresight strategies;
- legislation which does not favour innovation and untraditional thinking and slow preparation of new legislative acts and constant changes of legislation;
- inconsistencies in policy objectives (e.g. climate change vs biodiversity) and related legislation;
- administrative burden and bureaucracy related to support measures: too many inspections, too detailed reporting, making needed changes in applications is sometimes very difficult etc. thus the efficiency of the measures could be increased;
- lack of financial capacity in order to compete with real estate and other big companies on purchasing land and limited access to credit in order to develop and expand the production;
- sometimes negative attitude to organic farming;
- low consumer's awareness, low purchase power and interest in consuming high quality food.

2.4 Ancillary economic and social benefits provided 'on the back' of ESBOs

Strategy Europe 2020 consists of three priorities: 1) smart growth – developing an economy based on knowledge and innovation, 2) sustainable growth – promoting a more resource efficient, greener and more competitive economy and 3) inclusive growth – fostering a high-employment economy delivering economic, social and territorial cohesion (European Commission, 2010). Grass-fed beef production through this CS approach is in line with the Europe 2020 priorities and contributes to enhancement of sustainability, strengthening of innovative capacity as well as creating employment.

The contribution of the CS to the sustainability objectives was described above. To create and sustain working places in rural areas is crucial for keeping people in rural areas and thus helping to preserve rural vitality. If we consider that about 10 000 jobs have been lost from rural areas during last 10 years (Hani, 2015), jobs related to this approach are quite remarkable for rural employment: whole employment (farms/NGO/Nordic Beef) supported through the system is estimated to be ca 160. Related slaughtering and processing provide additional jobs, for example, there are more than 20 people employed in Luha meat factory.



3 Shifting societal norms, collective learning and voluntary actions

Shift of societal norms is a long-term process. Given that this CS approach started only seven years ago, it would be too early to expect any major societal changes. Some trends can be still underlined.

Interviews with CS actors and farmers show that the CS approach has been shifting thinking and behaviour among farmers and consumers about beef production and the whole related value chain. The term “grass-fed beef” itself in Estonia is strongly linked with Liivimaa Lihaveis and the CS actors have been successfully increasing consumer’s awareness and interest in environmental and animal welfare benefits. If not considering market and policy instruments, an important trigger for changes has possibly been wider (global) trends of healthy living, (local) food trends and environmental concerns. But still, there are a lot of consumers who are not aware of the difference between this meat and imported beef often sold in supermarkets.

As common for post-soviet countries, Estonian farmers are sceptical to cooperation and common action. Although lack of cooperation is something that is always mentioned by policymakers and also by the farmers themselves, real action to change this attitude is missing. At the same time there are also many good examples of well-functioning cooperatives in Estonia, the current CS is certainly among them, but probably more time, collective learning and inspiration through presenting positive examples is needed before a real societal shift will take place.

Farmers increasingly value beef meat more and they like to talk about the production and related benefits. Many farmers who are not actually part of the quality scheme are selling “grass-fed beef” as they see the value and benefits for the consumer. As one interviewee put it: *“Even people who usually do not eat meat, often eat grass-fed beef as they know it is coming from happy animals raised in a clean environment!”* One chef said that changes need time and the older generation is definitely much less open to changes and that is why particularly high attention should be paid to the younger generation and children.

As mentioned above, awareness raising and constant collective learning among all the actors in the SES are fundamental. For increasing the consumer’s awareness information is shared through the website (www.liivimaalihaveis.ee) and Facebook page of Liivimaa Lihaveis, video-clips about grass-fed beef production and semi-natural habitats as well as about cooking the meals from this meat have been made. Liivimaa Lihaveis is participating in domestic and international food fairs, e.g. in Nordic Organic Food Fair in Malmö (Nov 2016). In 2015, “Beef Month” was organised in 40 Estonian restaurants as well as a beef grilling contest. In autumn 2017, a short TV-series about grass-fed beef, its production on semi-natural grasslands and how to cook beef will be launched on national public broadcast TV. Liivimaa Lihaveis is also participating in different innovation networks (grasslands, manure management, climate).



Co-operation with chefs includes constant training about the quality and preparation of grass-fed beef, and about the values and benefits. Liivimaa Lihaveis is organising meetings and information exchange with butchers and food bloggers from different countries around the world.

