

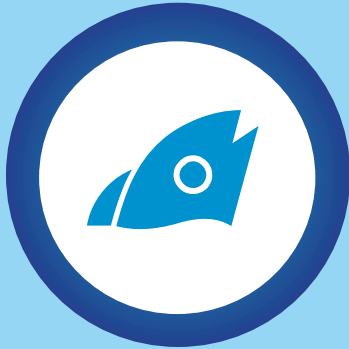


LONGLINE
ENVIRONMENT

Corporate presentation

Sectors

Delivering science



Aquaculture



Fisheries



Regulatory



Insurance



Big data



Ports & harbours

Longline Environment delivers cutting-edge science to address complex problems across a range of sectors.

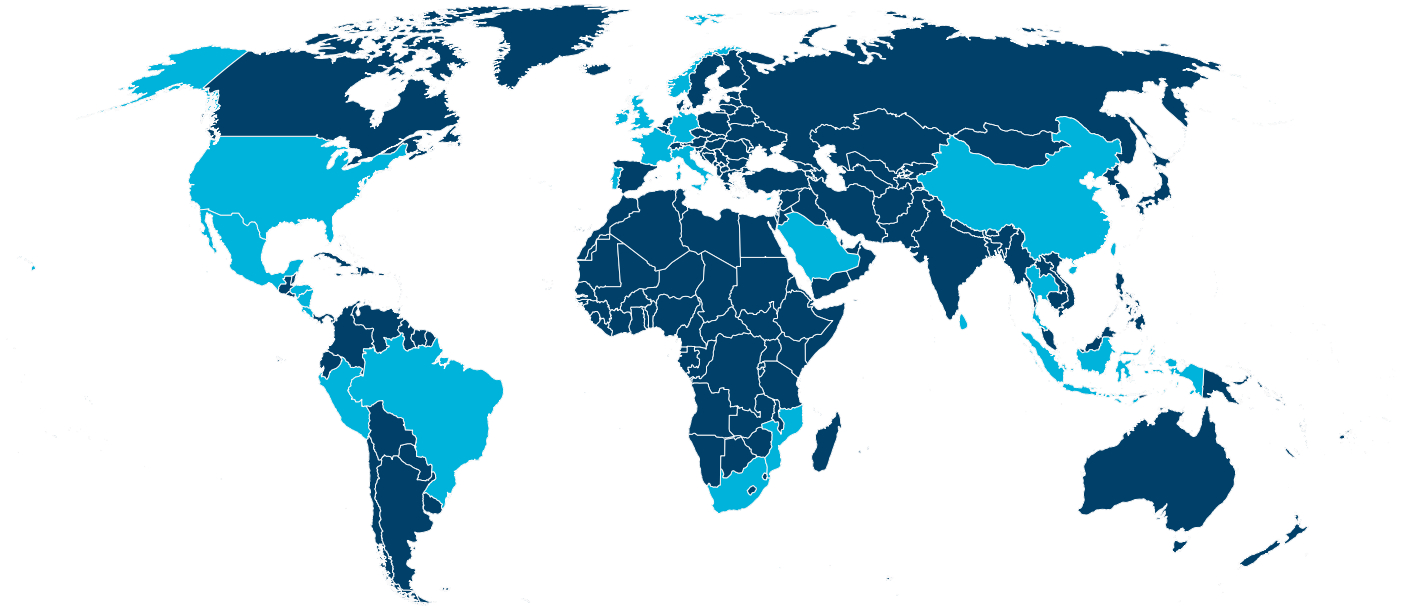
Delivering science solutions, Longline Environment collaborates with academic, governmental and industrial partners across the globe.

Track record

Global portfolio



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Europe:

United Kingdom
Republic of Ireland
Norway
Portugal
France
Germany
Italy
Cyprus

North America:

United States
Mexico
Costa Rica
Honduras
Nicaragua

South America:

Brazil
Peru

Asia:

China
Thailand
Singapore
Indonesia
Taiwan
Sri Lanka

Middle East:

Saudi Arabia
Bahrain

Africa:

South Africa
Mozambique

Solutions

A science company



Big data

Longline uses big data to assist in decision-making. Big data analysis allows us to tackle complex problems, with timely insight to help clients make decisions on a wide range of production and environmental decisions.



