



**MARICULTURE
STRATEGIC WORKSHOP
Monday 19th May 2008**

WORKSHOP REPORT

Preface

The Mariculture workshop was held on 19th May 2008 at Glasgow Caledonian University CPD Centre. The workshop was facilitated by Professor John Kelly of Axoss Ltd and recorded by Pamela Thomson of Glasgow Caledonian University. Contact details are below.

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1. Executive Summary

The objectives of the mariculture strategic workshop are to respond to the Firth of Clyde Marine Spatial Plan (MSP) vision statement;

"the Firth of Clyde will have a healthy marine and coastal environment, rich in biodiversity and natural resources. This will enhance the quality of life for local communities and contribute to a diverse and sustainable economy for the West of Scotland"

This response to the above, determined issues, identified drivers, developed a functional vision and established strategic options.

Mariculture in the context of the workshop is the farming of fin fish and shellfish and the term fish farm in this report refers to both sectors. The workshop group considered the current issues impacting the industry and evolved strategic options for action. The focus of the workshop team in respect of mariculture was on; water quality generally in the Clyde, planning for growth, the competition for and the securing of suitable sites, integration with wildlife and the wider opportunities for fish farming. These themes continued to be addressed in all stages of the workshop.

The primary issue referred to many times by the group was associated with the planning procedure for fish farms which currently involves an extensive permission trail involving several layers of compliance within a system perceived as being based upon subjective judgement rather than objective criteria and guidance. It was accepted that a fish farm necessarily impacted the marine landscape but the levels of acceptable impact have not been made explicit. Similarly an informed approach to consultation is sought with proper regard and weighting to the comments received from individuals and representative groups. There is a perception that as fish farming is the Clyde's newest industry then it should be subservient to all existing industries and activities.

The drivers developed from the issues can be summarised into four general areas

- ❖ There is a significant local market for the product
- ❖ The industry is sustainable and has the potential to increase production within an ideal environment
- ❖ There is a need to address a number of planning procedural issues
- ❖ There is a need to work constructively with others and enhance the industry's reputation through better PR

These drivers are summarised through the functional mission as providing scope for sustainable growth by determining good locations. The three primary high level functions to meet the mission are:

- ❖ Determine explicit planning criteria
- ❖ Improve information sharing
- ❖ Work collaboratively with other users

The strategic options mirror the primary themes of the day and include the recognition that the industry has a responsibility to explain the minimum requirements for a viable shell fish and fin fish farm with indicative areas within the Clyde which would be suitable for expansion. There is also a need to liaise more effectively with conservancy officers and users of the Clyde generally.

2. Introduction

The mariculture strategic workshop was held with the primary aim of informing the Strategy for the Firth of Clyde Marine Spatial Plan. Mariculture in this context means the farming of fin fish and shellfish. The workshop comprised representatives of those organisations having a valid input to the sector. The specific workshop objectives were:

- ❖ Determine where the sector wants to go (the 20 year vision)
- ❖ Identify the key internal and external drivers that are likely to affect the sector particularly over the coming five years.
- ❖ Establish the strategic position of sector.
- ❖ Develop strategic options for the sector.

The objectives informed the agenda for the workshop that used four facilitated techniques namely:

- ❖ issues analysis
- ❖ driver analysis
- ❖ sector orientated functional vision statement and
- ❖ formulating strategic options.

The following report details the consensus of the workshop group.

3. Issues Analysis

The project issues were summarised by the team by brainstorming and recording on post-it notes displayed on a 'working wall.' Once complete the team categorised the issues under issue headers derived from an analysis of the documentation to date supplemented as necessary. The ten most important issues to individuals were highlighted by "spending" black dots as appropriate. Those issues considered critical were highlighted by red dots. The table below summarises all issues and their importance.

	Stakeholder	Black dot	Red dot
	Scallop farmers previously dredgers		
	Fishing as close as possible to moorings	1	
	Problems with fisherman	2	
	Culture of traditional fishing		
	Opportunities for use of farm slips	1	
	Context/Culture		
	Difficulty of defining community benefit		
	Who owns the view	1	
	Perception of negative impact on tourism		
	Levels of acceptable impacts	3	2
	Legal/Legislation		
	Extensive permission trial		
	4 or 5 statutory consultees		
	Extensive consultation process	1	
	Need for informed approach to consultation	3	2
	Rights to stock rather than right to sea beds		
	Location		
	Finding suitable sites	4	2
	Terrestrial influences	2	
	What is visual intrusion		
	Capacity (resources/space)		
	Growing sailing interest (possible opportunity to educate them on wider aqua interests ie fish farms)		
	Competition for sheltered bays	1	
	There is a need for expansion	1	
	Relationship with fishing		
	Have not reached biological limits for shell fish		
	Addressing competition for same bit of sea		
	Fish farms keep wild life log books		
	Fish farm objected to on loss of safe anchorage		