4 Mechanisms, (collective) actions and governance arrangements to enhance the level of ESBO provision

4.1 Organisational capacities, leadership, networking and communication

The structure of the collective action, leadership, networking and communication between stakeholders was described in section 2.2. When we talk about the wider support for this CS approach among actors of the beef sector, then the attitude has been somewhat careful but positive in general and some *“sceptics are coming to realise that the whole supply-chain approach can be successful”*. Activities of Liivimaa Lihaveis are acknowledged by other stakeholders like different organisations related to food, rural development, agriculture and environment and by the consumers.

The strength of this initiative, as confirmed by many farmers we interviewed, lies in the existence of enthusiasm among the initiators who started the whole approach and who develop it from day-to-day. At the same time, it is also the weakness, as in the case when the initiators do not want or are not able to continue, the whole system might be affected and the future of the approach and thus the provision of related ESBOs might be in danger. There are no clear pathways for overcoming this weakness, as it is related to abilities and characteristics of personalities which cannot be easily *“transferred”*.

There are no ongoing similar actions in Estonia. A running Swiss-lead project *“Baltic Grassland-Beef”* through which the Estonian beef is exported to Switzerland (and to which the ongoing dispute about the label described in section 2.2 is related), differs considerably from the approach of Liivimaa Lihaveis (not organic, production requirements allow also grain as feed, no whole-chain approach) and are therefore not really comparable.

4.2 Innovative governance arrangements and mechanisms supporting ESBO provision

Governance of this approach was described in section 2.2.

The whole governance arrangement developed by the CS is a new one and built up from scratch. The initiators of the whole approach did not consider any other governance mechanism and found that a combination of NGO (Liivimaa Lihaveis, production) and private limited company Nordic Beef (distributor) in organising the whole process from production to marketing works well. But it also became clear that buying in the slaughtering and processing service based on agreements without any relation to these companies does not guarantee enough flexibility for the expected fast development. Therefore, some of the members recently became co-owners of the meat factory and can now influence directly the decisions made. This step is further strengthening the control over the whole production-processing-marketing chain.



At the beginning, the initiation of quality schemes was only foreseen for cooperatives and not for NGOs, but this requirement was later changed (partly also because of action taken by Liivimaa Lihaveis).

As mentioned above, the role of the leaders in whole approach is extremely important, but it is also important that all farmers who are part of the approach feel that they can influence decision-making and strategic developments are decided together. Wider development of the whole beef sector needs collective action and cooperation between all actors from farmers to policy makers.

We can say that the provision of ESBOs is central for this approach and ESBOs related to this case (e.g. biodiversity, animal welfare) are always in the foreground when communicating with the public. Further enhancement of ESBO provision is described in section 5.

4.3 The role and impact of policy in ESBO provision

Liivimaa Lihaveis is actively using the policy support measures available and is searching constantly for additional funding to be used for promotional activities. Overall agricultural production is obviously influenced by CAP Pillar 1 and several measures of the Estonian Rural Development Plan (ERDP) 2014–2020, e.g. “Organic farming” (M11), “Co-operation” (M16; support for short-supply chains), LEADER (M19) and “Establishment of producer` groups and -organisations” (M09). Management of semi-natural habitats is supported by the ERDP measure “Support for the maintenance of semi-natural habitats” (M10.1.7). Additional financing related to restoration of semi-natural habitats on protected areas is provided by the Ministry of Environment.

Marketing and promotion activities are supported by several other measures, including “Market development support” (national), “EU information provision and promotion measures” and ERDP measure “Quality schemes” (M03) – only two national food quality schemes have been developed, “Grass-fed beef” and “Onion Lake Peipus”. NGO Liivimaa Lihaveis was one of the organisations who established an innovation cluster in 2015 on beef production to be able to apply RDP support for innovation activities under the co-operation measure (M16), the project was accepted in the second application round in 2016 and starts in March 2017.

In the table 4.3.1 main policy measures influencing activities of Liivimaa Lihaveis and their relation in ESBO provision are summarised.



Table 2: Main policy measures and their relation in ESBO provision.

