



Scottish Seaweed
Industry Association



CODE OF GOOD PRACTICE

INTRODUCTION AND BACKGROUND



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Standard Version History

Version	Date	Reason for Change	Primary Author(s)
WD1.0	June 2025	Working Draft – Version 1.0	RR
FD1.0	November 2025	Final Draft – Version 1.0	RR

Code of Good Practice for the Scottish Seaweed Sector

Introductory Chapter: Purpose, Principles, and Context

This chapter outlines essential protocols and guidance for responsible seaweed cultivation. These standards address key aspects of farm operations, including traceability, health and safety, and environmental stewardship. By adhering to these guidelines, seaweed farmers in Scotland can ensure the sustainable growth of their industry while safeguarding marine ecosystems, protecting worker welfare, and producing high-quality seaweed products.

1. Introduction

Scotland's seaweed industry is rooted in a coastline of global ecological significance. It is an industry built not only on economic opportunity, but on the stewardship of ecosystems that support biodiversity, livelihoods, and climate resilience. The Code of Good Practice (CoGP) for the Scottish seaweed sector sets out shared expectations and standards that enable safe, sustainable, and responsible growth across the industry.

This Code was developed by the Scottish Seaweed Industry Association (SSIA) in collaboration with operators, processors, and supply chain partners. It brings together practical guidance for nurseries, farms, wild harvesting, and processing in a unified document consisting of a series of chapters.

2. Purpose of the Code

The primary function of this Code is to support all those operating within the Scottish seaweed sector in achieving a high standard of environmental and social performance while ensuring regulatory compliance. It aims to:

- Define good practice across the entire seaweed value chain
- Promote traceability, food safety, and biosecurity
- Safeguard the environment and biodiversity
- Strengthen community relations and social responsibility
- Provide clarity to new entrants, investors, and regulators

The Code is a living document. It is expected to evolve alongside scientific understanding, market needs, and environmental challenges. Adopting the Code signals a commitment to responsible practices that go beyond regulation.

3. Scope and Application

This CoGP applies to both cultivated and wild seaweed operations in Scottish waters. It is relevant to:

- Seaweed nurseries
- Marine farms and cultivation sites
- Wild harvesters
- Onshore processors
- Food businesses handling or selling seaweed
- Researchers and innovation stakeholders

Operators are encouraged to apply the Code holistically, but individual chapters can be used independently depending on a business's activities and stage of development.

4. Structure of the Code

The Code is divided into four core chapters:

1. **Nursery:** Standards for nurseries and propagation facilities.
2. **On the Farm:** Cultivation practices for seaweed farms, including traceability and stewardship.
3. **Wild Harvesting:** Responsible approaches to harvesting wild stocks, including ecological monitoring and access rights.
4. **Processing:** Clean, safe, and efficient handling and transformation of raw biomass, including HACCP, testing, labelling, and legal compliance for seaweed products.

Each chapter contains:

- Practical protocols that describe what good practice looks like in day-to-day operations
- Considerations for scale, site conditions, and end-use, recognising that approaches differ across the sector
- Links to further guidance and resources where applicable
- A focus on outcomes, allowing for flexibility and operator judgement

5. Legislative and Regulatory Interface

This Code is in addition to existing Scottish, UK, and international regulation. It is not a replacement for statutory compliance, but supports industry participants in understanding and meeting their responsibilities. Key regulatory bodies to engage with for further guidance on statutory obligations include:

- Marine Directorate (licensing, marine operations)
- NatureScot (environment and biodiversity)
- Crown Estate Scotland (leasing of the seabed)
- Food Standards Scotland (food hygiene and safety)
- SEPA (environmental protection and waste regulation)

6. Scope and Application

This Code is underpinned by five core principles:

Environmental Integrity	Biosecurity and Health	Traceability and Transparency	Social Responsibility	Continuous Improvement
Minimising negative impact where possible, safeguard habitats, and operate within ecosystem limits.	Prevent disease, contamination, and invasive species introduction.	Document operations, monitor outcomes, and maintain open communication.	Engage respectfully with local communities and ensure fair treatment of workers.	Apply adaptive management, share knowledge, and invest in better practices.

7. Scope and Application

The CoGP is a live document that will be updated regularly in response to:

- New regulatory requirements
- Scientific advances
- Industry consultation
- External feedback and audits

Operators and stakeholders will be invited to participate in regular review sessions.

Comments, questions, and proposals for improvement should be sent to info@ssia.scot.

8. Glossary of Terms

Algal spores – Microscopic reproductive units released by seaweeds, used in hatchery propagation.

Batch – A defined quantity of seaweed harvested or processed under uniform conditions.

Biosecurity – Procedures and measures designed to prevent the introduction and spread of pests, diseases, or invasive species.

Biomass – The total mass of living seaweed material, typically expressed in wet or dry weight.

Contaminant – A biological, chemical, or physical agent in seaweed that could affect food safety or environmental health.

Critical Control Point (CCP) – A step in the food production process where control is essential to prevent or eliminate a food safety hazard.

Dry Weight (DW) – The weight of seaweed after all moisture has been removed; often used in food safety thresholds.

