


Heat entrepreneurship from the Finnish countryside to the Estonian countryside – international information exchange and cooperation promoting renewable energy in the rural areas

VISU – Heat entrepreneurship -project final publication 2021



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Content

Summary

Estonia and Finland are connected by a long and friendly history and culture. Both countries have large quantities of forests and share similar climate conditions. Thereby the transnational bioenergy and energy efficiency related project was prepared between the countries. The special characteristics of the VISU-project is its structure, in which both countries stakeholders are financed by the sources nationally available for them, but share similar timeline and goals, thus forming each other supporting sister projects. In the Finnish side the VISU Heat entrepreneurship project has been realised from 1st of March in 2017 to 31st of December 2021 Thermopolis ltd., Finnish Forest Centre and Seinäjoki University of Applied Sciences. The financier of the project has been the Centre for Economic Development, Transport and the Environment's European Agricultural Fund for Rural Development. The Estonian sister projects have been funded by the Mooste mansion foundation Mooste Mõis SA and a cooperative Kõpu PM Oü situated in Kõpu.

The VISU project has been based on an earlier project of the Finnish Forest Centre called HECSO project, in which the information in relation to the South Ostrobothnia skill cluster on heat entrepreneurship was internationalised. In the VISU project the knowhow of South Ostrobothnia on heat entrepreneurship was transferred to the countryside of Estonia. Prior to the project heat entrepreneurship business model was relatively unknown in Estonia. In Estonia two small and rural municipalities were the target sites, namely Mooste and Kõpu. In the mansion areas of these municipalities model energy audits were conducted to selected buildings. Additionally, in the regions of Põlvamaa and Viljandi the heat entrepreneurship business model was widely communicated.

International networks and information exchange was promoted by organising bioenergy field trips between Finland and Estonia, by participating on Tartu Maamess fair and spreading related knowledge there. Also, two events were organised in the project, one in Finland and one in Estonia. First, in Seinäjoki and more broadly in the South Ostrobothnia area two day International Bioenergy Days were organised in 10th – 11th of October in 2018. In Kõpu, Estonia Kõpu Forest Bioenergy Day was organised. Additionally, international networks were also built to other European countries.

The project accomplished to clarify the view on the different countries energy auditing systems for the Finnish and Estonian participants. The differences and the similarities between the systems became clearer. This knowledge is valuable when the systems are being developed. The project accomplished to promote installing of renewable energy in Estonia. Based on the created international networks in the project new international projects were formed. In the Estonian target group, the awareness of the heat entrepreneurship business model increased significantly. VISU project is an excellent example of the importance of transnational information exchange projects on the way to a carbon neutral society.

1 Introduction

Finland and Estonia have a long and amicable history together. The two nations are connected by language and culture and they both share a long and eventful history as neighbouring country of the powerful might Russia. According to the Finnish Embassy in Tallinn the “bilateral cooperation between Finland and Estonia is closer than ever” and “relationship between the countries is excellent” (Finnish Embassy, Tallinn, read: 18.11.2020). Also, geographically the countries are situated close to each other and the two countries climates do not vary significantly. Thereby, it is natural for the countries to learn from each other in matters related to energy, as both countries share long heating periods, both need to pay special attention to the matters related to energy efficiency and climate conditions in general affect the choice on renewable energies in similar lines.

Figure 1 The regional mayor of Viljandi region of Estonia Erich Palm was delighted that the Estonian flag had been raised in the honor of the Estonians visit by the company Veljekset Ala-Talkkari Oy in South Ostrobothnia 2017. Picture: Anne Viljanen.

Forest bioenergy in Finland and in Estonia

In the VISU-project information was exchanged on heat entrepreneurship, which is a business model widely in use in Finland, but relatively unknown activity in Estonia at the start of the VISU-project. Both Finland and Estonia are rich of forest, which creates a good ground on the use of bioenergy. In Finland, forest covers exceptional 75 % of the total area and in Estonia 51 % (Estonian timber, Read: 18.11.2020). Further, Estonia has many potential sites, which have large needs for heating, and which are situated in the countryside outside of the district heating network, namely the mansions of Estonia. There is a significant amount of these mansions and now-a-days they are used for different purposes, such as schools, hotels, and travel sites.

Figure 2 Estonian mansion schools displayed in a map at the Mooste mansion school in Estonia. Picture: Anne Viljanen.

In South Ostrobothnia Finland there is a lot of knowhow on heat entrepreneurship. Prior to VISU-project the Finnish Forest Centre carried out a project called HECSO, which brought forth the fact that in the region of South Ostrobothnia lies a knowledge center around the topic of heat entrepreneurship. This knowledge center consists of heat entrepreneurs, heat entrepreneur sites, research, education and the whole production chains machine and equipment manufacture. In the HECSO-project it was detected that this knowledge center is profitable also internationally by offering knowhow and education possibilities for the international target groups (HECSO-project website, read: 19.3.2021). Therefore, in the VISU-project this offered a good ground to build on as this knowhow was spread to the countryside of Estonia as good, climate-friendly and local practice, on which the local actor could benefit while producing local energy.

Letter of intent and the structure of the sister projects

A letter of intent on participating on VISU-project was made between the Finnish and the Estonian partners at the end of the year 2016. Finnish side participants of the agreement in the planned VISU-Heat Entrepreneurship -project were Thermopolis Ltd., Finnish Forest Centre and the Seinäjoki University of Applied Sciences (SeAMK). From the Estonian side the participants to the agreement were Ühinenud metsaomanikud MTÜ (United forest owners), Eesti Maaülikool (Estonian University of Life Sciences), Mooste municipality and Kõpu municipality. The letter of intent was related to the agreement to apply funding for the intended project from the funds nationally available. It was agreed that the Finnish participants would apply for a funding for the project from the funding available for them, namely from the Centre for Economic Development, Transport and the Environment's European Agricultural Fund for Rural Development, form which the funding was granted. On their part the Estonian participants would apply for funding from the sources nationally available for them. The funding percent became 100 %.