Main policy measures	ESBOs involved
CAP Pillar I	
Direct area payment (+cross-compliance and greening)	All
RDP	
Agri-environment measures (incl. support for the maintenance of semi-natural habitats)	Biodiversity, landscape character and cultural heritage, carbon sequestration/storage, rural vitality
Organic farming support	All
Co-operation measure: support for short-supply chains; innovation cluster	Rural vitality
Quality schemes	Rural vitality
LEADER	Rural vitality
Establishment of producer` groups and -organisations	Rural vitality
Natura 2000	Biodiversity, landscape character and cultural heritage, carbon sequestration/storage
EU	
EU information provision and promotion measure	<i>Indirect</i>
National	
Market development support	<i>Indirect</i>

All above-mentioned measures promoting sales of grass-fed beef contribute to increasing consumer interest and thence the number of farms engaged which, in turn, are impacting ESBO provision.

National market development support was applied from 2011. In 2015, Liivimaa Lihaveis received about 75 000 euros support for marketing and promotion of beef and have also applied to the EU Information and promotion measure. In 2015, a 3-year and 600 000-euro project started for promotion and marketing activities in neighbouring countries` (Latvia, Sweden). Through these support measures and self-contribution about 1 million euros is committed until 2018 (Liivimaa Lihaveis; Äripäev, 2016a). Support measures and projects are considered crucial for marketing the beef.

The importance of support measures has increased since the establishment of the Liivimaa Lihaveis, for example, in 2015 supports made already about 24% (~158 000 euros) of the total revenue (~670 000 euros) of the Liivimaa Lihaveis⁴ (Commercial Register; own calculation).

⁴ Includes only NGO Liivimaa Lihaveis, as Nordic Beef as private limited company is not eligible for the support measures related to promotion.



This case is also demonstrating that preservation of grasslands and especially valuable semi-natural habitats which are highly supported by the public policy (incl. cross-compliance, targeted measures for semi-natural habitats management) is much more efficient when one can sell (with normal price) the products related to the management of this land. Support does not work by itself, adding value to the production is equally important and they should be developed interwoven.

Most of the policy measures influencing the provision of ESBOs have been in place for the last 10 years. The current 2014–2020 financial period pays much more attention to innovation, co-operation and short-supply chains. If one imagined that the policies of the last 10 years had not been implemented, then all the farmers interviewed agreed that the management of semi-natural habitats (more expensive and less yielding compared to intensive grasslands) would be considerably more difficult and most probably the area of managed semi-natural grasslands would be much smaller. As different support measures play important roles in farms' income, continuation without any support would be questionable. Many farmers were a bit frustrated, as compared to the previous programming period, as payment rates for some of the production-related RDP measures are reduced (e.g. organic farming payment rate for permanent grasslands). Furthermore, CAP Pillar I support for suckler cows is not paid any more since 2017.

The current crisis in dairy and pig production sectors (low milk price, African swine fever) is influencing other sectors like beef cattle production (which is doing in general quite well). As credit institutions often tend to see all agricultural enterprises as the same group, they may be limiting possibilities for beef producers to obtain credit for development. At the same time most of the attention of policy makers is targeted to these sectors in difficulties, leaving beef producers who need aid in order to develop and grow without support.

Moving to coherence of policies, farmers belonging to the grass-fed beef quality scheme and the adviser to whom we spoke agreed that there might be some conflicts and lack of clarity in regulations among different policy objectives and rules, especially environmental objectives like biodiversity (management needs of grasslands), water and soil protection (e.g. pasturing on the shores of inland waters, grazing density, manure management and handling etc.) and climate change mitigation which all are related to this CS. For example, pasturing was recently only allowed on coastal areas whereas on the shores of inland waters it was not allowed, although from biodiversity point of view pasturing is needed in some semi-natural habitats. This restriction caused many difficulties and additional costs and efforts to many beef farmers. Unquestionably, conflict will rise with provision of ESBO “water quality” when the rules are not followed. Similar contradictions have been in regard to manure storing and management – for now some of the rules have been changed and more suitable for beef producers. The CS actors have been actively involved in making the proposals for the change of legislation and at the same time they are aware that careful planning of manure handling and investments (e.g. shelters for winter period) are important to avoid e.g. water pollution and soil degradation.



