



# StarTree in Finland Mushrooms, berries and lakes

Toni Dickson and Emma Chapman report on the latest from the StarTree Project.

Every six months, around 40 people from the StarTree project partner organisations travel across Europe to work together, report on progress and new ideas, and make plans for the coming months. In May 2015,

## Carbon travel notes

This time, the StarTree team resorted to air travel. What happened to our overland, low-carbon travel ideal? A quick-&-dirty piece of research we did in 2013 found that travelling by air takes roughly three times as much carbon as travelling by bus or coach, and roughly twice as much as travelling by train. Figures for ferry travel are hard to come by, though there are rumours that they are surprisingly high. Air travel draws a straight line between Edinburgh and Helsinki, whereas train or coach draws a long, long curve, eating up much of the carbon saving. The inevitable ferry crossing adds a question mark to that picture. This was the first journey where the carbon benefits of overland travelling looked questionable. Also, for personal reasons, at most two of our three outward journeys and one of our three return journeys would have been done overland. So we decided to travel together, flying from Edinburgh to Finland.

The last leg of the journey was an easier question to answer. International flights would only get us as far as Helsinki, leaving another 400-odd kilometers to travel to our StarTree partner's base in Joensuu. Short-haul flights are disproportionately carbon-heavy, as much of the energy is spent simply in getting the plane into the air. So instead we did that final leg by train, giving us several extra hours' close-up experience of Finland and, with no distractions and an inspiring backdrop of lakes and forests, a particularly productive team meeting on board.

a party of three flew from Edinburgh to Helsinki, then took a train north to Joensuu. During the first hour of the train journey, the landscape became gradually less farmed and less settled; for the next three hours we glided through seemingly endless lakes, birch trees and pine trees, with the occasional sight of wooden huts, houses and farms.

The highlight of these General Assembly meetings is the one-day 'knowledge exchange event' (KEE). Toni Dickson, one of Reforesting Scotland's StarTree researchers, writes:

Based around a series of field visits, the purpose of the KEE day was to look at different aspects of non-wood forest product (NWFP) production, use and marketing within the Karelia region, in Northern Finland. Cross-country exchange was encouraged and facilitated throughout the day with certain topics given as starting points for discussion, such as 'Innovation within forestry management' and 'Challenges facing SMEs within the NWFP sector'.

## Mushrooms

The packed itinerary began with a visit to a small silver birch woodland, where an interesting cultivation experiment of pakuri (*Inonotus obliquus*), commonly known as the chaga mushroom, was taking place [1]. This was one of many woodlands that are part of an innovative project attempting large-scale cultivation of pakuri on silver birch trees. There are around 200 forest owners cultivating pakuri as part of this experiment, stretching throughout Northern Finland up to the Arctic circle. For forest owners that have low-yielding forest, the pakuri has great potential as a new income source; the

value of the pakuri can exceed almost tenfold the value of the tree which it grows on if sold as a raw material for health remedies. The pakuri is widely used as a tea and medicinal remedy in Asia and its use is becoming a growing trend in Finland; thus the raw material has both an increasing national and a well-established international market.



The trees are inoculated using plugs containing pakuri spores. We witnessed a

Finnish forester carrying out this task, doing well to maintain a dry sense of humour and his wits to not fall off the ladder whilst fifty people looked on. Pakuri grows as sterile conks on the stem of the tree, it is a parasitic pathogen and kills the host tree, making this experiment also controversial as the trees will be chopped down and burnt once the pakuri is removed. Pakuri is a slow grower and it will not be known if the experiment is successful for at least another five years, when the size of the sterile conks can be assessed. However, the early signs are promising with conks on some trees already appearing within the first couple of years.

From this very small silver birch woodland we were taken to a forest site in Heinavaara. Standing upon a forestry track, where on one side lay an old-growth forest and on the other a clearfell site, we were meant to be looking at a site where joint production of NWFPs and timber was taking place. There was no evidence of management for NWFPs. We were told that cowberries/lingonberries (*Vaccinium vitis-idaea*) grow well on clearfell sites and there was a brief mention that the old-growth forest was good habitat for capercaillie. As Finland is the most forested country in Europe, with 86 per cent of the land area under forest cover, one could not help but feel a little

Above, from top: The lake, with dipping platform; Research forester inoculating a birch tree with pakuri. Opposite page: StarTree General Assembly.



disappointed that this brief forest visit at Heinavaara was to be the only example of Finnish forests and forestry we were to experience.

