SPECIALIST MARINE CONSULTANCY

ENABLING PRODUCTIVE OCEANS

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www.srsrl.com
SAMS Research Services Ltd provides specialist environmental marine consultancy services, underpinned by cutting-edge science, that safeguard the marine environment to maximise productivity.

We are the wholly-owned trading subsidiary of the Scottish Association for Marine Science (SAMS). Based in Oban, 160 staff are working for healthy and sustainably managed seas and oceans through world-class marine research, education and engagement. SAMS’ Blue Economy research area channels our diverse expertise in fundamental marine science to support commercial users of the marine environment to gain wealth from the oceans without degrading the very system we all depend on.

SAMS Research Services Ltd provides access to SAMS’ international expertise and advanced research infrastructure. Our clients benefit from the customer focus and project management capabilities of a successful commercial consultancy in tandem with the ingenuity and facilities of a leading, multidisciplinary research organisation.

Operating a Quality Management System that has gained BS EN ISO9001 certification, SAMS Research Services Ltd is a respected, independent third-party consultancy that industry can trust.

To explore solutions to your marine environmental requirements, contact our friendly consultancy team.

Get in touch:
+ 44(0)1631 559470 | info@srsl.com | www.srsl.com
OUR MISSION:
We support individuals, industry and organisations who work with our seas and oceans to safeguard the marine environment.

SAMS Research Services
About us..............................2
Consultancy..........................4
Industries..............................6

Marine Energy
Decommissioning......................8
Marine renewables....................10

Aquaculture
Seaweed.................................12

Aquaculture Modelling
NewDEPOMOD..........................14
Sea Lice.................................16

Seafood Security
HABs & Toxins...........................20

Snow & Ice
SIMBA....................................22

Our Customers
Testimonials............................18
Clients....................................19

Need to know more?
Get in touch............................24

SAMS Research Services Ltd is committed to achieving the highest standard of quality to meet, and exceed, the expectations of its customers. We operate a Quality Management System that has gained BS EN ISO9001:2015 certification.
Survey
- Baseline
- Monitoring
- One-off assessment

Sampling
- Benthic
- Water-column
- METOcean
- Plankton

Analysis
- Organic carbon
- Nutrients
- Metals
- Particle size
- Chlorophyll

Modelling
- Hydrodynamic
- Particle dispersion
- Sea lice connectivity
- Harmful Algae Blooms (HABs)

Review, Reporting & Interpretation
- Third party scientific services
- Policy & procedures
- Environmental Impact Assessments
- Environmental statements

Socio-economic planning
- Feasibility studies
- Social license
- Stakeholders & community engagement
Bespoke Services
We can deliver bespoke solutions to diverse industrial challenges in the marine environment. We also deliver industry specific services, detailed in the following pages.
INDUSTRIES

- OIL & GAS
- MARINE RENEWABLES
- AQUACULTURE
- SEAWEED
- SEAFOOD SECURITY
- MARINE MINING
- MARINE BIOTECH
Decommissioning

In the coming years, the established infrastructure of many production platforms, seabed structures and pipelines established for the Oil and Gas industry are scheduled to be decommissioned in the North Sea sector as well as in other areas around the world.

SAMS Research Services provides assessment and measurement of marine growth on subsea structures (using ROV video). We offer consultancy for drill cuttings management, the options presented by both removal and managed abandonment and the creation of artificial reefs for large fabricated structures. We further provide environmentally focused marine surveys and scientifically informed consultancy to ensure practical, viable and environmentally secure operational methods.

Our decommissioning services:

- Marine growth assessment
- Drill cuttings consultancy
- Removal vs managed abandonment
- Reefing
- Biosecurity
- Environmental Impact Assessment
- Marine surveys
- Laboratory analysis
- Modelling
With many years of robust research into interactions between renewable energy devices and the marine environment (fish, marine mammals and benthic), SAMS Research Services work with renewable energy companies to provide surveys, modelling and analysis services in support of all stages of the Environmental Impact Assessment process.