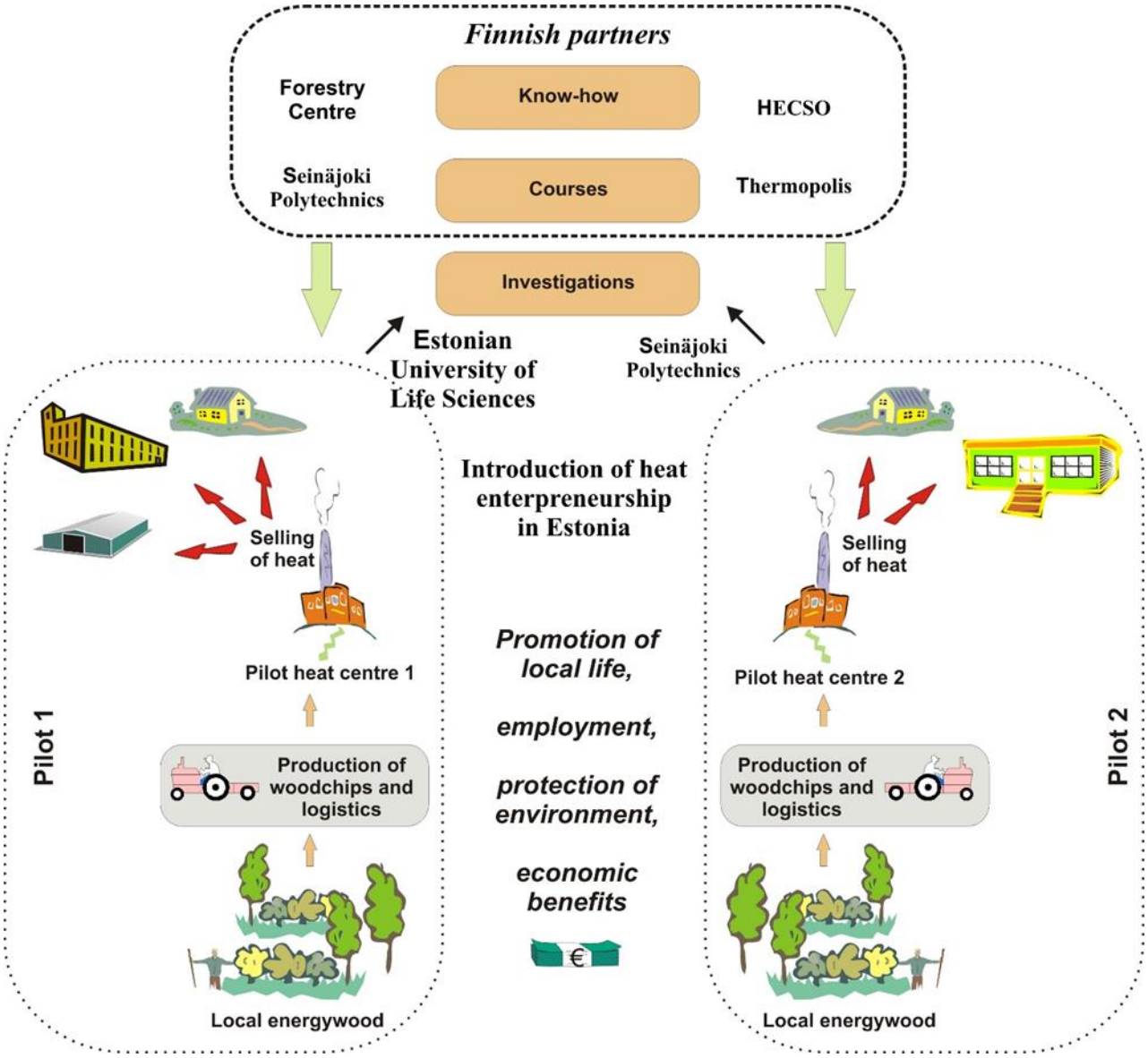

Figure 3 Estonian professor emeritus Väinö Poikalainen's illustration of the structure of the VISU-project. Picture: Väinö Poikalainen.

In the end two sister projects in relation to the VISU-project were formed in the Estonian side: 1) Mooste VSE funded by the Mooste mansion foundation Mooste Mõis SA and 2) Prerequisites of a small-scale heat entrepreneurship in Kõpu funded by an Estonian cooperative Kõpu PM. Mooste and Kõpu as small rural municipalities with their mansions and their heating needs provided excellent backdrop on the project related information exchange.

Figure 4 VISU-project was prepared for instance in 24th – 26th of August 2016 in Estonia. In the picture from the left: professor emeritus Väinö Poikalainen, Mooste mayor Ülo Needo, Juha Viirimäki (Finnish Forest Centre), Merja Järvelä (Thermopolis Ltd.), Tõnu Vreimann (Kõpu PM Oü), Yrjö Ylkänen (Finnish Forest Centre) and managing director, emeritus associated professor Lembit Lepasalu (Teadus & Tegu). Picture: Merja Järvelä.

2 Heat entrepreneurship

In Finland, heat entrepreneurship is a special characteristic of forest bioenergy production. This business model is widespread in Finland, but in Estonia prior to VISU-project quite unknown operating model. Heat entrepreneurships is business activity, in which the entrepreneur sells heat to customers, not energy wood or woodchips. The heat entrepreneur is paid by the megawatts (€/MWh) delivered. Typically, the heat entrepreneur buys the fuel, operates and maintains the heat plant and gets income based on the amount of heat produced. In many cases the heat entrepreneur also invests in the heat plant and is its owner. From the fuels used by the heat entrepreneurs overwhelming majority is woodchips. In addition, other wood processing by-products (woodchips, saw dust, pellets, briquettes), recycled wood and peat are also used as fuel.

