

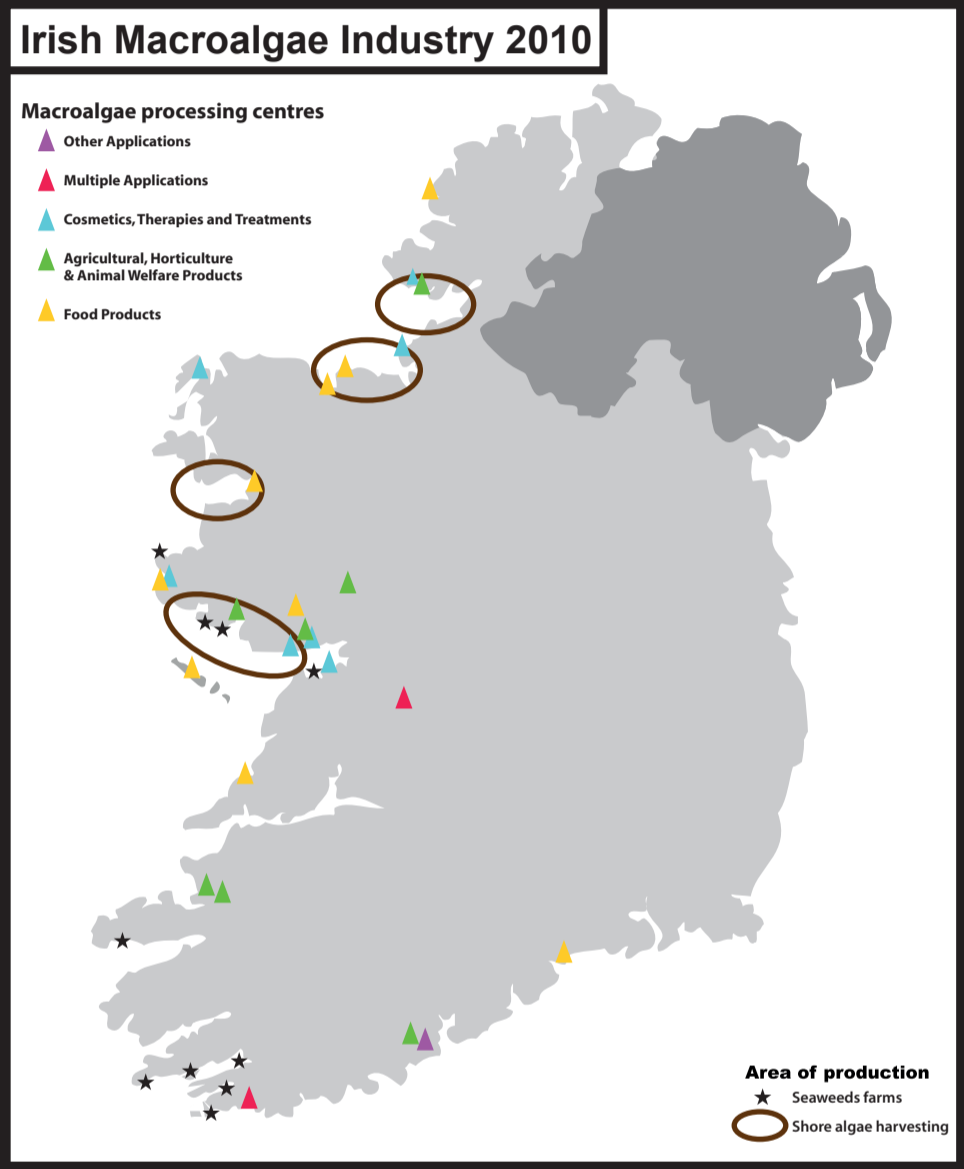
Inter-regional network to promote sustainable development in the marine algal industry

Worldwide macroalgae production increases year on year, however the situation in Europe is different, with decreasing production being reported in the last 10 years. The maintenance and expansion of the European algae industry depends on stable, economically viable and environmentally sustainable access to raw materials, the development of high value products and the transfer of expertise from more developed industries to less developed industries. The NETALGAE project seeks to create a European network of relevant stakeholders within the marine macroalgae sector. The network seeks to develop scientific, commercial and industrial links across European macroalgae industries, these being mostly located along the Atlantic seaboard.