Environmental Baseline Assessment (EBA) – A survey conducted prior to site development to establish the existing environmental conditions.

Environmental Impact Assessment (EIA) – A statutory process assessing the likely environmental effects of a proposed development.

Farmed seaweed – Seaweed cultivated on structures such as ropes, nets, or other artificial substrates.

Food Business Operator (FBO) – A person or company responsible for ensuring compliance with food safety regulations.

Harvesting window – A specified time period for cutting wild or farmed seaweed to protect growth cycles and ecosystem stability.

Hazard Analysis and Critical Control Points (HACCP) – A systematic approach to food safety that identifies, evaluates, and controls hazards.

Invasive Non-Native Species (INNS) – Organisms introduced outside their natural range that can cause ecological or economic harm.

Iodine – An essential nutrient found in seaweed; excess intake can present health risks and must be managed through labelling and testing.

Inorganic Arsenic (iAs) – A toxic form of arsenic sometimes present in seaweed.

Key Receptor - Ecologically sensitive sites that may be affected by development or activity. This includes protected areas (e.g. MPAs, SACs, SPAs), breeding sites, Priority Marine Features (PMFs), and areas used during sensitive biological periods such as breeding or moulting seasons.

Lifecycle Assessment – a method for the environmental assessment of products and services, covering their life cycle from raw material extraction to waste treatment.

Longline system – A seaweed farming technique using suspended ropes for cultivation.

Macroalgae – Large, multicellular algae species, commonly referred to as seaweeds (e.g., kelp, dulse, wrack).

Monitoring – Routine observations or testing to ensure compliance with environmental, safety, or quality standards.

Novel Food – Any food not significantly consumed within the UK or EU prior to 1997, subject to special regulatory approval.

Nursery – A facility that produces seaweed juveniles or spores for cultivation purposes.

Pathogen – A biological agent that causes disease in humans, animals, or plants.

Plant Passport (PP) – A phytosanitary certificate required for moving certain plants or seaweed within regulated zones.

Polycyclic Aromatic Hydrocarbons (PAHs) – Chemical contaminants that may accumulate in seaweed; regulated in food safety.

Priority Marine Feature (PMF) – A species or habitat considered of conservation importance in Scottish waters.

Processing – Any activity that transforms raw seaweed, including cleaning, drying, milling, or packaging.

Product Recall – The process of removing a food product from the market due to identified safety risks.

Residue – A substance that remains in or on seaweed after harvesting or processing (e.g., heavy metals, cleaning agents).

Risk Assessment – Evaluation of the probability and severity of harm from identified hazards.

Seaweed – A general term for marine macroalgae used in a variety of applications including food, feed, cosmetics, and bioplastics.

Sensory Evaluation – A quality control method using sight, smell, or touch to assess product characteristics.

Site of Special Scientific Interest (SSSI) – A conservation designation denoting protected areas of natural significance in Scotland.

Stakeholder – Any individual, group, or organisation affected by or involved in seaweed operations, including communities, regulators, and customers.

Traceability – The ability to track the origin, movement, and transformation of seaweed throughout its lifecycle.

Wet Weight – The weight of freshly harvested seaweed, inclusive of water content.

Wild Harvesting – The collection of naturally growing seaweed from the foreshore or subtidal zones.

9. Abbreviations

APHA	Animal Plant Health Agency
CCP	Critical Control Point
CES	Crown Estate Scotland
CoGP	Code of Good Practice
DW	Dry Weight
EC	European Commission
EFSA	The European Food Safety Authority
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EU	European Union
FBO	Food Business Operators
FSA	Food Standards Agency
FSS	Food Standards Scotland
GPS	Global Positioning System
HACCP	Hazard Analysis Critical Control Point
HMU	Horticulture and Marketing Unit
iAs	Inorganic Arsenic
INNS	Invasive Non-Native Species
LA	Local Authority
LCA	Lifecycle Assessment
LOA	Lease Option Agreement
NPPO	National Plant Protection Organisation
MCA	Marine Coastguard Agency
MD	Marine Directorate
MD-LOT	Marine Directorate - Licensing Operations Team
MLWS	Mean Low Water Springs
MPA	Marine Protected Area
NLB	Northern Lighthouse Board
NMPi	National Marine Plan Interactive
NRW	National Resource Wales
ORC	Operation Requiring Consent
QA	Quality Assurance
PAC	Pre-Application Consultation
PAHs	Polycyclic aromatic hydrocarbons
PC	Phytosanitary Certificates
PMF	Priority Marine Feature
PO	Professional Operator
PPE	Personal Protective Equipment
RA	Risk Assessment
RYA	Royal Yacht Association
SAC	Special Area of Conservation
SASA	Science & Advice for Scottish Agriculture

SEPA	Scottish Environment Protection Agency
SG	Scottish Government
SIFT	Sustainable Inshore Fisheries Trust
SPA	Special Protection Areas
SSIA	Scottish Seaweed Industry Association
SSSI	Special Site of Scientific Interest
SSW	Safe Systems of Work
UK	United Kingdom
UV	Ultraviolet
WW	Wet Weight