Forest Centre of South Ostrobothnia initiated back in the day the heat entrepreneurship in South Ostrobothnia. The first plant was put into operation in 1992 at that time municipality of Peräseinäjoki. At its best there has been over 50 heat entrepreneurs at the region. Partly due to South Ostrobothnia

entrepreneur spirit and partly for the purposes of forest management has South Ostrobothnia become one of the top heat entrepreneurship regions in Finland. The project work of Finnish Forest Centre and Seinäjoki University of South Ostrobothnia has supported the development of the related activities. In addition, South Ostrobothnia has had economic activity and populated countryside, which have provided good and profitable heating sites for the entrepreneurs.

Figure 5 Production chain from forest to the heat plant: harvest of energy wood, energy wood stacks, chipping, storage, and heat production at the heat plant to the site. Pictures: Finnish Forest Centre

3 Two Estonian mansion areas Mooste and Kõpu as sites

In the VISU-project the information exchange was between rural areas both in Finland and in Estonia. Two sites were part of the project in Estonia. One was Mooste mansion area in Põlvamaa region. The other was Kõpu mansion and the closely situated cooperative farm in Viljandimaa region. First, the project focused on energy related information exchange by looking at the energy audit systems of Estonia and Finland. Information exchange contained model energy audits conducted by the Finnish energy auditors to four buildings altogether in Mooste and in Kõpu; the presence of the Estonian energy auditors in one of these; the interview of an Estonian energy auditor; and the presentation of the Estonian energy auditor on the

energy auditing system of Estonia and the perceived similarities and differences between the Finnish and the Estonian systems. Second, in the project the heat entrepreneurship business model was communicated and presented to the municipality leaders, potential entrepreneurs, forest owners and citizens, as well as suitable heat entrepreneur sites were searched.

Mooste – sympatic mansion municipality at the Estonian countryside is home to arts and crafts

At the beginning of the year 2017 Mooste municipality was a small rural municipality. In 2009, its population was 1542 and area 185,12 km2 (Wikipedia, read: 7.12.2020). Mooste is situated 44,2 km south-east from Tartto. At the end of 2017, at the municipality reform the Mooste municipality became part of larger municipality Põlva, of which population in 1st of September 2020 was 13172 and area 705,9 km2 (Põlva vald 2020).

Figure 6 Mooste municipality is now part of the Põlva municipality and is situated 44,2 km south-east from Tartto. Picture: Google Maps 2020a.

The pride of Mooste is historic Heimatstil-style mansion with its beautiful buildings, gates including the stone wall and bell tower. The Mooste mansion complex comprises of all together 18 buildings: Mooste mansion main building; Mooste mansion granary; Mooste mansion estate managers house; Mooste mansion combined stable and cart shed; Mooste mansion cowshed; Mooste mansion piggery; Mooste mansion workhorse stable; Mooste mansion workshop; Mooste mansion carpenter workshop; Mooste mansion wagon warehouse; Mooste mansion saw and mill; Mooste mansion workers shed; Mooste mansion dairy; Mooste mansion wine cellar and residential building; Mooste mansion distillation; Mooste mansion kitchen; Mooste mansion bell tower; and Mooste mansion workers house. The oldest of the buildings, the Mooste mansion granary and Mooste mansion combined stable and cart shed have been built in the 19th century and other buildings at the beginning of the 20th century.

Figure 7 Mooste mansion main building from outside and inside. The building is now-a-days used as a preliminary school. Pictures: Anne Viljanen

Currently, the different buildings have new uses. The mansion main building is used as preliminary school. Mooste mansion estate managers house operates as art residence and guest studio. Mooste mansion cowshed contains consert hall and wool store. Mooste mansion carpenters workshop has been renowed as a guest house. Mooste mansion saw and mill operate currently as mill theatre hall. Most of the buildings are owned by the municipality, but some buildings are privately owned.

Figure 8 Mooste municipality is known venue of events, for instance the mansion consert hall provides excellent surroundings for different event (up and left). Mooste mansion bell tower is rich in detail and it is covered by baroque styled tin roof on top of which is situated an elaborate weathervane (up and right). Many arts and crafts are made in the buildings of Mooste mansion and sold in small shops, for instance clay and wool work (below). Pictures: Anne Viljanen ja Juha Viirimäki.

Mooste model energy audit

Two buildings from the Mooste mansion area vwere selected for the energy information exchange: Mooste mansion guest house and Mooste mansion wagon warehouse. Mooste mansion guest house has been on active use especially during the summertime, and it has been oil heated. New uses have been planned for the Mooste mansion wagon warehouse as a foodstuff hut. Measures for the renowation of the building were suggested. It is not possible to alter the exterior of the buildings as they are protected.
To gain energy savings, the proper sealing of windows and external doors were suggested. As a heating solution it was suggested to either install separate geothermal heat pumps for each building or to attaching many different mansion buildings to a container of woodchip heating. For the electric equipment it was recommended to replace the old and high energy consuming light bulbs with LED-lights; to install solar panel system; to tender the electric prices regularly and the reactive power compensation.



Kõpu – alongside of the beautiful mansion school lies large scale agriculture

At the beginning of the VISU-project Kõpu was small rural municipality 102 km west of Tartto. Kõpu was and still is part of Viljandi region. During the VISU-project the Estonian municipality reform took place and Kõpu was attached as part of Põhja-Sakala municipality.

Figure 9 Kõpu municipality is now part of Põhja-Sakala municipality and is situated 102 km west of Tartto. Picture: Google Maps 2020b.