Data analytics

We design, structure, and implement robust measures for data collection, processing and analytics to solve challenges faced by industry stakeholders. Longline enables the management of the entire life-cycle of data analytics.



Modelling

Data and modelling are our core business. We provide cutting-edge modelling solutions for aquaculture and fisheries. Our models are applied at the farm and system scales, employing advanced techniques to model for connectivity at different resolutions and spatial scales.



Ecology

Our ecosystem management approach provides solutions for environmental challenges. We incorporate inter-disciplinary scientific techniques to promote the sustainable development of aquatic industries.



Coastal

Coastal management requires a detailed understanding of the interactions between water and land. We quantify spatial and temporal connectivity, providing holistic and balanced solutions for public and private sectors.



Insurance

Longline has a specialist unit dedicated to risk transfer services helping aquaculture farms, underwriting markets, and insurance brokers with production, environmental, and social risks for offshore and onshore aquaculture.

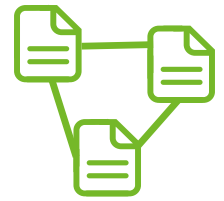


Global network

We have an extensive network of scientific collaborators across continents. We are able to tap into a broad range of expertise to address specific challenges.

Big data

Connecting the fish



Data acquisition

We acquire, structure, and interpret large datasets ranging from water quality to species, to make decisions faster and cheaper. Longline leverages large data volumes, taking a proactive approach to turning data into information.



Remote sensing

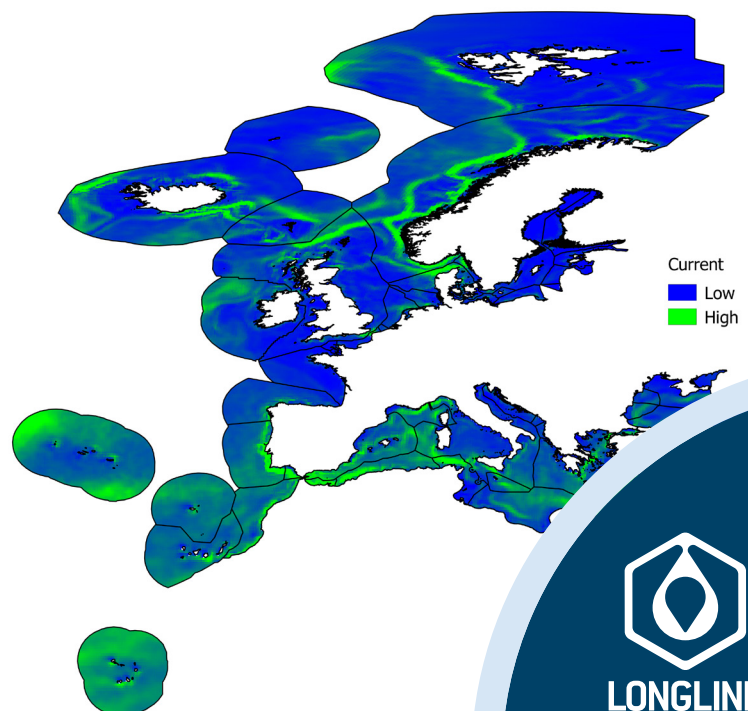
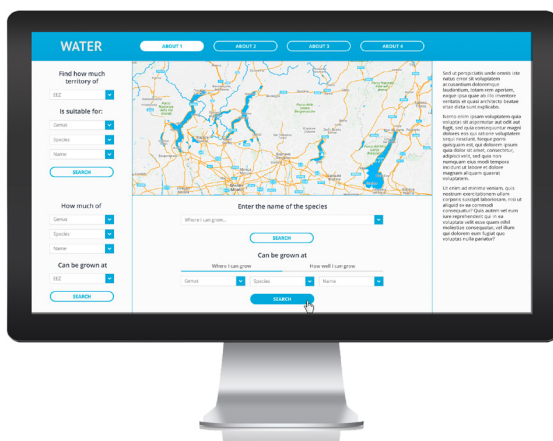
Our remote sensing is performed by a interdisciplinary team to source and process a wide range of data to support and inform scientific applications.