Recently there has been discussion emerging about environmental impact of grass-fed beef production, especially considering climate change mitigation and GHG (esp. methane) emissions related to (grass-fed) beef production. It has been claimed by some researchers, that organic farming and beef production emits more methane compared to dairy production. By Kaasik (2007), global methane emission by beef and other cattle is about three times higher compared to dairy cattle (50.16 million tonnes and 15.69 million tonnes respectively). Higher methane emissions are simply related to digestion process where digestion of forage (only feed of grass-fed beef) produces more methane compared to digestion of starch-based feed (forms up to half of feed ratio of dairy cows). However, as the total number of Estonian beef cattle represents only a negligible share of global beef cattle, concentration per area is low and fast growing breeds are used mainly, the total methane emission and general environmental impact is very little (Kaasik, 2016). Also, the stocking rate of beef cattle is much lower in beef cattle farming than in dairy.

Representatives of Liivimaa Lihaveis argue that although it is a fact that beef cattle produce methane, blaming organic grass-feed beef cattle production on environmental pollution is distorted and short-sighted. The broader picture should be looked at and if all the positive aspects related to grassland management and grass-fed beef production and negative aspects of dairy cattle feed production are taken into account then the opposite picture is clearly shown (Kass, 2016; Kaasik, 2016; Äripäev 2016b).

All CS actors agree, that bureaucracy and administrative burden related to policy measures should be substantially reduced and solutions should be found (e.g. cross-use of national databases) to avoid time and effort spent for reporting and accountancy related to support measures. For example, reporting related to EU promotion measure of farm products is extremely detailed and making changes in application is complicated – all this is taking disproportionately amount of time and reduces significantly the interest of applicants to use this measure.

4.4 The role of the private sector in ESBO provision and enabling factors

Mantino et al (2016) found that existing private sector initiatives are evidence of a societal demand for ESBOs like sustainable use of natural resources, biodiversity and social cohesion. In most cases, private initiatives seem to be driven by market and are response to more (environmentally) aware consumer`s demand, e.g. different food labelling and certification schemes like organic farming. Also, this case is an example of market-driven initiative triggered by the interest of producers in order to get better price for their produce. Provision of organic and quality scheme labelled products is accompanied by provision of wide list of ESBOs. Private sector initiatives seem to be often related to extensive and niche production, responding to changes in consumer needs and expectations. Based on this CS, we can say that private initiatives are quickly able to adapt with market changes, are more open to non-traditional thinking and less bound with administrative-bureaucratic frames which seem to characterise public initiatives.

At the same time, private schemes related to ESBO provision are often supported by public policies in a complementary way and within particular SES there is always a mix of different



policies (environment, climate, CAP) contributing to the ESBOs (Mantino et al, 2016). This is particularly true also in this CS. Although the Liivimaa Lihaveis beef brand has achieved consumer recognition and certainly improves general image of beef in Estonian market, consumers might perceive private labelling (and certification) less reliable. Therefore, label of “state certified grass-fed beef” is used in parallel, which gives additional reliability, especially in foreign markets. Organic farming in Estonia has also state certification system.

When looking at the whole list of ESBOs defined by PEGASUS (Maréchal et al, 2016), it is clear that there are several ESBOs (e.g. water quality, air quality, climate change) where provision of ESBOs is not adequately covered by private sector initiatives. Moving to benefits and risks related to the provision of ESBOs through private initiatives, one can conclude that risk of private initiatives is its sometimes strong linkage to market and possible instability related to market fluctuations. Public sector schemes are on one hand more stable, but entail often also burdensome bureaucracy and responsibilities and sometimes controversial expectations and desires which do not always consider the needs and possibilities of key actors like farmers.

Public policies related to ESBO provision do not ensure that the objectives will be achieved. This CS is an example showing that combination of public policies and activities of private initiative might be the best way in order to safeguard long-term provision of wide spectrum of ESBOs.

5 Potential pathways towards an enhanced provision of ESBOs

In Estonia, due to the natural preconditions, there is potential to double the current number of beef cattle and increase it up to 100 000–150 000 heads (Vaan, 2016). This means there is a lot of room for expanding the whole beef sector and the development of the domestic market as well as finding new export markets.