Kõpu's historic and grand classical style manor main building was built in 1847 (Estonian manors, read: 7.12.2020). The building is currently owned by the municipality and it is being used as a school building. Suure-Kõpu mansion and sport hall energy audit describe it followingly:

"From Viljandi 18 km away, is situated Suure-Kõpu mansion. The earliest information of the mansion is from the year 1487. In 1805 the mansion was transferred to the ownership of the Stryk noble family, who owned the building until its expropriation in 1919. Classical manor house was built in 1847. The middle part and the wings are two-floored and outer parts one-floored. At the end of the 20th century second floor was built also on top of the outer parts and the façade was supplemented with balconies. Notable is that the Suure-Kõpu balcony railings were manufactures in the Louisenhütten metal foundry, which was established in 1861 by the nearby mansion owners. Manor house, which has been used as school for decades, offers many surprises. As restauration work had been begun, underneath several coatings of paint hidden wall and roof paintings were discovered. The museum room contains a lot of history the mansion and the nearby areas." (Estonian mansion website according to the Suure-Kõpu mansion and sport hall energy audit 2018.)

In addition, the mansion building is described followingly:

"Characteristic for the building is large main lobby, Pompeiji style painted dining room and dance hall with walls coated with artificial marble. The mansion offers its guests Estonian food and musical experiences. Different parties with style from different era have been organised at the mansion. Mansion is suited for organising guided group tours, meetings, receptions, diners, weddings, and birthday parties. Private tours need to be agreed upon in advance. Sport hall can be used for organising competitions and training camps." (Visit Estonia website according to the Suure-Kõpu mansion and sport hall energy audit 2018.)

Nearby the mansion school building is more modern sports hall building. At the immediate vicinity opens up the lands of the agricultural cooperative Kõpu PM Oü. The agricultural cooperative Kõpu PM Oü focuses mainly on milk production. Also grain is cultivated a bit. There are 600 dairy cows and 40 employees. The size of the estate is 2000 hectares (Ähtärinjärven Uutisnuotta 13.12.2017.)

Figure 10 In the picture are shareholder of the agricultural cooperative Kõpu PM Oü Tõnu Vreiman (left) on his farm in Kõpu as well as the interpreter emeritus professor Väinö Poikalainen (right) on a VISU-project trip in 27. - 28.8.2018. Picture: Anne Viljanen.

During his visit in South Ostrobothnia in 2017 the shareholder of the cooperative Tõnu Vreiman tells the following information on his estate and the nearby situated Kõpu mansion:

"At the estate a heating plant is planned. The heating plant would produce the heat not only for the needs of the estate itself, but also to the nearby mansion school. The school has been restored and it is a protected site. In the estate there is a lot of forest at the edges of the fields and ditches that can be used in woodchipping activities" (Ähtärinjärven Uutisnuotta 13.12.2017.)

Additionally, he continues on the plans of the VISU-project the following:

"With VISU-project the planning of the heat plant will be done. It is in the thoughts that there would also become an educational center by the heat plant, in which you could study the field. In this visit I have gained so much information that I need to consider it carefully at home." (Ähtärinjärven Uutisnuotta 13.12.2017.)

Kõpu model energy audit

In Kõpu energy audited sites were two massive buildings: Kõpu mansion school and the sports hall next to it. Based on this, an energy audit report was drawn. In the report measures were suggested in relation to structures, heating, electric equipment, and water devices. For the structures it was suggested to take care of the concentrates of the doors and the windows, as well as moulding the tilting of earth surface away from the building. On heating it was suggested to balance the heating network and aeration of the radiators and the renewal of the thermostats when necessary. The report also gave its view on the heating system, that it could be operated for instance with woodchip boiler of power output of 700 kW and building a new heating network. On electric equipment LED-lights were recommended as the current ones get broken. Also, as new equipment is acquired it was recommended to check the devices energy class. On water devices it was recommended to go through them to detect possible water leaks. Later, as the water devices are renewed, it is recommended to choose small consumption models. Additionally, the flow of water of the showers and taps can be reduced by installing water flow restrictors.

4 International networks and information exchange

Bioenergy field trips

To enhance information exchange and to strengthen international networks many field trips were conducted from one country to another. The Estonians visited Finland and VISU International Bioenergy Days were organised for them and other international contacts. Also, from Finland many visits were made to Estonia to get acquainted with the bioenergy field actors in Estonia.

From Estonia to Finland

In the VISU-project concrete efforts were made to improve bioenergy and heat entrepreneurship related information exchange between Estonia and Finland. Two bioenergy field trips from Estonia were made to South Ostrobothnia, in which they were presented different heat entrepreneurship sites, equipment manufacture as well as education and training on the field. The Estonian actors were presented very concretely the bioenergy chain from forests to the utilisation site. One of the Estonian delegations visits to South Ostrobothnia took place in 29th – 30th of November 2017. The program of the visit was extensive and began from Thermopolis Ltd.'s premises. The Estonian guest were welcomed there by the managing director of Thermopolis Ltd. Matti Alakoskela, project manager Anne Viljanen (Thermopolis Ltd.), task manager Juha Viirimäki (Finnish Forest Centre), task manager Risto Lauhanen (Seinäjoki University of Applied Sciences) and the South Ostrobothnia provincial council chairman Kai Pöntinen. The Estonian delegation headed by Viljandi regional governor Erich Palm consisted of Estonian municipality leaders, farmers and project operators.