The exploitation of these datasets provides crucial inputs to drive our analytical solutions.



Data analytics

Turning data into information means economically extracting value for large datasets. Value is extracted by providing information management for big data, high performance analytics, and flexible deployment of diverse datasets to identify synergies.



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Data analytics



Driving data solutions

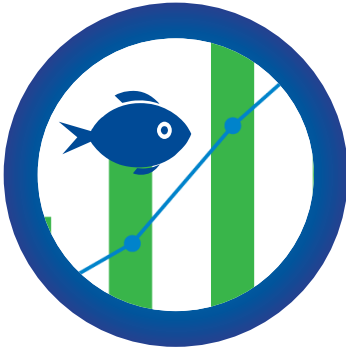
Flow	What	When	Where	How	Why
1. Sampling design	<u>Parameters</u> Water Sediment Biological	Coverage Stations Vertical profiles Mooring analysis	Duration Frequency	Vessels Sampling gear Replication Sample processing	Production Regulatory Certification Stewardship
2. Analytical methods	<u>Parameters</u> Water Sediment Biological	-	-	Methods Probe calibration Intercalibration	Quality control Certification Comparability
3. Data processing	<u>Parameters</u> Water Sediment Biological	Longline cloud Client servers	Rolling schedule Just-in-time Data handling	Processing Outliers Excel import Database storage	Security Ease of access Leverage Quasi-real time
4. Big data analytics	<u>Statistics</u> Trends Correlations Models	Multiple locations Multiple farms	Long-term analytics Multi-annual trends El Niño/La Niña	Data algorithms Bespoke analysis Physiology models Impact models	<u>Knowledge</u> Production Water Environment

Structuring
cutting edge
science



Modelling

The future of aquaculture

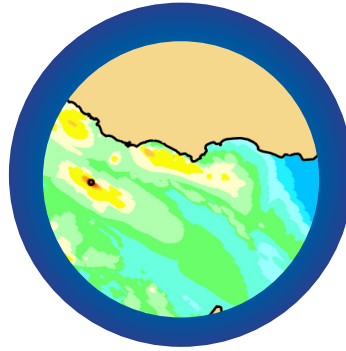


Aquaculture modelling

Longline provides state-of-the-art aquaculture modelling to determine carrying capacity for stakeholders.

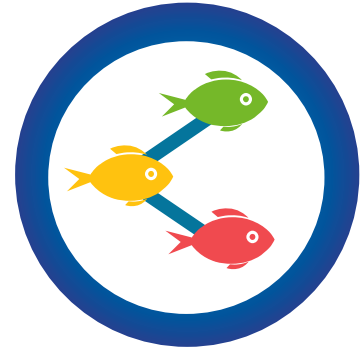
Aquaculture modelling determines the sustainable level of production, improving profitability and environmental stewardship.

Carrying capacity ranges from local to system scale for farms and regulators.