The time and cost required to meet the consenting requirements of regulators presents a significant hurdle for developers. We provide clients with advice and guidance on the assessment of marine environmental impacts across all stages of project development to reduce uncertainty and mitigate against additional costs further down the line.

The carbon-free energy available from the wind, wave and tidal movement of our oceans presents a major sustainable power source for the future.
Our marine renewable services:

- Marine mammal survey
- Underwater acoustic monitoring
- Marine growth assessments
- Marine modelling & surveys

- Hydrodynamics
- Environmental impact assessment
- Marine spatial planning
- Biosecurity
EXPERTS IN SEAWEED SEEDING, CULTIVATION AND DISEASE MANAGEMENT.
SAMS is at the forefront of understanding and extending know-how in seaweed seeding, cultivation and disease management.

We operate our own hatchery where we cultivate such seaweeds as Alaria esculenta, Saccharina latissima, Laminaria hyperborea, Palmaria palmata and Ulva from gathered spores. We use a number of different seeding methods and are also working to discover and characterise new strains of seaweed better-suited to seaweed farming practices, or with improved disease-resistance.

As experienced operators of two experimental seaweed farms, we advise the emerging seaweed industry on:

- Farm setup and infrastructure
- Cultivation and coppicing
- Managing pathogens and diseases.
- Set-up and operation of Integrated MultiTrophic Aquaculture Systems

Our seaweed industry services:

<table>
<thead>
<tr>
<th>Seaweed hatchery and seed supplier</th>
<th>Laboratory analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seaweed farming</td>
<td>Environmental Impact Assessment support</td>
</tr>
<tr>
<td>Marine surveys</td>
<td>Marine spatial planning and social license</td>
</tr>
</tbody>
</table>

Modelling
Biosecurity
Site selection
NewDEPOMOD
Optimising aquaculture production

Developed by SAMS, NewDEPOMOD is particle tracking modelling software, used to predict impacts of marine cage fish farm discharges on the seabed and its benthic macrofauna. Highly configurable, it optimises operation of aquaculture sites to match environmental capacity.

The software, together with our highly skilled, dedicated support team, helps fish farmers to sustainably meet production targets and expand operations, whilst safeguarding the sea and the seabed. It is currently prescribed by SEPA for fish farm development and is adaptable to varying marine environments including Mediterranean, tropics and fresh water.

We offer NewDEPOMOD licences (commercial, academic and developer) with support and bespoke training programmes or we can run the software for you.

For more information, contact our NewDEPOMOD team:

T: +44 (0) 1631 559470
E: depomod@srsrl.com
W: www.srsrl.com/depomod
AQUACULTURE

Key assets:

- Optimises stocking to meet regulatory requirements.
- Allows for differing marine environments and fish species.
- A realistic representation of complex tidal flows.
- Configurable to specific site characteristics - accounts for variable bathymetry.
- Suits both new and advanced users.
- Flexible output options - informs benthic monitoring programme design.
Atlantic Salmon production accounts for more than half this value. However, a persistent challenge for the salmon farming industry is sea lice, a natural parasite affecting salmon and trout, both farmed and wild fish. This has significant economic costs and environmental impacts, in terms of fish loss, wild fish interactions and discharge of chemicals used in treatment.

We have developed a suite of modelling tools, one of which predicts the connectivity and dispersal of sea lice. By mapping the proliferation and dispersion of sea lice to display the connectivity between discrete fish farm locations, we can help aquaculture industries make decisions about where to establish or grow new sites.

Our services to inform sea lice management:

- Modelling
- Regional planning
- Area management
- Treatment strategy
- Outbreak analysis
- Site scoping
ESSENTIAL SERVICES THAT INFORM INDUSTRY ON THE SAFEGUARDING OF HUMAN HEALTH.
HABs & Toxins

With much of our food coming from the sea, the monitoring of naturally occurring and man-made toxins in the sea, which can be ingested by fish and shellfish and absorbed by seaweeds, is of vital importance. Some of these toxins can be produced by Harmful Algal Blooms (HABs).