Figure 11 The Estonian Viljandi regional governor Erich Palm (right) and South Ostrobothnia provincial council chairman Kai Pöntinen met at the premises of Thermopolis Ltd. in Lapua. Picture: Anne Viljanen

Followingly, the Estonian delegation was presented with the whole production chain from forest to a heated site: energy wood harvest, energy wood stacks, chipping, storage and heat production at a heat plant and into the site. The guests had a chance to get acquainted with heat boiler manufacture at the factory of Veljekset Alatalkkari Oy as well as heat entrepreneur sites. In Alavus Pohjanmaan Biolämpö Oy heat plant and terminal tour presented various fuels used by the heat entrepreneurs (forest woodchips, by-products of wood processing, recycled wood and peat) as well as their storage. Heat entrepreneurship business model was introduced with showing different ownership models, as it is possible to become a single entrepreneur or partner with others and form a cooperative for instance. Thereby, the guests were presented with the Ähtäri cooperative, its activities and sites. Additionally, the guest had a chance to get to know the education in the bioenergy field in the educational facilities of SEDU vocational education and training located in Tuomarniemi, Ähtäri.

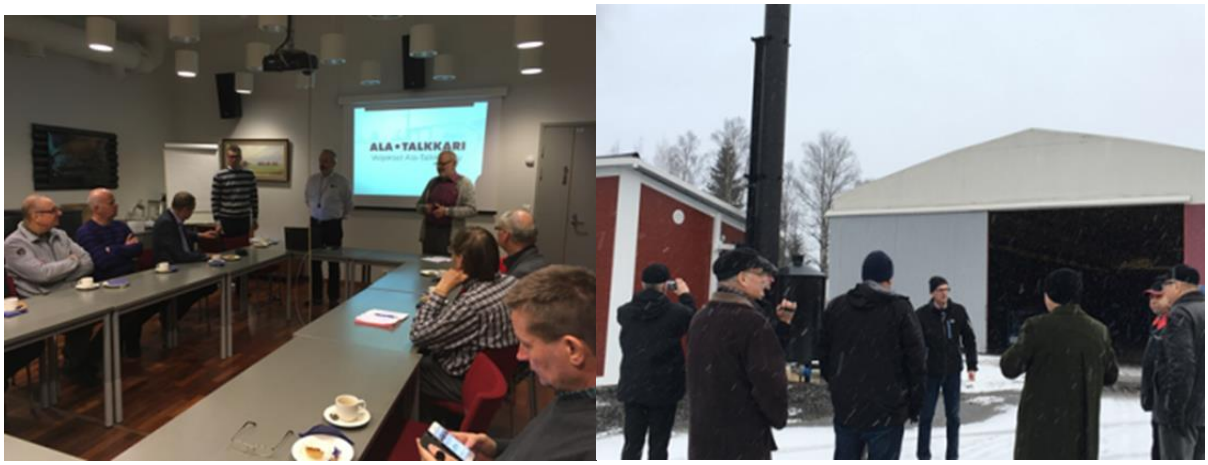

Figure 12 The Estonian guests were shown equipment manufacture relating to heat entrepreneurship as well as heat entrepreneur sites. Pictures: Anne Viljanen.

Figure 13 Wood harvesting and chipping exhibition in Ähtäri. Pictures: Anne Viljanen.

Figure 14 The Estonian delegation visited Finland in 29th – 30th of November in 2017 and were presented with the storage of woodchips. Picture: Anne Viljanen.

Figure 15 The fuels used by the heat entrepreneurs and their storage as well as getting acquainted with Ähtäri cooperative activities. Pictures: Anne Viljanen.

The Estonians were also interviewed to a local newspaper Ähtärin Uutisnuotta. The article was published in 13.12.2017 with the title of "Woodchip activities interests the Estonians". In the article the Viljandi regional governor states that in Estonia there is a great interest in developing the woodchip activities: *"In Estonia we have very large container boiler rooms, and their boilers are too big for the residential buildings. However, there would be need for heating solutions for smaller residential buildings as well, especially in the countryside. The woodchip boilers are of great interest to us, as well as guaranteeing the quality of woodchipall the way from the storage and transportation. In this visit we will get to see the whole chain and it is valuable information for us"* (Ähtärinjärven Uutisnuotta 13.12.2017).

From Finland to Estonia

Information exchange in the project went two ways. Also, from South Ostrobothnia Finland field trips were conducted towards Estonia to learn especially on the forest bioenergy use in there. Bioenergy field trips to Tartto, Estonia and nearby region were organised for the forest owners and other actors from South Ostrobothnia Finland. During the ferry ride from Helsinki to Tallinn seminars were organised for the participants which showcased related activities and projects. One of the most significant visiting site for the finns was the yearly organised Tartu Maamess fair, which is one of the most prominent agricultural and rural themed fair in the Baltic Sea countries. Additionally, the project team visited several sites around Estonia and gained comprehensive view on the bioenergy production and consumption in the country.

Maamess fair in Tartu

In Tartu yearly organised Maamess fair is ”the most recognised rural-themed fair in the Baltic Countries”, which consist of international agricultural exhibition, international timber processing and forestry exhibition, food fair and gardening exhibition (Tartu Näitused website 30.3.2021.) In 2019 Maamess fair had 45215 visitors, 484 exhibitors and 70 000 m2 of exhibition area (Maamess website 30.3.2021).

Figure 16 Yearly organised Maamess fair gathers comprehensive collection of showcased agricultural and forestry machinery, equipment and products to Tartto, Estonia. Picture: Anne Viljanen.

VISU- project team participated in the Maamess fair in 2017, 2018 and 2019. In 2017 the newly began VISU-projects rollup was showcased in the Finnish “Koneyrittäjät” stand. In 2018 VISU-project was displayed at the fair with its own stand. At that time, a lot of information was distributed in different languages (See figure 18). The Finnish VISU project team communicated the project in Finnish and in English. In all times, there was present also an Estonian interpreter, who was in detail knowledgeable of the project and

communicated the project to the Estonian fair visitors, who presented the majority at the fair. The project was communicated in different ways. A video of the project had been produced and it was repeatedly shown to the fair visitors. Several rollups and brochures showcased the benefits of heat entrepreneurship and introduced the project. Thereby, heat entrepreneurship, the information exchange between Estonia and Finland and the activities were made known at the grassroot level with the target audience interested in the topic.