The leaders of the Liivimaa Lihaveis expect to see over a 10-year period that the enhancement of the provision of ESBOs will be achieved through expanding and enlarging the number of farms participating in the quality scheme and thus also the area (especially grasslands) managed. During this 10-year period, it is hoped that the number of farms (and the related managed area) could be increased up to 3-fold, e.g. up to 150 farms. Such an increase would significantly contribute to the goal set in the state Nature Conservation Development Plan for 2020, to maintain 45 000 hectares of semi-natural habitats nationwide (EMoE, 2013).

The current CS initiative definitely has good potential to expand. Although currently only a draft idea, the initiators of the CS are planning to start a similar quality scheme for sheep. As the production of sheep is also suitable on grasslands and the market situation is similar to beef (lamb is even less consumed in Estonia than beef), this quality scheme could create additional synergy and would additionally contribute to ESBO provision. Expanding the product line of their newly acquired meat factory with lamb, and also with other types of organic meat (pig) and game meat will further strengthen their position on the market.

The main limiting and enabling factors to further enhancement were described in section 2.3. To overcome the main limiting factors (exporting of living animals, limited possibilities to buy



or rent land for development of production, low interest and awareness of consumers, bureaucracy) a constant shift in the thinking of farmers and the awareness raising of consumers are central. To overcome the problem with limited access to credit to buy land, tools like state guarantees and/or subsidised interest rates come into consideration.

Several non-governmental organisations (e.g. Estonian Semi-Natural Communities Association, Estonian Fund for Nature) have projects and initiatives targeted to management of (semi-natural) grasslands, or trying to build up local farmer-consumer networks, but as mentioned before, there are no other comparable collective actions which have the potential to enhance the provision of the same set of ESBOs in a complex way.

6 Suitability of the SES framework and ‘action-orientated approach’ in the analysis of ESBO provision

For the current CS, the SES approach was difficult to apply, as the whole concept is based on the assumption that a certain geographical area is analysed, but the current CS was *not* directly related to a certain geographical area, but analysed the private initiative – whole chain approach (production-processing-marketing) of grass-fed beef – as such. For this reason, we did *not* use this framework in relation to stakeholder engagement. Also, the use of an action-oriented approach in the Estonian context is new and not very much used. That is why stakeholders and actors feel more comfortable when using more “classical” ways of communication, data collection etc. (e.g. interviews vs focus groups).

From the conceptual point of view, we feel that Ostrom’s SES approach divides the system artificially into arbitrary parts (e.g. resource system and resource units should not be divided as they are one complex) and the link between ESBOs and their role in the SES framework seems difficult to apply, also because some ESBOs (like biodiversity, landscape, water, climate, rural vitality etc.) are not only related to some SES, but also with other systems. Also, boundaries between actors, actions and governance are not straightforward. The concept might also not fully capture the dynamics, historical developments and complex of initiatives under investigation.

However, the strength of the SES framework is that it enables integration of ecological and social aspects and shows the interrelations between resources, actors, actions, and governance, although it might be difficult to find the right balance of details to be displayed graphically.

The term “ESBO” (Environmentally and Socially Beneficial Outcomes) is adequate in order to bring together public goods and ecosystem services concepts, by adding important social dimension. While it is understandable and useful in English, it is very difficult to translate it into Estonian (“beneficial outcomes” = “goods” = “benefit”).



7 Main conclusions derived from the Steps 3-4 analysis

7.1 Key findings on the particular SES and the provision of ESBOs

This case is exploring the innovative private initiative of grass-fed beef production and marketing. Liivimaa Lihaveis is actively promoting the consumption of grass-fed beef. The main aim of the approach is to give more added-value to the beef they produce and to control better the whole supply chain by organising production, processing and marketing.

Grass-fed organic beef production relies on grasslands, and provides related ESBOs like biodiversity, landscapes, carbon storage, rural vitality and also ESBOs related to organic farming (soil, water quality, animal welfare). Without adding value to the production (in this case beef) the system is not sustainable in long-term.