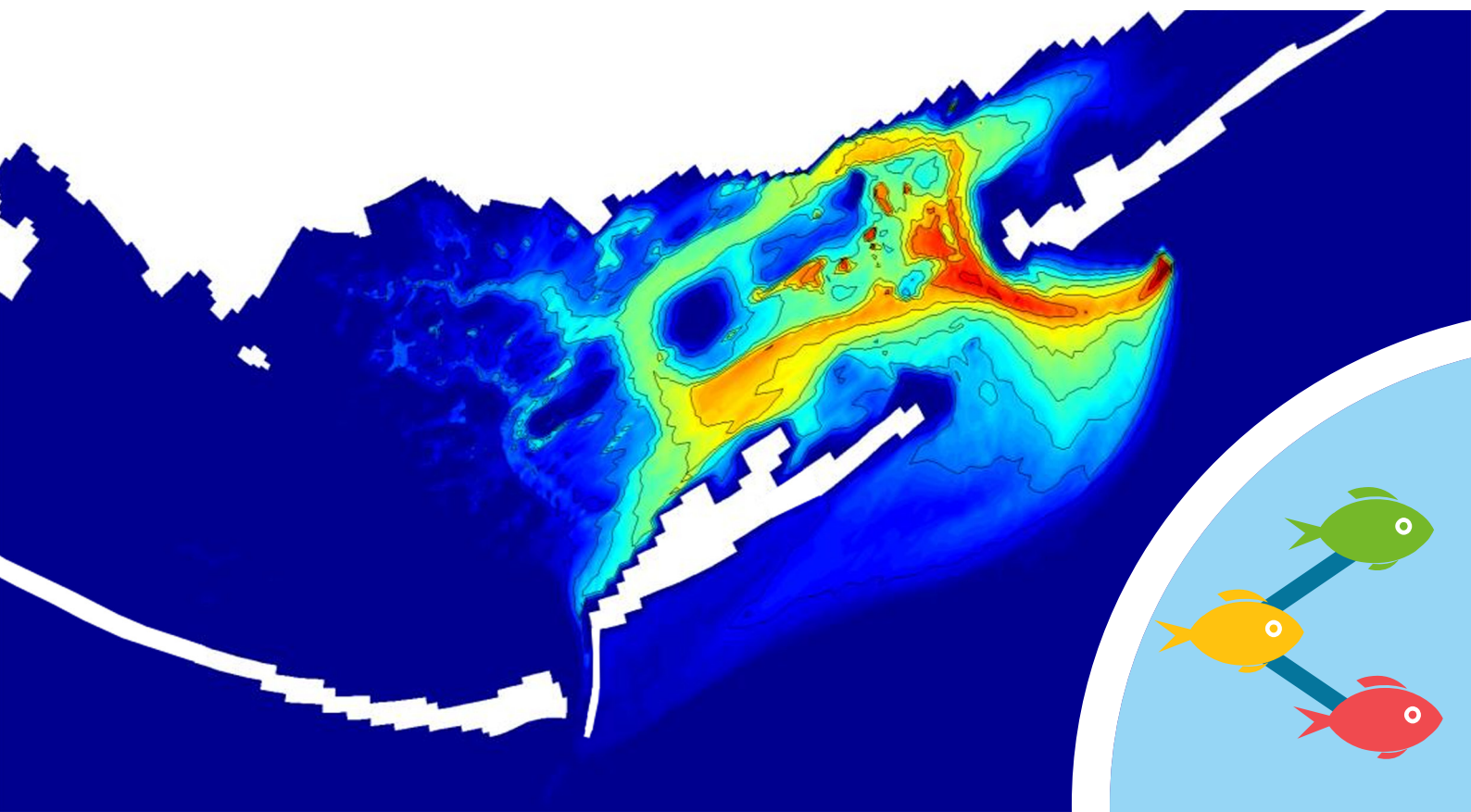
Ecosystem modelling

Ecosystem modelling determines how water bodies connect, delivering solutions for the sustainable development of aquatic resources. Hydrodynamic models determine water flow and transport patterns to provide risk analysis for real-world challenges and promote responsible aquatic stewardship.



Disease modelling

Disease modelling integrates a range of modelling tools to predict the spread of pathogens, accounting for system connectivity, providing stakeholders with real-time risk maps. The combination of aquaculture, ecosystem, and disease modelling provides a comprehensive aquaculture management tool.



Ecology

Ecosystem management

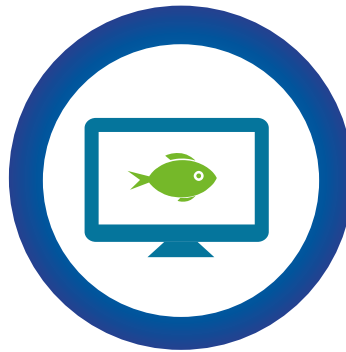


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Ecosystem processes

Our ecosystem management approach provides solutions for environmental challenges. We promote the triple bottom line: people, planet, profit. We analyse biogeochemical and ecological processes to inform decision-making, providing scalable ecosystem solutions for a range of aquatic environments.