Figure 17 In 2018 VISU-project was displayed at the Maamess fair with its own stand. The project was communicated with a video, brochures and rollups. The project team also communicated in words about the project for the visitors and communication was in three languages: Estonian, Finnish and English. In the picture from the left: Risto Lauhanen (Seinäjoki University of the Applied Sciences), Väinö Poikalainen (Teadus & Tegu), Lembit Lepasalu (Teadus & Tegu), Juha Viirimäki (Finnish Forest Centre) and Anne Viljanen (Thermopolis Ltd.). Picture: Anne Viljanen.

In 2019 in the VISU project a bioenergy study trip was organised for agricultural and forestry entrepreneurs of South Ostrobothnia. There were 46 participants for the study trip. Thereby, it is easy to conclude that there is wide interest on Maamess fair and Estonian bioenergy issues among the actors of South Ostrobothnia.

Forest Bioenergy Day in Kõpu Estonia

One of the most interesting events of the project was Kõpu Forest Bioenergy Day, which was organised in the countryside of Estonia in the small municipality of Kõpu. Around 25 exhibitors participated to the Kõpu Forest Bioenergy Day and Olympic medallist Juha Mieto himself was the main attraction of the day.

Figure 18 The opening speeches of the day were heard from a local regional governmental representative, director Erich Palm (left in the center) and professor emeritus Väino Poikalainen (right in the center). Picture: Matti Alakoskela.

The event was a forestry field fair, in which fair visitors could freely circle around and get familiarised with different stands and sites. Local (Estonian) wood harvesting machinery was displayed at the fair stands and also smaller scale wood harvesting and firewood processing equipment. Additionally, at 3 p.m. there was a chipping exhibition at the fair area. For this purpose, an Estonian company Reinpaul Oü delivered a chipper to the site and showcased the chipping exhibition.

Figure 19 Kõpu Forest Bioenergy Day work exhibition in 20th of March in 2019. Picture: Matti Alakoskela.

Figure 20 Work exhibitions chipper. Picture: Matti Alakoskela.

Figure 21 Harvesting machinery displayed at the event. Picture: Matti Alakoskela.

Figure 22 Fair area at Kõpu. Picture: Matti Alakoskela.

Followingly, the fair visitors had the chance to participate on a site tour, which entailed a tour at the Kõpu mansion school as well as the planned site for the heat plant (former and closed heat plant). Also, the tour included the farm grain dryer, which is an English gas fuelled grain dryer. In the end, the fair visitors were taken by bus around the cooperative Kõpu PM Oü farm, in which its central functions were presented. This gave an overview of the farms large size and the activities at the Estonian countryside – agriculture, forestry and harvesting of wood. Kõpu PM Oü is the financier of one of the two sister projects to VISU in Estonian side and there is interest in the farm towards heat entrepreneurship.

Figure 23 Chipping exhibition at the Kõpu Forest Bioenergy Day. Picture: Matti Alakoskela.

The day was interesting and successful in the sunny but cold weather. Juha Mieto, who is highly esteemed in Estonia gathered 100 visitors at the site. He acted as the ambassador of heat entrepreneurship and thanks to his appeal the project and its goals gained national attention. Communication-wise the event was a huge success. Estonian newspapers such as Maaleht, Sakala and Postmees interviewed Juha Mieto and the project team.

Media articles

Several media articles were produced throughout the project both in Finland and Estonia. The launching of the project and later its activities were published in the local papers in South Ostrobothnia Finland. The project and the topics inspired by it were published many times in the Koneyrittäjät – Newspaper. Kõpu Forest Bioenergy Day gathered national attention at the Estonian newspapers, largely thanks to bioenergy ambassador Juha Mieto's appeal.

12 INTERVJUU

Toimetaja ANDRES EILART. Tel 661 3330. e-post andres.eilart@maaleht.ee | MAALEHT Nr 12 (1641) 21. märts 2019

Suusasangar JUHA MIETO: praegusaegsed inimesed on ära hellitatud. Mina olen raudne mees!

"Juba viis aastat enne tippspordiga lõpparve tegemist hakkasin mõtlema, mis edasi saab. Haridust mul küll suuremat pole, ainult külakool, aga mõistus peab ikka endal peas olema," räägib legendaarne soomlane intervjuus Maalehele.

AIVE MÕTTUS
aive.mottus@maaleht.ee

"Ei, meil ei ole sooja võileiba!" ütleb hotelliteenindaja ja soovitab äsja Helsingist saabunud laevalt maha astunud legendaarsele olümpiavõitjale Juha Mietole õhtusöögiks kahe kuivanud välimusega saiakest. Läbirääkimiste tulemusel õnnestub siiski tellida burger friikartulitega. Intervjuu võib alata.

■■■

Kui tihti Eestis käite?

Ikka käin. Viimati oli vist siis, kui Eduskunnas olin ja riigikogu riigikaitsekomisjonil külas käisime. Või ei, hiljem ikka ka – ühel olümpiavõitjate klubi üritusel.

Seekord on teie tuleku põhjuseks puude lõhkumine Viljandimaal Kõpus toimuval metsandusüritusel.

Oo jaa! Puude lõhkumine on minu tõeline kirg, naudin seda väga! Üldse meeldib mulle metsas olla, just üksi. Linnulaulu ja vaikust kuulata. Olen elu jooksul nii palju inimestega suhelnud, et vahel kulub üksiolek marjaks ära.

Kui kaks ronka su pea kohal tiirutavad, on ikka uhke tunne jaksu küllaga, ning mina ka veel elujõus. Palju hullem on seda korraldada siis, kui ise juba mineku peal oled.