A short meander through the forest brought us to the hunting lodge, adorned with lynx skins and the like on the wall, where we were gifted a kuksa (traditional Finnish wooden cup). Kuksas are usually carved from birch burl but this was made from a non-traditional composite material, recycled plastic and wood, it was a

## The business of the General Assembly meeting

### Action Research

“a reflective process of progressive problem solving... actively participating in a change situation...” [1]

During the Joensuu meeting, StarTree partners described their Action Research projects: mushroom tourism, black cherry chemical extracts, community woodland enterprises, Naturpark branding, a wild harvests app... posters of all can be seen on the StarTree website [2].

Our own Action Research focuses on supporting existing Scottish initiatives, and leaving behind a legacy of connections made and a shared promotion of Scotland's wild and woodland products.

### Planning StarTree outputs:

- suggestions for innovation support materials
- a preview of an online portal of NWFP legislation
- discussions about academic papers - some at the brainstorming stage, some nearing publication
- case studies for business ideas - a 'marketing course'

### Delphi study

We were introduced to this structured group communication process, which is used for collecting knowledge and achieving a consensus from experts, and is something we are required to use during the StarTree project. We are expecting it to be very useful for our Action Research!

1. [https://en.wikipedia.org/wiki/Action\\_research](https://en.wikipedia.org/wiki/Action_research)
2. <http://star-tree.eu/results/posters>

lovely practical present which “you can put in the dishwasher”, one of the hosts proudly told me. The first round of ‘organised focused discussion’ on innovations and forest management took place over coffee, with the discussion orientated to discover if people felt that innovation in forestry comes from external sources, such as forestry organisations and institutes, or is internally driven by woodland and forest owners. Interestingly, no-one thought innovation came from the big governing forestry bodies, they felt the risk was too high for these organisations. It was voiced that in Wales (much like Scotland) there are an increasing number of smaller woodland owners and community woodland groups which are starting to become innovative in finding ways to manage and raise income from their woodland other than timber production, and in these cases the innovation is internal rather than external.

### Berries

Every year, Finland has a huge crop of forest berries - over 500 million kilograms! It is estimated that about 60 per cent of households pick forest berries and around 20 million kilos are collected for sale. Moving closer to the Russian border, we made our way to Illomantsi, the easternmost municipality of Finland. Here we were introduced to some small and medium-sized enterprises (SMEs) selling NWFPs. The brave drank the distinct-tasting pakuri brew; the tar moisturiser with its extremely strong smoky scent was a product that one either loved or hated; blaeberry and cowberry juice and powder seemed extremely popular with the delegates, as did the lovely smelling spruce resin oil.

The Arctic Flavours Association (AFA) made a presentation. AFA [2] is a NWFP industry association for producers, processors, sellers, and buyers, and is one of the more successful NWFP support initiatives we have studied [3]. With over 100 member companies, AFA mainly represents the larger scale operations, those who bring in some 2,500 foreign pickers each year, from as far away as the Philippines and Thailand. Unfortunately, there was no opportunity to ask the SMEs present if they felt that AFA represented and supported SMEs as well as larger businesses. The AFA definitely does

encourage and promote sharing of NWFP information, with well-presented leaflets on berry and mushroom picking, the health benefits of berries and the range of activities that people can participate in within the forests of Finland.

Rounding up the visits, we were treated to a tasting of berry wines and pure birch sap (for the non-alcoholic drinkers) at the Hermanni winery, the oldest winery in Finland [4]. This is one of twenty fruit wineries in Finland; at one time there were around eighty before the licensing application procedures changed. The winery cultivates some of the berries used, others are bought from pickers; there was no mention of the owners themselves going out wild harvesting. It is difficult for those producing and selling berry wines to be profitable. The winery owners tell us of the alcohol laws which restrict where their wines and liqueurs can be sold, producers can only sell their wines from their own premises or an ALKO (the state's alcohol monopoly) shop and their liqueurs only through ALKO shops, and they explain that the taxation is high, around 45 per cent of wine price constitutes taxes. The Hermanni winery generates extra income through their Winetower café, with panoramic views attracting tourists, and increasing their range, soon to add birch sap wine and a whisky brewed by the Russian Orthodox monks to sell to the Chinese! Berry wine making is the norm in Finland, not surprising when around 20 million kilos of forest berries are collected for sale every year, this is in stark contrast to Scotland where we have only one successful country wine company.

Naturally, the only way to bring the day to a close was in traditional Finnish style, a sauna and icy lake dipping!

### Further reading

1. Cultivation of pakuri: <http://tinyurl.com/p9ckvnp>
2. <http://www.arctic-flavours.fi/en/arktiset+aromit/association/>
3. 'NWFP initiatives in the UK and worldwide' – there'll be a link to this soon on the RS website
4. Hermannin Winery: <http://hermannin.fi/en>

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