

NEWSLETTER

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Interview with the Coordinator: NOVAFOODIES preliminary assessment from the launch of project activities.

Expectations at the beginning of the project.



During the Kick-off-Meeting that we held in Seville last May 2023, we could perceive the enormous potential of the **NOVAFOODIES** concept due to the multidisciplinary profile of the consortium and the excellent background and expertise they have brought to the project.

Undoubtedly, the support given to aquaculture and fisheries researchers and companies by technological partners will boost their capabilities and contribute to fulfilling the set objectives of the project, such as the sustainable production of macro- and microalgae and fish species. This production is directed to their use in novel functional foods and feed products, maintaining the use of local resources, but also to other uses such as eco-packaging manufacturing. Additionally, other very important aspects regarding European values have been considered for the project, like social assessments, gender inclusiveness or training activities to improve the target groups and professionals' employability. We are therefore very satisfied with the tools and developments that this Consortium has to offer to contribute to a more sustainable food system.

Point of view of the Coordinator after almost one year of running activities.

After almost one year, we are optimistic about the development of the **NOVAFOODIES** project. The meeting we maintained last October in Genoa in month 6 of the project demonstrated the huge advances achieved even after a short period of time since the beginning of the project. For example, excellent work has been completed with a compilation of the current production of the farms involved in the project. This information has been essential for the ongoing tasks of growth modelling of the selected species and the further development of the IMTAs. Other examples include the work done regarding the cultivation of algae for eco-packaging purposes carried out by, the valorisation of beach wracks by, the up-scaling of low-cost microalgae production by and macroalgae cultivation in liquid wastes by and also the cultivation of macroalgae in earthen ponds for obtaining high-value products by. In case of Idener, we have achieved interesting advances in the mathematical modelling of biorefinery processes, such as bacterial-based algal-polysaccharides decomposition in collaboration with IOLR and we have also started with modelling activities related protein extraction from fish biomass in collaboration with BII. We are also immersed in the design of microwave enhanced drying processes for micro- and macroalgae in collaboration with UCC and CTQ. These are only some examples of the developed work. In parallel, assessments regarding the circularity of **NOVAFOODIES** related production processes, the environmental, economic, and social impacts as well as standardization tasks are also in their path.

Expectations for the activities of the second year of the project.

The second year of the project is going to be key for the accomplishment of NOVAFOODIES objectives. In fact, it is right now when more tasks will be activated, and more interactions will appear between partners. The tasks related to the evaluation of seaweed extract properties and the formulation and design of novel functional products, that started last February, are a clear example of that. Another pivotal example of NOVAFOODIES is the kick-off of the tasks related to the operation of the designed IMTA systems, to validate them and reach the target scale of the production. The digitalisation of the project will also gain strength in this second stage of the project with the development of the MarketPlace Digital platform and the App for end users. Certainly, this year 2024 will boost the project and lay the groundwork for the final year of the project to achieve the goals set by the consortium.

IDENER.AI, NOVAFOODIES Coordination team

Getting inside.... microalgae cultivation and expected nutraceutical soups.

Plants are one of the most important sources of human foods and medicines. One of the oldest and most diverse groups of plants on the planet, microscopic algae hold enormous potential as an environmentally sustainable and secure source of foods and medicines. Rich in essential proteins, lipids and vitamins, the nutraceutical potential of micro-algae is of increasing industrial interest. Capable of growing up to 10 times quicker than conventional food crops and without the need for arable land, the development of a micro-algae industry also addresses key policy requirements and represents a clear bioeconomic opportunity for the EU.

Within the EU Atlantic Arc region, Ireland is the only Member State without facilities to demonstrate this opportunity. To address this, UCC is developing a first-of-its-kind pilot-scale biorefinery process based on low-capex cultivation and high added-value products development. UCC will determine bulk micro-algae productivity and yields of nutraceuticals in two cultivation modalities, phototrophic and heterotrophic (Fig. 1). Cultivating outdoors in summer; in glasshouses during winter; and year-round in conventional fermentation tanks, whole biomasses produced will form the basis of high-added value nutraceutical soup formulations.



Figure 1. Image showing the types of reactor equipment that will be used to cultivate micro-algae under phototrophic (left) and heterotrophic (right) modalities at UCC.

Nutraceutical soups will be designed to meet the nutritional needs of, predominantly elderly, dysphagic consumers that have trouble eating conventional foods. To meet these needs, scientists at UCC's School of Food and Nutritional Sciences, will use techniques such as high-pressure gelation to optimise the texture and taste properties of microalgae biomasses to improve palatability while retaining the nutritional value of soups produced. Combining low-cost plant, dual cultivation modes and innovative high-value product formulation in this manner, UCC will contribute to improving the productivity and economic performance of a microalgae biorefining process for northerly EU states.