Kui on üks pärija, on lihtne asju käest anda. Ei mingit jagamist ega jagelemist. Nii et mul on praegu tühjad pihud... (*Naerab.*) Võlad on makstud ja pisut raha kõrvalegi pandud. Arved tulevad ka kõik pojale.

mõistus peab ikka endal peas olema!

Ühte asja ma ütlen: lõpetamiseks tuleb end hinges ette valmistada. Ja abi saavad pakkuda mitte igasugused asjapulgad, psühholoogid ja kes kõik, vaid endised tippsportlased, kes selle tee ise läbi käinud.

Mina jagan oma eluea neljaks: lapsepõlv, noorus ja sport,

soojalgpall. Olete neid ka proovinud?

Soos pole jalgpalli mänginud ega sääski püüdnud, aga naiskandmist olen küll korra proovinud. Tegelikult on meil selle ala nimi eidetassimine. Te, eestlased, ütlete lihtsalt viisakamalt. (*Muheleb habemesse.*)

Ükskord Lasse Virení siinpäeval osalesime neil võist-

pärit naissuusatajat, sündinud Virenigа täpselt samal päeval ja aastal. Aga ta, sunnik, oli jube raske. Pidin ikka tõsiselt pingutama, et temaga finišisse jõuda!

**Millal te viimati Jukolat jooksite? (*Maailma osavõturohkeim õlne orienteerumise teatejooks seltsmelilkmelistele võistkondadele, peetakse 1949. aas-*

1991 oli see, kokku jooksin 19 korda. Kolmel korral jõudsin teatevahetusalasse esimesena.

Väga paljudele inimestele seostub suusalegend Juha Mieto nimi ülinappide kaotustega ja sagedase ebaõnnega. Meenutage palun sellele vastukaaluks mõnda eriliselt õnnelikku spordihetke.

Figure 24 VISU-project gained national attention at the Kõpu Forest Bioenergy Day thanks to the appeal of Juha Mieto. Media articles on the topic were published at the Estonian newspapers. In the picture is a part of the long newspaper article published in the Maaleht. Source: Maaleht Nr.12 (1641) 21.3.2019.

International Bioenergy Days

Two-day event of International Bioenergy Days were organised in the VISU project in 10th -11th of October in 2018. International Bioenergy Days consisted of a seminar day and a field trip day. The International Bioenergy Days had participants from four countries: Finland, Estonia, Lithuania and Czech Republic. Among the participants were two representatives of respective ministries: one from the Lithuanian Ministry of the Environment and one from the Ministry of Trade and Industry. Altogether there were 40 participants to the event. The first seminar days program consisted both Finnish and Estonian presentations. VISU project team consisting of project manager Anne Viljanen (Thermopolis Ltd.), Task

manager Risto Lauhanen (Seinäjoki University of Applied Sciences) and Juha Viirimäki (Finnish Forest Centre) welcomed the quests. Deputy Regional Mayor Antti Saarteenoja gave the opening speech and regional salutation to the participants. Vapo Ltd.'s director of public affairs Janne Sankelo spoke of the political aspects of the distributed energy production. The Associated Prof. Eugen Kokin talked about the farm size bioenergy use and its prospects in Estonia. Branch Manager at the Bioenergy Association of Finland Hannes Tuohiniitty enlightened in his turn the importance of domestic bioenergy both in Finland and in EU. Professor Emeritus of agricultural engineering at the University of Helsinki Jukka Ahokas explained in his speech the farm-sized energy issues. Followingly, the VISU-project was presented from both Finnish and Estonian perspective. The project manager of VISU-project Anne Viljanen presented first the general structure and activities of the project from the Finnish perspective. Professor Emeritus of Food Science at the Estonian University of Life Sciences Väinö Poikalainen continued VISU presentation by describing the practical events of the project and the Estonian perspectives on it. Energy Expert at Tartu Regional Energy Agency and Managing director of Pilvero oü Ülo Kask on his turn presented the Estonian energy auditing system and the differences and similarities of the Finnish and Estonian energy auditing system perceived in the VISU-project. Finally, Energy Expert at Tartu Regional Energy Agency Martin Saareoks informed on accelerated use of forest residues in the Baltic Sea countries based on the ongoing project Baltic ForBio. Thereby, the seminar topics shifted from more general and broader topics towards the farm-size and in the end the concrete and practical activities that had been realised especially in the energy and bioenergy related information exchange in the VISU-project.

During the second day of the international bioenergy days on the 11th of October in 2018 sites of South Ostrobothnia were introduced to the quests. The field trip instroduced several sites on heat entrepreneurship such as the heat plant operated by Helppolämpö Oy, which provides heat to Härmä Spa. Also, among the visiting sites was for instance a wind power plant of 2,5, MW located in Kortesjärvi.

Figure 25 VISU International Bioenergy Days field trip quests at the nearby surroundings of the Härmä Spa on the 11th of October in 2018. Picture: Anne Viljanen

Creating international networks to other (Eastern) European countries

In the project other trips were also conducted to other European countries, in which the project team participated in bioenergy field fairs and strengthened international networks as well as created new ones. One interesting field trip was directed to the Czech Republic in the spring of 2018. On this journey the South Ostrobothnia bioenergy delegation visited the Czech Republic and was hosted by the Finnish Embassy in Prague. On the first day of the journey (25th of April in 2018) the South Ostrobothnia bioenergy delegation visited District Heating and Energy Days in Hradec Kralove, in which they took part in organised meetings with the local representatives of the energy field as well as local company presentations. On the second day of the journey (25th of April in 2018) the delegation took part in the mini energy seminar organised at the Finnish Embassy in Prague. Prestigious representatives of the Czech Republic and the bioenergy field as well as at that time Prague Finnish Ambassador Helena Tuuri were present at the event. Information was exchanged between the Finnish and the Czech on forest bioenergy use and its opportunities in the countries.

