OASIS

Project Outline:

Work in 2021 will build on key trial learnings. In particular emphasis will be placed on nutrient removal from the system, improved stock survival and growth rate and addressing challenges surrounding cyanobacteria growth. Algal incubator units will be installed to intrude natural prophylactic properties aimed at stabilising system performance in spring when algal growth is significant. A new duckweed nursey will be installed to ensure adequate duckweed coverage earlier in the growing season which will reduce BOD. A juvenile mesocosm unit will also be trialled aimed at increasing natural juvenile production and a mass balance model will be developed. Elements of the project are run in conjunction with UCC, NUIG and AIT providing significant academic and scientific back-up to ensure that key learnings drive further development.

Project Objectives:

- Documented inputs and outputs on trial sites.
- Trial of technological and management-based solutions.
- Utilisation of natural reedbed and wetland systems to treat effluent.
- Analysis of sludge generation and possible reduction solutions
- Assess the potential for duckweed cultivation as a protein source.
- Create a circular economy test model.
- Map the energy efficiency and Life cycle assessment (LCA) of the system.
- Production of out of season juveniles
- Supply of niche organic product
- Perch & trout culture expanded.
- Farms open to external visits from stakeholders to encourage dissemination.
- Development of sustainable IMTA system delivering both fish and plant products.
- Continued development of brood stock programme.

Expected Benefits:

- Develop a new freshwater production system for Ireland
- Expansion of Irish freshwater production
- Utilisation of non-agricultural lands
- Develop methodologies for reduced abstraction and discharge
- Develop new alternative protein source

Projected Cost: €300,000