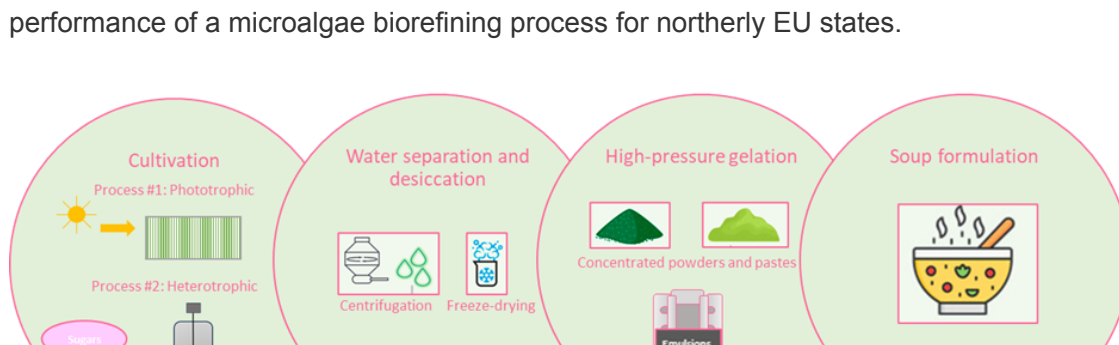
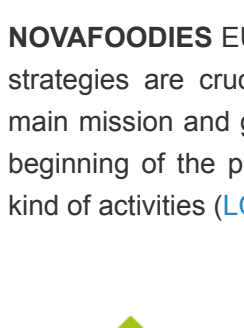


Figure 2. Schematic of the microalgae cultivation and refining processes leading to soup formulation.

UCC, Ms Linda O'Higgins

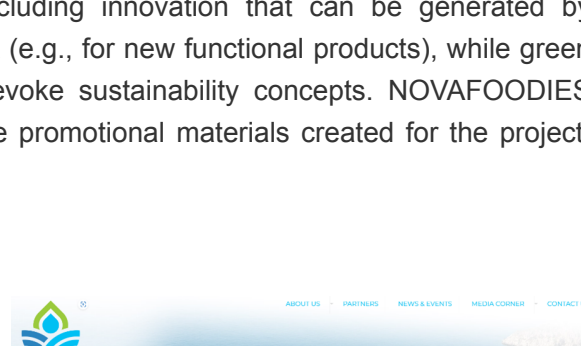
Discovering NOVAFOODIES communication channels & activities already performed.

NOVAFOODIES EU Project strongly believes that good communication and dissemination strategies are crucial to let stakeholders appreciate and benefit from NOVAFOODIES main mission and goals. Key messages and good methodologies were defined since the beginning of the project by Communication and Dissemination Partners involved in this kind of activities (LCI and SPES).



First of all, **NOVAFOODIES visual kit** has been set with a logo which can emphasize the main field of action of NOVAFOODIES, that is to say the seafood sector and all *green* aspects of sustainability: blue in all its shades - used for waves and the drop - recalls the sea, including innovation that can be generated by marine environment (e.g., for new functional products), while green colour is used to evoke sustainability concepts. NOVAFOODIES logo is visible in the promotional materials created for the project, online and offline.

Online channels include the **Official website** (www.novafoodies.eu), where the interested public can gain information about NOVAFOODIES mission, background & goals, project developments, upcoming events and activities, as well as the description of NOVAFOODIES partners, including contacts of the project coordinator.



In addition, as Social Media now play a strategic role in communication, **LinkedIn** (@novafoodiesEUProject), **Twitter-X** (@novafoodies_23) and **Instagram** (@novafoodies_eu) accounts have been created to engage as many stakeholders as possible.

In addition, NOVAFOODIES project has been presented during many events at both national and international levels, to spread the word about the goals and mission of the partnership. In less than one year, NOVAFOODIES was involved in several initiatives, such as **ALIBETOPIAS 2023** in Madrid – a unique event dedicated to latest innovations in the food and beverage sector, **Vigo University** – with a presentation done to students attending the bachelor's degree in food science and technology, and **Alimentaria 2024** in Barcelona – with Project introduction in . Are you curious to discover more about us? Visit the section "News & Events" in NOVAFOODIES website (<https://novafoodies.eu/news-events/>)!

In our website, promotional materials of NOVAFOODIES are also available, as well as public Deliverables and official Press Release of the Project! Browse the "Media Corner" section of our website (<https://novafoodies.eu/promo-material/>).

For more information, do not hesitate to contact us at info@novafoodies.eu!

SPES - Federalimentare, Ms. Giorgia Sabbatini