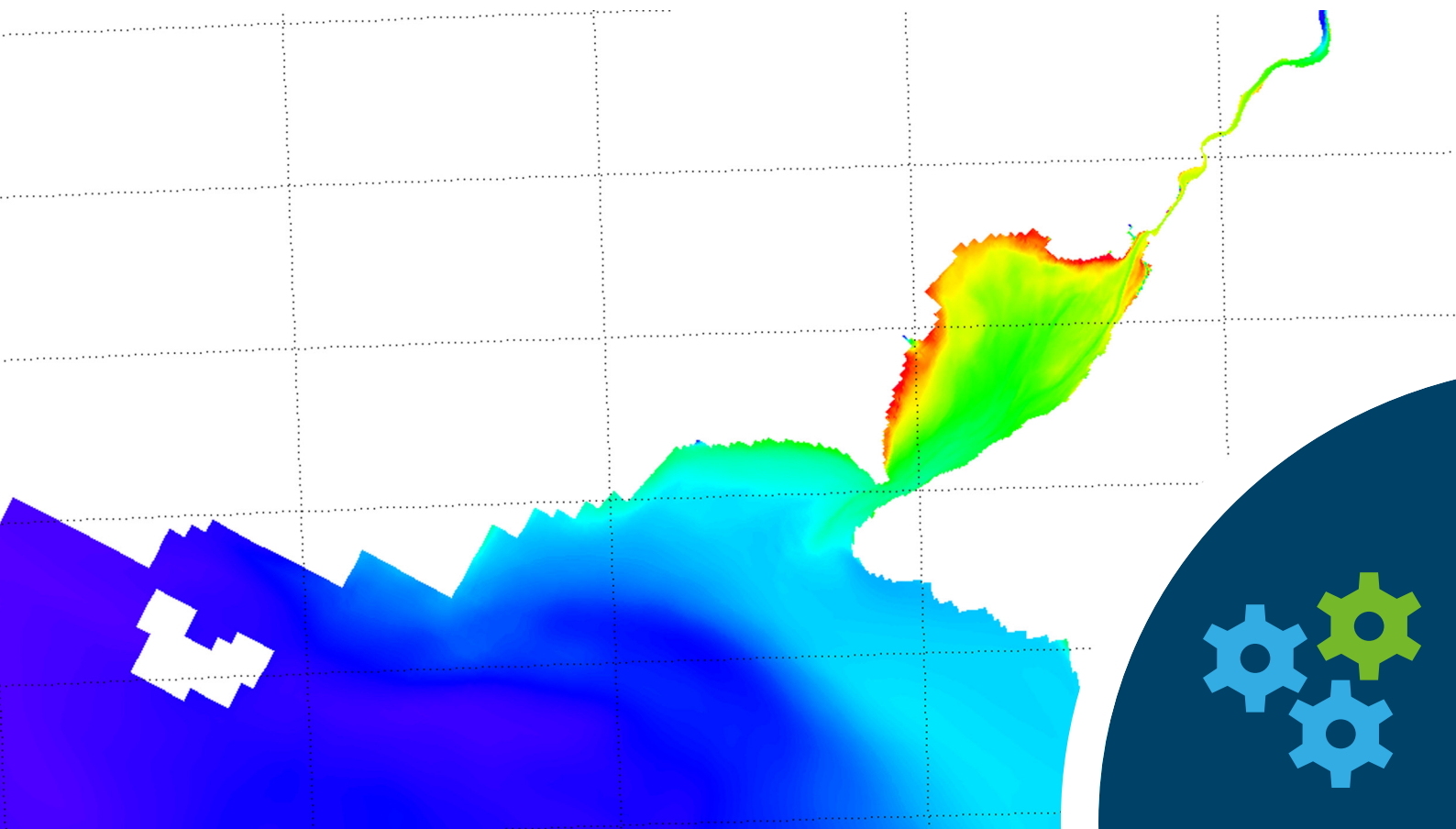
Aquatic planning

Management of marine and freshwater ecosystems requires comprehensive planning. We incorporate trans-disciplinary science to promote the sustainable development of aquatic industries. Aquatic spatial planning and coastal management ensures future environmental and economic sustainability.