Private initiatives, like this CS approach, are strongly related to the market and respond to consumers' demands, often in an innovative way. At the same time, private initiatives are more unstable compared to public sector schemes. Public sector initiatives in turn are not able to fully meet the needs of e.g. farmers, not to mention bureaucracy, lack of flexibility and untraditional thinking. Any SES consists always of the mix of policies which support the private initiatives, and in relation to ESBO provision. This approach is a good example of the good working combination of market-oriented private initiative and public support measures which makes it possible for farmers to valorise their ESBO provision in markets through price premium for beef produced under organic and grass-fed beef quality scheme rules. There is high potential to increase the provision of ESBOs when the number of participating farms and the area they manage) increases. Additional synergy and enhanced ESBO provision could be created when expanding the grass-fed beef quality scheme to sheep production.

Management of permanent grasslands, especially semi-natural habitats is very important for *maintaining biodiversity* (species and habitats) and for protection of *landscape character* and *cultural heritage*. Liivimaa Lihaveis is providing marketing opportunities for producers and increasing the awareness of the consumers about benefits related to this kind of production and this allows participating producers to continue the agricultural production and stay in rural areas. Maintaining/increasing employment opportunities in the countryside is helping to preserve rural vitality. Preservation of grasslands is highly important also in terms of *carbon storage*.

Consumer awareness and interest to buy grass-fed beef is very important for this approach – the more knowledge and interest to buy the products provided, the higher the success of the approach, and the wider interest of farmers to join the scheme and as a result the increase in ESBOs provided. This means that the marketing and promotion should include education and awareness raising. Awareness of the consumers on how the products are produced and what are the related benefits – and thus demand for such products – is increasing, certainly a lot thanks to the work (e.g. information sharing, events, trainings) of this case study actors. Further awareness raising and provision of ESBOs needs systematic and constant action in a number of different directions and involving all key actors, but also a shift of policies from agricul-



tural policy towards holistic food policy and respective support measures (supply chains, quality schemes, co-operation, innovation). Attitudes of farmers should change towards valorisation of produce and provision of related benefits instead of going the so-called 'easiest way' (e.g. exporting young living animals). But policy measures need to support this shift in thinking.

One particular issue related to the production of grass-fed beef and a serious obstacle in order to increase ESBO provision is the limited access to credit to buy land in order to develop and expand the production and to compete with real estate companies who are buying the land in rural areas. This can only be solved through policy intervention whether through some financial instruments (e.g. state loan guarantees, subsidised interest etc.) or other measure(s). For example, if the state is renting or selling the land, previous experiences and commitments in management of grasslands (related to animal husbandry) in the same region should be taken into account when organising public bids.

7.2 Key findings on governance arrangements and institutional frameworks

Controlling the whole value chain and the smart use of available policy measures makes this approach successful. The strength and the weakness of the whole system at the same time is its dependence on a few leaders, e.g. the enthusiasts who started the whole system and take responsibility for its development. Governance of this case is simple as all main components of the approach are led by the same persons and it does not include a wide number of actors, different levels of governance etc. Although the everyday management and development of the approach is the responsibility of the board members, all the strategic decisions are discussed and taken by the general meeting of the NGO and all important aspects are discussed among the participants – this is appreciated by all parties and is important in order to guarantee that everyone feels that this is a common effort. For the development of the whole beef sector in Estonia cooperation and common action is needed not only by farmers, but it should be also supported by the policymakers.

The case study actors agree that some policy objectives and related legislative frameworks (e.g. biodiversity, water protection, climate change mitigation) are inconsistent in that it is characteristic for Estonia that objectives and actions taken by the Ministry of Environment and the Ministry of Rural Affairs often seem uncoordinated. There are several difficulties and problems related to e.g. management of semi-natural habitats which is one of the key resources of this CS (esp. manure handling and pasturing on the shores of waters). Also, harmonisation of legislation and keeping the administrative burden (incl. inspections, accounting) as low as possible should be considered when developing governance arrangements. For example, reporting and making changes related to the EU promotion measure is made way too complicated and bureaucratic requiring too much time to be invested by the applicants.

Speaking of CAP, the changes compared to the previous programming period are seen as positive in general, more attention (and support) is given to the food chain, innovation and cooperation, all affecting ESBO provision in a positive way. However, reduction of payment rates of some production-related RDP measures and withdrawing of Pillar I support for suckler cows was noted by many farmers as a negative development.



