

HORIZON  
2020

# Boost BLUE economy trough market uptake an innovative seaweed bioextract for IODINE fortification II

## Berichterstattung

### Projektinformationen

#### Blue Iodine II

ID Finanzhilfevereinbarung: 733552

[Projektwebsite](#) 

#### DOI

[10.3030/733552](https://doi.org/10.3030/733552) 

Projekt abgeschlossen

#### EK-Unterschriftsdatum

29 Juli 2016

#### Startdatum

1 August 2016

#### Enddatum

31 Dezember 2018

#### Finanziert unter

SOCIETAL CHALLENGES - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy

#### Gesamtkosten

€ 1 147 826,25

#### EU-Beitrag

€ 803 478,38

#### Koordiniert durch

UBQ II LDA



Portugal

Dieses Projekt findet Erwähnung in ...



## Forschung und Innovation der EU als treibende Kraft für die Produktion nachhaltiger Meeresfrüchte innerhalb und außerhalb Europas

# Periodic Reporting for period 2 - Blue Iodine II (Boost BLUE economy through market uptake an innovative seaweed bioextract for IODINE fortification II)

Berichtszeitraum: 2017-08-01 bis 2018-12-31

## Zusammenfassung vom Kontext und den Gesamtzielen des Projekts



The main objective of the project is to produce in a cost-effective way new high quality seaweed iodine products focusing in solving the iodine deficiency demonstrated in 3 main target groups (children, pregnant and breastfeeding women and elderly). These groups have particular iodine need and nowadays there is no product in the market specialized for children nor elderly and there is not yet a clear leader in products for natural iodine support for pregnant and breast-feeding women. The expected profit in 5 years will be 4.5 million euros and we hope to have a ROI of 1.9 years (taking into account the cost of the innovation project for UBQ). We expect to increase our staff in 11 people, including technical and commercial personnel.

Iodine deficiency is one of the three most common nutritional deficiencies and is spread all over the world, according to the World Health Organization (WHO). 40% of the world's population remains at risk for iodine deficiency and only in Germany it has been estimated that iodine insufficiency to cause a billion dollars in health care costs per year.

The Market for iodine products is expected to increase stably until 2020 being Europe the main regional market.

Of all foods, seaweed is the most famous and reliable source of natural iodine. Seaweed creation is dominated by larger players, mainly from Asia. Our strategy is not to compete with them, but follow the FAO advice and target for a niche market: we will differentiate our product in specializing in developing high quality seaweed products based on protein enrichment with natural iodine and rich in essential amino acids.

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innovation project for UBQ). We expect to increase our staff in 11 people, including technical and commercial personnel.

Iodine deficiency is one of the three most common nutritional deficiencies and is spread all over the world, according with the World Health Organization (WHO)<sup>1</sup>. 40% of the world's population remains at risk for iodine deficiency and only in Germany it has been estimated that its insufficiency causes a billion dollars in health care costs per year<sup>2</sup>. Iodine deficiency disorders are particularly harmful in pregnancy and childhood. Cretinism and fetal abnormalities are likely to occur when pregnant women have a deficient consumption of iodine during this stage. Moreover a chronic deficiency of iodine may lead to a compensatory hypertrophy of the thyroid gland, resulting in goiter, a pathophysiology state that increases the risk of thyroid cancer.

## Arbeit, die ab Beginn des Projekts bis zum Ende des durch den Bericht erfassten Berichtszeitraums geleistet wurde, und die wichtigsten bis dahin erzielten Ergebnisse ▼

Project objectives for the period

- Higher Production of seaweed

Implementation of favourable conditions conducive to the development of selected seaweeds.

This production will be supported through a production on land which, under sterile conditions, will produce seedlings that will ensure a continuous supply of seaweed to the production. And the off-shore cultivation will allow having more quantity of seaweeds.

- Upscale Biorefinery process

Optimization of the biorefinery process using press cold extraction and filtering techniques to obtain purified extracts.

- Producing new nutraceutical extracts

Transformation of macroalgae in products with high quality. This transformation will be possible through the improvement of the extraction of its bio-components.

- Creating cooperation between companies

Establish protocols with regional and international companies to sell and put in the market the products of macroalgae extracts.

- Demonstrate Blue-Iodine extract advantages through a clinical study

Implementation of a clinical study to demonstrate, through an independent laboratory, the advantages and quality of our product.

- Improve cost effectiveness to the use of the by-products

Determine the commercial feasibility of the by-products obtained through the biorefinery process.

- Put in place our international commercialization strategy (distributors)

Engagement with international key stakeholders and develop an international commercialization strategy to distribute our product worldwide.

## Fortschritte, die über den aktuellen Stand der Technik hinausgehen und voraussichtliche potenzielle Auswirkungen (einschließlich der bis dato erzielten sozioökonomischen Auswirkungen und weiter gefassten gesellschaftlichen Auswirkungen des Projekts) ▼

Seaweed creation is dominated by larger players, mainly from Asia. Our strategy is not to compete with them, but follow the FAO advice<sup>3</sup> and target for a niche market: we will differentiate our product specialising in the development of high quality seaweed products based on protein enrichment with natural iodine and rich in essential amino acids.

Some specific target groups have particular iodine needs, such as children (7-14 years), pregnant and breast feeding women and elderly people. Nowadays there is no product in the market specialized for children nor elderly and there isn't any clear leader in products for natural iodine support for pregnant and breast feeding women. Another group with a higher iodine deficiency is the Vegan and vegetarian, but we decided not to target them in our initial market introduction (nevertheless our labelling will include that is a product appropriate for them) due to the already existing significant number of products focusing in this group.

Our seaweeds are autochthonous from our region and have naturally a high iodine and protein content and a high degree of stability. They are ideally to be processed for the production of iodine extracts. Through our innovative biorefinary process already developed and tested for small production we will be able to put in the market a high quality products at a competitive price (10% to 30% lower than our competitors), with much higher quality (iodine composition 30% higher and vitamin C 300% higher than usually commercialized seaweed products). We have the intention to apply for a patent with our biorefinary procedure during phase 2 project.

Our product is a natural extract and we provide in our supplement a diverse range of nutrients, vitamins and minerals (iron, calcium, magnesium,...) that will be beneficial to the human metabolism and not only iodine. For example, our natural supplement is very rich in protein. This is a clear advantage because our seaweed proteins possesses all the essential amino acids and will stabilize iodine during assimilation. Iron is also presented in a significant quantity. This is very important for the improvement of the thyroid function according to Eftekhari et al. (2006) due to the synergism that exist between iron and iodine in the improvement in thyroid function.

Copper, also an essential mineral that is known to help the human body to use the iron and participate in the vitamin C metabolism, is presented in our supplement. Dietary fiber is presented is also present and is extremely important in the maintenance of a good bowel movement.



Industry

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**Permalink:** <https://cordis.europa.eu/project/id/733552/reporting/de>

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