Water management

Increased pressures on coastal regions means that pollution and water quality are challenges that need addressing. We apply risk management across a variety of sectors, for water managers, regulators, and aquaculture, making sense of real-world challenges through the application of cutting-edge science.

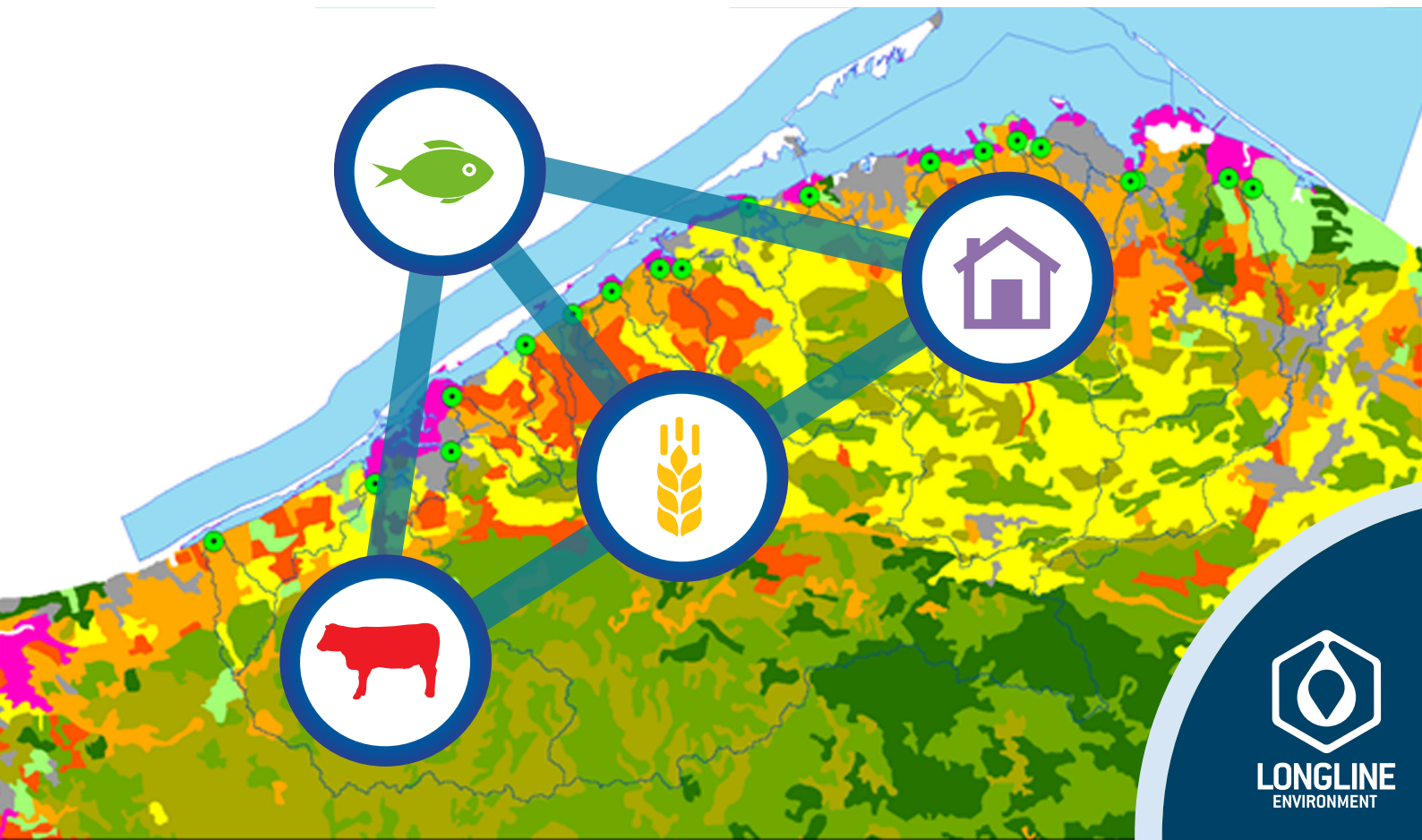
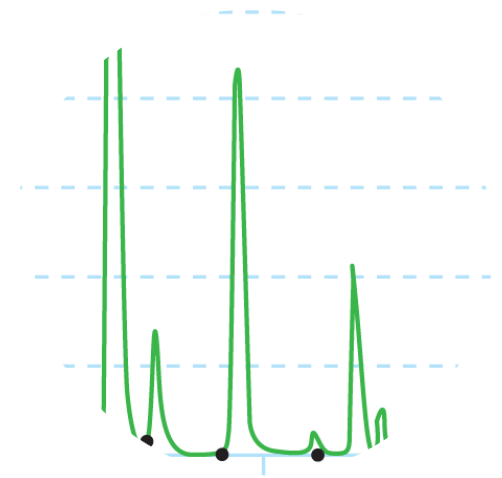