## The Irish Macroalgae Industry

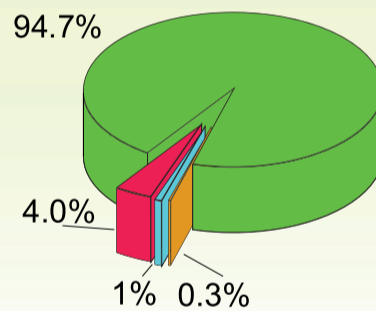
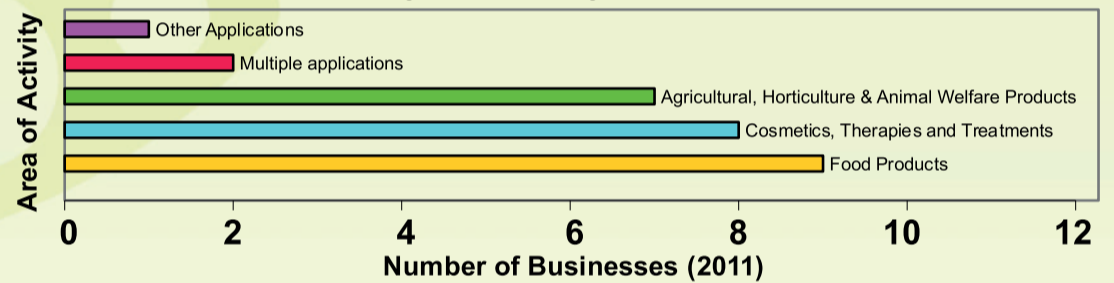
The Irish macroalgae industry employs 185 people and is worth approximately €18 million per annum\*. Over 99% of raw material comes from the manual harvesting of natural resources, most of the harvesting occurs along the coasts of Donegal, Sligo, Mayo, Galway, Kerry and Cork. Every year, approximately 30,000 tonnes of algae is processed in Ireland. The most important species is *Ascophyllum nodosum*, which accounts for approximately 25,000 tonnes or 95% of domestic production. *Ascophyllum nodosum* is processed at two factories on the west coast (Donegal & Galway) and is used to produce fertilizers, horticultural products and animal feed. A significant quantity of national production is sold as raw material for further industrial processing. Numerous other species are harvested and used for commercial purposes in Ireland including; *Fucus serratus*, *Chondrus crispus*, *Laminaria digitata*, *Fucus vesiculosus* and *Saccharina latissima*. Ireland has been importing significant quantities of *Lithothamnion corallioides* from Iceland for processing into agricultural and nutritional products. Aquaculture of macroalgae is still largely experimental in Ireland and has not contributed significantly to domestic production of algae, experimental cultivation of *Asparagopsis armata*, *Alaria esculenta*, *Palmaria palmata*, *Laminaria digitata* and *Porphyra* has been achieved over the last 20 years. Recently, the potential of algae for bio-energy production and strong interest in developing integrated multi-trophic aquaculture systems has given a new dimension to algae aquaculture. The Irish macroalgae industry is mainly focused on servicing the international agricultural, horticultural and animal welfare markets with approximately 95% of production being directed into these markets; still, small quantities are processed for speciality products like cosmetics, pharmaceutical, nutraceutical, food and other applications. Ireland exports a great deal of domestic seaweed production either as raw material or as processed products ready for the end use application.

\* Morrissey, K., Hynes, S., Cuddy, M., O' Donoghue, C., (2010) Ireland's Ocean Economy.



## Primary Markets by Sector 2011

BIM 2011



## Uses of Algae Resources in Ireland. Domestic & Imported raw materials

BIM 2011

Legend for pie chart: Agriculture & Horticulture Products (green), Food (orange), Cosmetics & Therapies (blue), Other (red).

Type of Algae	Seabed algae		Shore algae			Cultivated algae	
Authority and Management	The Department of the Environment, Community and Local Government					The Department of Agriculture, Fisheries and Food	
Management System	Foreshore Licence					Aquaculture Licence	
Producers	Sub-littoral harvesters		Shore harvesters			Algae Growers (Human Consumption)	
Algae Species	Lithothamnium (imported) □□		L. digitata L. hyperborea □	A. nodosum □□□	P. palmata, C. crispus M. stellatus, S. latissima □	Fucus spp □	P. palmata, Porphyra spp. L. digitata, A. esculenta, A. armata □
Transformation	Drying, Grinding, Packaging		Maceration, Extraction	Drying, Grinding	Drying, Conditioning, Packaging	Drying, Grinding, Packaging	Maceration, Extraction... Drying, Grinding, Packaging
Products	Meals €€	Food processing industry €€	Contract products € Meals €€	Alginates €€ Meals €€€€	Foodstuffs €	Contract products €€ Meals €€	Contract products € Foodstuffs €

### KEY:

Use: Agricultural supplies (green), Health, Well-being (blue), Food processing industry (red), Food distribution (orange)

Degree of importance in harvested tonnage (wet tons): □ ≤ 1,000t □□ ≤ 10,000t □□□ ≤ 25,000t

Degree of importance in harvested tonnage and/or produced turnover: €€€€ : very important, €€€ : important, €€ : medium, € : weak

### Irish Partners



### Other Partners



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