Moving even more towards comprehensive approach of food production is also step towards increasing ESBO provision. Topics central to this CS (supply chains, the role of agriculture in environmental and climate change objectives and contributing to the development of rural areas) are also main areas of discussion about CAP 2020+. In order to safeguard the sustainability of the CS approach in the long-term political support and appreciation for this kind of approach is very important and awaited by the CS actors.

7.3 Other enabling or limiting factors

In addition to the enabling and limiting factors described above, there is another production-related factor influencing provision of ESBOs, namely (financial) stability. Farmers need stability to be confident about this CS approach and grass-fed beef production and it should be possible for them to sell consistently through this approach. Stable sales also require investments to have a sufficient amount of grassland and the ability to keep the animals all year round (shelters, feed provision and storage etc.). Investment measures together with easier access to credit could help to solve the investment needs. In Estonia, considerably more beef is produced than consumed in the domestic market and that is why export of beef (esp. living young animals) is prevailing in the beef sector. Although development of export and finding new markets is important, more attention should be paid to valorisation of the products e.g. exporting meat and meat products or breeding cattle instead of young living animals. Valorisation is also key when developing support measures. Valorisation of the products gives more stability to whole system as export markets of living animals (e.g. Turkey) might easily disappear.

7.4 Contributions to EU strategic objectives

Europe 2020 strategy aims to accelerate economic recovery and job creation and sets three priorities in order to fulfil the goals: smart, sustainable and inclusive growth. Grass-fed beef production through this CS approach is in line with the three priorities of Europe 2020. As an innovative full-chain approach, it is contributing to smart growth. It is contributing to sustainable growth through efficient management of resources and provision of ESBOs. Inclusive growth is crucial in rural areas with an ageing population and lack of working places. This CS approach is contributing to the continuation of production and is providing employment thus supporting the objective of inclusive growth.

7.5 How about the transferability of the approach/mechanism used?

This CS is an example of a well-functioning approach and innovative collective action in Estonian conditions. When discussing the transferability of the CS approach, we can assume that this approach as such – controlling the whole supply chain together with consumer's awareness raising – is transferable to other products groups, contexts and countries, but has high potential to expand also in Estonia. But yet, there are several context-dependent aspects to consider, starting with natural conditions which are favourable to beef production. There is a much higher share of semi-natural grasslands in Estonia compared to most European countries. The Estonian food market is relatively small, dominated by big supermarkets. Direct marketing, short supply chain approaches, and other types of cooperation and common action



are much less developed than in many other EU countries. Consumer`s habits and awareness about beef are considerably lower.

The starting point of new approaches like this is usually dissatisfaction with the current situation, and motivation, which is typically economic – a better price for beef in this case. The basis is the presence and motivation of leaders who are able and willing to start and develop a similar approach, finding the best development strategies and actions within certain SES. For making the right decisions and choices for starting a similar approach somewhere else, it is crucial to understand thoroughly the planned field of action, trends, needs and expectations of all participants. At the same time, it is extremely important that people acknowledge new ways of thinking and are willing and able to find new ways of doing things. To this end, constant learning of all parties is needed.



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Estonian Commercial Register: <https://ariregister.rik.ee>

Liivimaa Lihaveis: www.liivimaalihaveis.ee



9 ANNEX: Reflections on the case study methodology used

9.1 Objectives and activities undertaken with initiative/stakeholders

It was agreed with key actors, that the best way to communicate will be in meetings and interviews. In total 29 interviews were conducted with key persons (farmers, leaders of Liivimaa Lihaveis, restaurant chefs, retailers and an agricultural adviser). Information collected through interviews during previous WP4 steps and WP3 was also used. Meetings with key actors were combined with other meetings they had in order to reduce the time spent.

9.2 Outcomes and further steps

It was agreed with key actors, that the results of the CS can be used for development purposes, e.g. as a background paper for development strategies, project and support applications etc. It was also agreed that CS report can be used as input for discussions with policymakers (change of legislation, development of CAP/RDP and environmental measures etc.).