Coastal solutions

Water and land

Aquaculture and agriculture

- Wastewater, agriculture, and aquaculture system analysis.
- Water and land management.
- Point and non-point source pollution management.
- Spatio-temporal patterns and scenario analysis.
- Linkage of catchment to coasts using complex modelling.
- Integrated nutrient assessment and evaluation.
- Loading analysis of crop land, range land, and pasture to water bodies.
- Solutions for agricultural monitoring, fertilization approaches, agricultural abandonment, and long-term contamination.
- Connectivity between fields and streams through landscape management.



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Insurance



Risk transfer solutions



Risk assessment

Risk assessment services for aquaculture farms, underwriters, and brokers. Production and environmental risks for aquaculture farms. Our modelling and big data tools allow us to provide insights and analysis for offshore and onshore aquaculture, for a wide range of commercial aquaculture species.



Aquaculture surveys

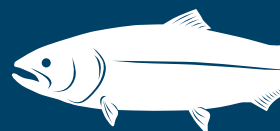
Aquaculture surveys are performed by a world-class network of scientists from around the world providing, bridging science and risk management for aquaculture insurance and reinsurance markets. We provide clients with experts on a variety of commercial aquaculture species, and areas of knowledge.



Market intelligence

Market intelligence provides strategic insights for aquaculture. Detailed intelligence on government initiatives and policy, companies, sectors, and markets, to address macro and micro trends. Development of risk-transfer solutions for some of the largest aquaculture markets around the globe.

production | disease
algal blooms | water quality
storm exposure | equipment
culture practice | modelling
remote sensing | data
analytics | hydrodynamics
coastal management



**“Risk transfer
solutions delivers
value for our
clients”**

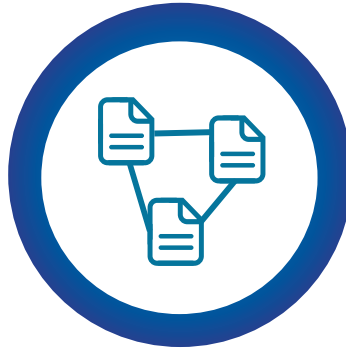
Global network

Cutting edge research



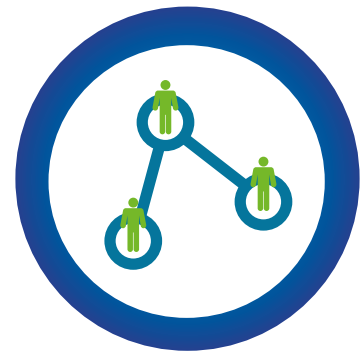
Innovation

Longline's business model promotes innovation and scaleable products, to provide relevant solutions for our clients. We use technology to turn data into information, promoting sustainable outcomes for aquatic industries.



Publishing

Our people and collaborators publish regularly in peer-reviewed journals. Our research hinges on validation of the scientific community before reaching our clients. Publishing provides Longline the interface to provide top quality science.

