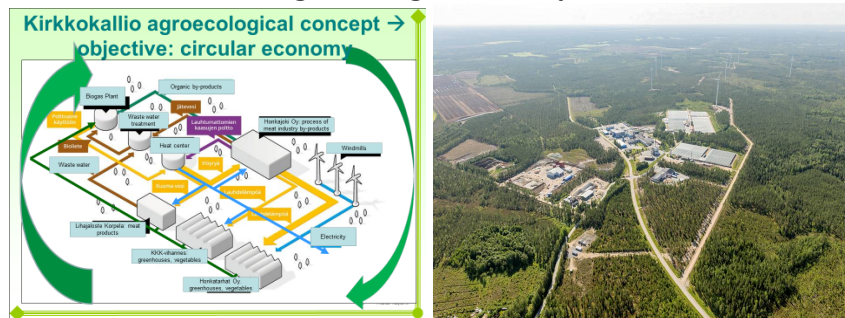


### Case 3: Kirkkokallio Agroecological Concept



#### What is it all about? Why is it needed?

Actors in the area form an integrated system where water, nutrients and energy circulate. The actors make use of each other's side products. The solution improves eco-efficiency of the cluster.

Surface area: approximately 150 hectares including the wind farm.

Over 10 companies involved.

-Honkajoki Oy: processing meat industry by-products into sterile meat and bone meal, organic fertilisers, fodder and fat, from which Neste Oil is currently making biodiesel in Porvoo

-Honkatarhat Oy: heating all-year-round with waste heat from Honkajoki Oy. Producing lettuce, herbs and cucumbers.

-KKK-vihammes Oy: organic tomatoes.

-Taaleri Oyj: the national electricity grid receives 21,6 MW from 9 windmills.

-Biogas plant opened in 2014.

Total investments over the past five years 100 million euros.

Several supporting actors\*

#### Effect:

Kirkkokallio has been growing continuously since the 1980s.

Total revenue of the companies has reached around 100 million euros.

Employs more than 200 people directly and indirectly.

Attracts a growing number of business and environmentally-oriented visitors yearly.

#### \*Key supporting actors

The circular thinking: prof. Juha Helenius (UH), MSc Jukka Kivelä and MSc Hannu Uusihonko

Municipal planning with novel thinking: regional architect Ilmari Mattila

The local entrepreneurs

The municipal development centre and regional and municipal trade authorities

Advisors helping the farmers and greenhouse entrepreneurs

Funding: the companies, national funds for companies and RDP's.

#### Future

The key issue is to enable the co-operation between the companies and also with the farmers involved. It is important to show this kind of examples to the administration in other regions too. Also advisors should have better view of the potential alternatives.

The cluster has been created only because there is a strong will and motivation among the key persons in the area. To implement them more widely, the information and also the imagination – should be more openly adopted.