Figure 26 South Ostrobothnia bioenergy delegation visited the Finnish Embassy in Prague in 25th of April in 2018. The Czech and the Finnish experts met and discussed bioenergy at a mini seminar. At the centre of the photo Finnish Ambassador in Prague at the time Helena Tuuri. Picture: The Finnish Embassy in Prague.

5 Accomplishments of the VISU-project

During the VISU-project the Finnish partners gained a lot of knowledge on the Estonian bioenergy field, operational culture and its energy auditing system. Also, the Estonian participants gained a lot of information especially on the heat entrepreneurship business model. The related production chain from the forest until the heat site was presented through concrete site visits in South Ostrobothnia. In addition, the Estonians were given an opportunity to get familiarised with South Ostrobothnia region in Finland and its culture and history.

Throughout the VISU project challenges were faced, a lot was accomplished, and new things were realised. These insights can be useful to other Finnish actors directed towards Estonia, Estonian actors directed towards Finland, others interested in bilateral information exchange projects as well as other international actors for instance in Baltic Sea or Baltic countries, that are interested in utilising these learnings in their own country as well as developing their own energy production and consumption to a more sustainable direction.

Energy information exchange

Due to VISU-project energy information exchange was conducted on the two countries energy auditing system. During the VISU project and in Mooste and Kõpu mansion areas several buildings underwent energy auditing, which was conducted by the Finnish energy auditors. The Estonian energy auditors participated on the energy information exchange by observing the work conducted by the Finnish energy auditors in Mooste. In addition, the Estonian energy auditor was interviewed on the Estonian energy auditing system. Together with the Estonian energy auditors the similarities and the differences between the Finnish and the Estonian energy auditing systems was clarified. This information was communicated in the feedback events of the energy audits to the Estonian audience and by presentations, especially at the VISU International Bioenergy Days. The Estonian energy auditor and long-time energy expert Ülo Kask is in the position to influence on the energy auditing system in Estonia. Thereby, the information exchange on the topic is fruitful and beneficial for the two countries.

Promotion of renewable energy

Based on the information exchange of the project renewable energy was installed in Estonia. In the Mooste mansion buildings geothermal heat pumps were installed. In Kõpu the heatings system of the mansion school was renewed and automated. The Kõpu heat plant is not fuelled by pellet.

New projects

Based on the VISU project new international projects were produced. First, to the direction of France a bilateral information exchange project was formed called FRANSU – the many opportunities of bioenergy, in which Thermopolis ltd. and Finnish Forest Centre from AIsapari area in South Ostrobothnia exchange information with the French Bretagne and Normandy areas. The cooperation is conducted with the French Dinan Agglomération, cooperative SCIC ENR Pays de Rance and Parc naturel regional des Boucles de la Seine Normande as well as the leader groups of these areas. At the centre of the project is to promote at the Aisapari leader area the local bioenergy chains activities and develop the energy related self-sufficiency. Additionally, internationally the project exchanges information between the project partners and aims to increase the target groups knowledge on for instance bioenergy use and hybrid solution.

Also, in the direction of Estonia, two new forest related projects were formed. First, “Tastes from the regions forest” (Makuja maakunnan metsistä) project operates on the funding of the European Agricultural Fund for Rural Development in 2019–2022. The Centre for Economic Development, Transport and the Environment of South Ostrobothnia as well as private actors fund the project. In this project coordinated by the Finnish Forest Centre is also Seinäjoki University of Applied Sciences. The budget of the project is 150 000 € and funding percent 80 %. Second, SUVI project or “Entrepreneurship from nature” (Liiketoimintaa luonnosta), coordinated by the Leader group Kuudestaan. The funding percent is 100 % and the budget approximately 165 000 €. In addition to the Leader Kuudestaan, the project partners are Leader Yhyres in Kyrönmaa, the Finnish Forest Centre and Seinäjoki University of Applied Sciences. In Estonia, the cooperation area is Põlvamaa and its Leader group.

Awareness on heat entrepreneurship has increased in the target audience

During the VISU project the awareness on heat entrepreneurship has increased in the Estonian target group at the countryside of Estonia, especially in Mooste and after the municipality reform in current municipality of Põlva as well as in Kõpu and after the municipality reform in the current municipality of Põhja-Sakala. Among the target groups were farmers and forest owners, which are potential heat entrepreneurs. On the other hand, municipalities need heat and are potential buyers of the heat produced by the heat entrepreneur. Following the VISU project the Estonian municipality leaders at the target areas are well informed of the heat entrepreneurship related production chain and the related benefits. Also, at the regional level of Viljandi the leaders are well aware of the Finnish heat entrepreneurship business model and it is possible that this knowledge spreads to the other municipalities of the area.

Bilateral information exchange on the transition to a low carbon society

During the project bioenergy related international networks were strengthened and created widely, from Finland to Estonia and other European countries. A prestigious Estonian delegation has visited Finland and the Finns have visited Estonia. The benefits of these site visits can be realised after a delay. The awareness on heat entrepreneurship has been raised in the Estonian countryside and it is important that this work continues. Additionally, in other Baltic countries and Eastern European countries have needs to use locally produced energy, to shift away from the fossil fuels and increase the local employment. In some countryside areas the Finnish heat entrepreneurship model can be an answer to these needs and the challenges of climate change. International information exchange on sustainable energy production and use in increasingly important in the future. Bilateral and interregional projects such as VISU project are important tools in achieving positive change in the transition towards carbon neutral society. Interregional and transnational information exchange is important, as the rural regions often have more things in common even across the country borders than for instance rural regions with urban regions at the same country. Thereby, it is important that South Ostrobothnia as a rural region continues to engage in international cooperation and information exchange beneficial for both parties with those European countries and regions in which the conditions and the challenges are the same. This will serve the mutual benefit the best and promote entrepreneurship, employment, self-sufficiency and the transition towards carbon neutral society.

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