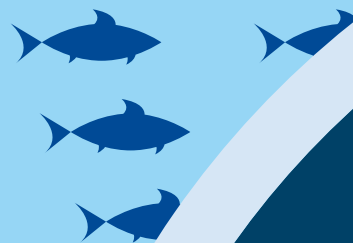


Network

We have an extensive network of scientific collaborators across five continents. We are able to tap into a wide range of expertise to address specific challenges. The Longline network provides insights from algal blooms to regulatory assessment.

Key facts

- Collaboration with over 50 institutions worldwide and a wide range of industry professionals.
- Participation in large-scale research initiatives with international teams of scientists and institutions.
- Focus on the integration of research outcomes for commercial applications.
- Participation in international scientific, and investment conferences.



Locations

Local knowledge. Global ambition.

United Kingdom

88 Wood Street
London, EC2V 7RS

Republic of Ireland

18-19 College Green
Dublin, 2

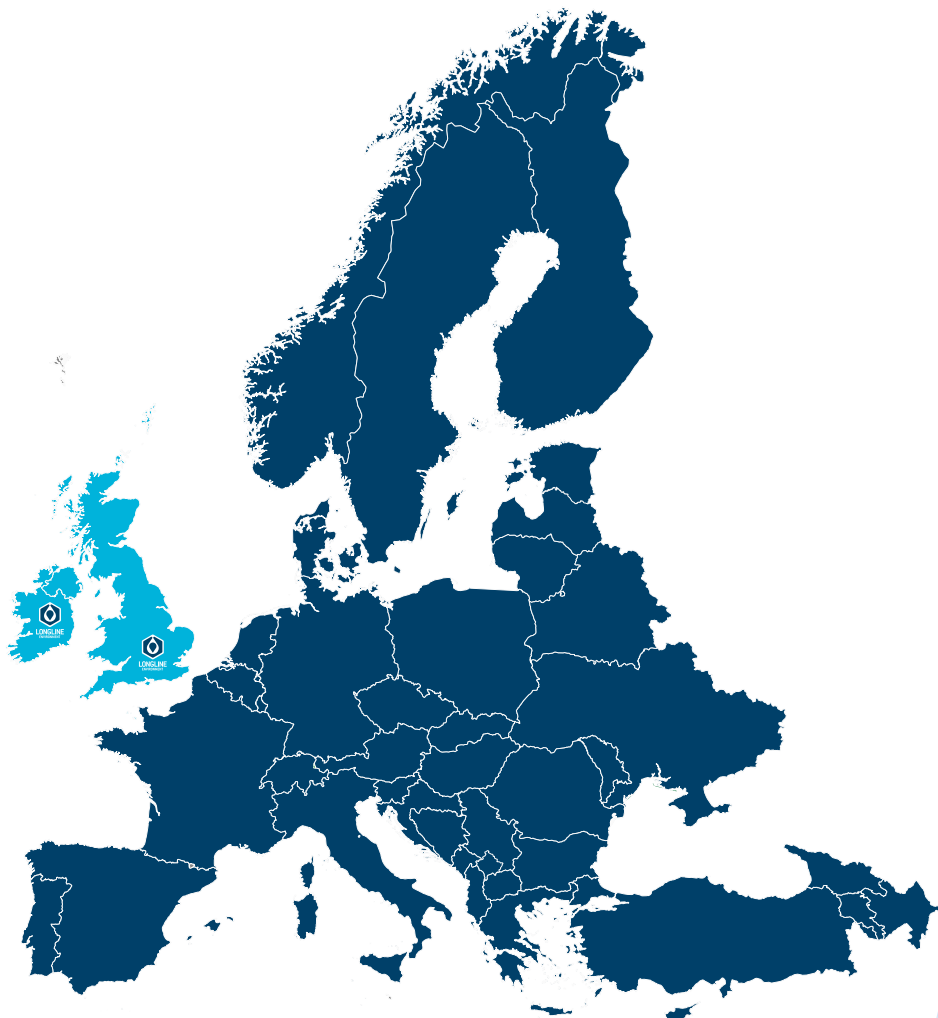


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