Our research underpins computer models and other risk assessment tools that provide the aquaculture industry with early warnings of HABs. Underpinned by this expertise, we make these pioneering methods available to aquaculture, regulators and the public.

We also provide an essential service to the seafood industry in gathering and analysing water samples to monitor the presence of toxic phytoplankton, to ensure the safe harvesting of seafood and to protect and preserve human health. Our toxic phytoplankton monitoring programme across Scottish shellfish growing areas for Food Standards Scotland is accredited to BS EN ISO17025.

Our seafood security services:

- Toxic phytoplankton monitoring
- Environmental Impact Assessment support
  - Effluents
  - Waste disposal
- Laboratory analysis
  - Contaminants
  - Benthic
  - Seawater
- Biosecurity
- Sanitary surveys

We operate a Quality Management System that has gained BS EN ISO9001:2015 certification.
SIMBA
Sea-Ice Mass Balance Array

Measuring temperatures, structures of snow, ice and water and sending the data in real time to your device, laptop or desktop computer.

SAMS Research Services has been developing and manufacturing SIMBA units for more than a decade, initially for our own polar research. This advanced commercial product can help customers who monitor sea and snow, and need reliable and detailed measurements at an affordable price. Sensors in the units are designed to withstand temperatures as low as minus 40 degrees Celsius and are contained within a box no larger than a briefcase.

SIMBA units have been deployed in locations around the world, including the Arctic and Antarctic regions, for more than seven years. In 2019, 18 devices were deployed in the €130 million project Multidisciplinary Observatory for the Study of Arctic Climate (MOSAiC).

The equipment is also under development for snow industries where it can be used as an avalanche prediction aid.
Features:
- Low cost
- Light weight (20 kg)
- Remotely configurable
- Long battery life (>1 year)
- Fine spatial resolution (2 cm) for temperature gradients
- Ability to resolve interfaces (air-snow, snow-ice, ice-water)
- Web interface available for status monitoring and observing live data

SIMBA services:
- Monitoring ice or snow thickness, movement & temperature
- Flood predictions
- Ice road monitoring
- Avalanche prediction aid
- Polar region weather forecasting
- Monitoring sea ice conditions for transport and shipping
**TESTIMONIALS**

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**Sezanne Marine Ltd**

Fiona Hamilton  
Operations Director

“We started using the facilities at SAMS in 2016. The Marine Robotics Facility is very well equipped and staff are knowledgeable and extremely helpful. The breadth of academic research at SAMS and SRSL, along with the friendly atmosphere, make it a stimulating and vibrant place to work. And the scenery is great.”

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**Balance of Plant**

Jude Ugwu  
Project Manager

“ORE Catapult engaged SRSL to support with a study on the colocation of floating offshore wind with aquaculture. ORE Catapult was impressed with the quality of work carried out by the SRSL team, particularly given the time pressure under which the study was delivered. ORE Catapult views SRSL as a dependable partner and would be happy for an opportunity to work with the company again in the future.”

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**Scottish Sea Farms**

Kate MacKichan  
Environment Team Leader

“We were very impressed and grateful for the speed and efficiency with which SRSL came to our assistance with hatchery water sampling, providing the required equipment and training at very short notice.”

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**Bin Cheng**  
Meteorology Unit

“The SRSL team provide good service for their SIMBA product. I am very pleased to receive SIMBA development updates and regular communications from the team. Long-term improvements and further research and development at SRSL helps to support our own ongoing arctic research.”

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**Finnish Meteorological Institute**

Bin Cheng  
Meteorology Unit

“The SRSL team provide good service for their SIMBA product. I am very pleased to receive SIMBA development updates and regular communications from the team. Long-term improvements and further research and development at SRSL helps to support our own ongoing arctic research.”
87% OF OUR CUSTOMERS ARE REPEAT BUSINESS.
Get in touch

To explore solutions to your marine environmental requirements, contact our friendly consultancy team. We look forward to hearing from you.

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