9.3 Judgement on the process

Although key actors of this CS are extremely busy with the everyday development and management work of the grass-fed beef approach, they were able to take part in this research and gave invaluable input. Expectations of the actors towards the research process were mainly related to influencing the policy-making and forwarding the messages to policy makers.

There were no major issues during the whole process, if we exclude the “usual” lack of time of the case study actors.

9.4 Supporting data and statistics

Development of beef cattle breeding in Estonia

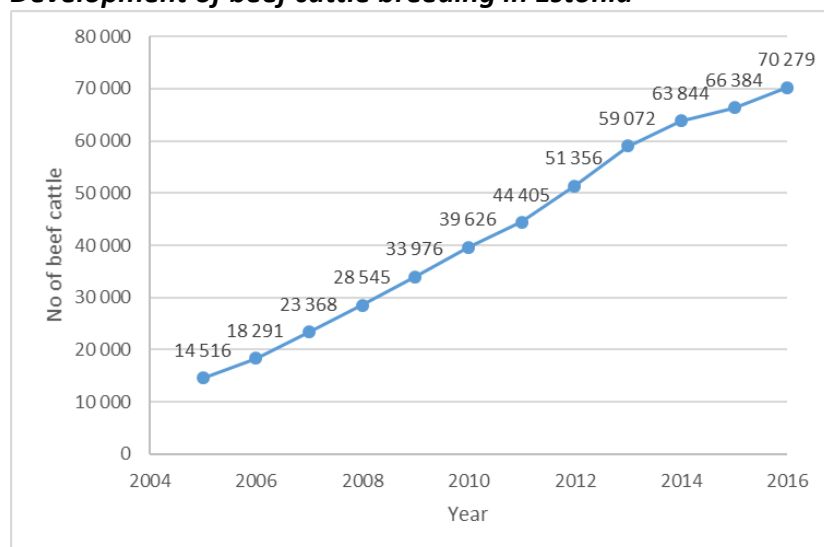


Figure 8: Number of beef cattle in Estonia 2003–2016.

Source: ARIB; own compilation.



Table 3: Meat production in Estonia, 2006–2015 (thousand tonnes)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Beef	14.8	15.4	14.3	14.2	12.9	12.2	12.3	11.5	11.9	12.6
Pork	41.6	42.9	46.2	46.1	45.8	50.2	48.8	49.5	48.7	50.1
Sheep and goat	0.5	0.6	0.9	0.8	0.7	0.6	0.7	0.7	0.6	0.7
Poultry	12.5	11.5	13.2	14.9	16.0	17.5	16.5	18.1	19.5	19.8
Total	69.4	70.5	74.6	76.0	75.4	80.6	78.4	79.8	80.7	83.2

Source: Statistics Estonia, 2016

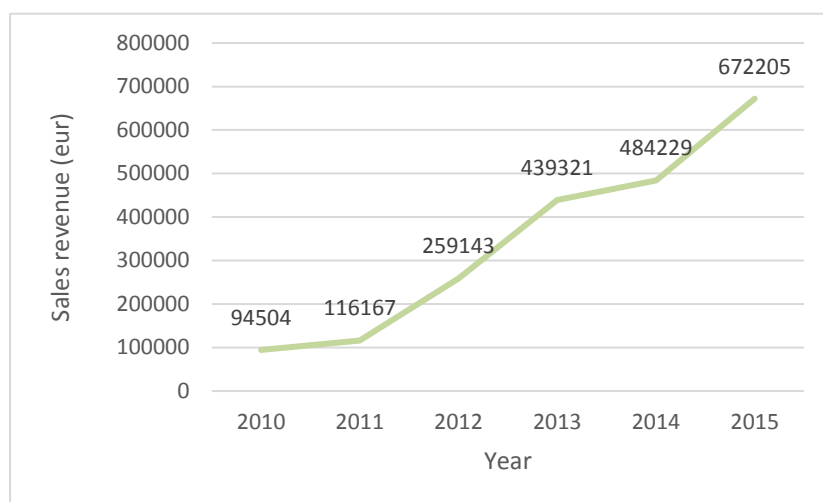


Figure 9: Revenue of Liivimaa Lihaveis 2010–2015

Source: Business Register; own compilation, 2017

Websites

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