



# Project RaaTec RZ

## — Development of a method for water treatment of drainage water in peat plants!

Peat mining has a significant impact on “health” of our rivers! Today, it is not so many turf companies, that cleans the drainage water. Water containing varying amounts of suspended solids. Most of the companies discharge their drainage water with primitive or no treatment methods. The situation is similar throughout Europe..

### Background

In order to prevent eutrophication of lakes and rivers near the sea, it is manifested in the Environmental Code, that surface, groundwater and streams are protected. For peat production, this means that the drainage water must be purified. Suspended solids have a very small particle size of  $<2\mu$ , too small to be captured in mechanical filters. Today there is no useful technologies for water treatment to an acceptable levels of suspended solids (SS). Some companies deliver their drainage water to the local sewage treatment, an option that rarely works in practice for logistic and financial reasons. The risk is great that we are denied permission to open new peat extraction if you can not keep enough low readings of suspended solids (SS).

A simple solution is requested, a cost-effective and environmentally friendly water treatment method. We want to develop the project RAATEC RZ - cleaning of drainage water adapted to peat plants. A technique that can also be marketed to logging companies.

### Goals to achieve with this project.

The project aims to develop an idea based on using Zeoflock, an MCP Zeolite-based flock funds, which lumps together the suspended material. For this project we need to build a prototype and pilot plant. After testing and development, the goal is to bring RaaTec RZ into production and marketing on the European market.

### Benefits for the end user

Facilitates the achievement of environmental goals when seeking permission to open new peat plants.

Easier to get existing peat plants approved for continuing operations.

Landfill from the RZ treatment can be reused and processed, such as addition to substrate, or replacing clay. Multimodal areas can be developed.

Zeoflock is an environmentally friendly non-toxic agents flock.

### Our target group:

Peat mining companies and timber companies of all types.

### The RaaTec RZ filter, functions and characteristics

- Reduces suspended solids.
- Based on prior art, parallel separation and natural Zeoflock. A technique used by conventional water treatment plants.
- The design should be simple, yet difficult to copy. “It must not be worth plagiarizing.”
- The filter must be service-friendly and easy to maintain.
- Built in a module system to achieve maximum customizing.
- Reduces the need for large collection ponds. (Increase the capacity by 10-100 times)
- Easy to control flow and counter flow.
- Automatic discharge of sludge for trouble-free operation.
- Operation alarm systems optional.
- Injector for oxygenation of the water or similar as an option.
- Sustained and increased biological balance of the purified water.
- Should be interesting for small and medium-sized companies at a reasonable price level.
- Independent of power source for operation, possibly solar cells can be used for optional equipment. In essence it is a mechanical filter.
- Are frost-resistant.

## MARKETING PLAN

### Manufacture of prototypes and pilot plant:

The first plant is being built in order to evaluate and develop the business idea. Experimental site can then serve as a reference plant. Based on that experience it can be developed for mass production.

RaaTec RZ is supposed to be built in modules, and can take various configurations customized for clients' various needs and abilities.

### Marketing:

1. Presentation material is presented in the form of 2 different brochures targeted to each audience to be sent by mail. For interested customers, a more detailed information are available at an website, an instructional DVD could be required from the website.
2. Press Release to all the trade press in relation to forestry and peat production and pressure environment-oriented.
3. Events for government officials, media and potential customer groups at site of the plant.
4. Sales may take place mainly through agents and dealers, the active site will offer sign-on for retail and agents with a complete sales and service support.
5. Close cooperation with companies in the branch, consultants and authorities.

### Action plan:

Year 1:

- Evaluation during the autumn and winter, if the results from the pilot plant is good we start the marketing efforts.
- Recruitment of 1 market sales manager at a 6-month project basis.
- Establish relation with agents and resellers.

Year 2:

- Evaluation of the sales and make decision of indefinite duration for the market sales manager.
- Establish contacts with agents of our neighbors.

Year 3:

- Evaluation of the sales
- Recruitment of 1 export market sales manager.
- Begin Marketing in Europe.

### Risks:

- The outcome is not as expected.

### Comments from representatives from the target group:

“This is what we have been waiting for”

## PROJEKTGRUPP OCH FINANSIERING

Self-financing of RaaTec and with external contributions from trusts and companies involved.

RaaTec AB have many years experience in water treatment in various forms; Bio filters (BioBox™), pressure filters, laminae filters, cyclones, sock filters mm. Among the references are a large number of greenhouses, McDonald's salad producers etc. Thomas Merlöv is the owner of RaaTec AB and since 3 years operator of ScanPeat AB. He is the founder of this project. ScanPeat and other peat extraction companies must find a solution to the water treatment problem.

With the accumulated experience and knowledge of current treatment methods are prerequisites for finding a method that reduces the emission of suspended matter.

### WORKGROUP:

It will require much commitment to implement the project. It is important to find employees who are well aware of the risks and successes. All persons named below are fully informed and see it as a challenge to be apart of developing the project - a development for the future.

Thomas Merlöv, RaaTec, Development  
Dr Janos Papp HAS, Hungarian Academy of Sciences  
Susanne Dahl, Ekonomiföretaget AB (Economist)  
Patrik Weijman, Weijman system  
Ulf Lövgren, mentor (Retired bank manager at SEB)  
Mattias Feldhusen, Nordicwater (marine biologist)