	Community/Politics/Local Planning		
	Planning for onshore facilities		
	Less secular communities in Clyde		
	Planners not familiar with Mariculture	4	3
	Popular image of Mariculture	1	
	Who has casting vote		
	Better guidance required for planners		
	Uneven perception amongst local authority planners		
	Sea based activity with no community benefit		
	Perception of not sitting in landscape	Black	Red
	Finance		
	State aid not in place		
	Minimum import price might be lifted		
	Short-term leases mean difficulty in investment		
	Lack of asset to borrow against		
	Expansion requires step increase in investment		
	Parameters and Constraints		
	Shooting rogue seals		
	Impact of service boat traffic		
	Wild fishery interest & interactions	1	
	Noise pollution of fish farms		
	Predation problem on salmon farms		
	Interaction with shipping	1	
	Problems with marinas	1	
	Eider duck problem with mussel farms	1	
	Need for evidence on impact of acoustic devices		
	Water quality	2	
	Visual Impact of fish farms	2	1
	Predation can lead to ripped nets & escapes		
	Gull & Eider duck scaring		
	Lack of fish farm sites	3	1
	Change Management		
	Evolving technology of fish farming	1	
	Opportunities for marine structure plan		
	Cross sub-sectoral collaboration fish/shell fish	1	1
	Information & Information Management		
	Tourism Opportunity of Fish Farms	1	

Commentary on Issues

The issues generated by the workshop team in respect of mariculture focused on; water quality generally in the Clyde, planning for growth, the competition for and the securing of suitable sites, integration with wildlife and the wider opportunities for fish farming.

Most significant in the above list are the problems associated with planning. An extensive permission trail was described involving several layers of compliance within a system perceived as being based upon subjective judgement rather than objective criteria and guidance. It was accepted that a fish farm necessarily impacted the marine landscape but the levels of acceptable impact were understood neither by the applicant or the planning officer. Members of the workshop group had experienced uneven understanding of mariculture by local authority planners, particularly a poor appreciation of the fact that permission is being sought for a temporary structure which if found to be not viable would be removed with no consequential damage to the landscape. The workshop group also highlighted the need for an informed approach to consultation with proper regard and weighting to the comments received from individuals and representative groups. An appropriate forum for consultation was briefly discussed recognising the less secular nature of communities generally in the Clyde in comparison to other locations further North. The primary physical constraint on the growth of shellfish farming in the Clyde was biological specifically the feed content in the water although this was not seen to be a constraint in the lifecycle being addressed by SSMEI.

Shellfish farmers in particular have problems with water quality in the Clyde specifically microbiological contamination, heavy metals, radiation, oil, pesticides, agricultural run-off, poor water quality in the vicinity of marinas and toilet emptying by boats in the vicinity of shellfish farms.

Fin fish farms were seen to compete for space within sheltered bays with recreational sailors seeking safe anchorages. It was also acknowledged that because fish farm environments are by definition highly suitable for fish growth that fishermen trawl very close to fish farms causing damage.

Fish farms generally integrate well with wild fishery and other marine wildlife although the perception is the contrary. The use by fin fish farms of acoustic devices to scare seals appears to have no impact on cetaceans. It is acknowledged that rogue seals that ignore acoustic scarers and damage nets causing escapes of farmed fish are shot. Shellfish farms use bird scarers to scare away gulls but mussel farms in particular have a problem with Eider duck.

The workshop group recognised an opportunity for fish farms to integrate better with the tourist industry and thereby enhance their reputation at a public relations level. There is also an opportunity for the use of shore side facilities by occasional recreational users, particularly kayakers and those who may wish occasional use of farm slips. Many fish farms also keep wildlife logs although these are not generally publicly available.

4. Key Drivers

The key drivers for mariculture are:

- 1 Large market
- 2 Proximity to market
- 3 Convenient logistics (existing infrastructure in place, harvesting plants and packaging and processing happens in the local area, Central Belt, Motherwell)
- 4 Aiming at domestic market
- 5 Sustainable
- 6 Opportunity (shellfish) to supplement income in rural locations
- 7 Potential to increase production
- 8 Ideal environment for this industry to thrive
- 9 Overcoming major constraints
- 10 Lack of available of sites
- 11 Poor Planning
- 12 Realistic Planning Policies
- 13 Perception
- 14 Government support for aquaculture
- 15 Conflicts with other users
- 16 Opportunity to work constructively with others
- 17 Need for PR

Commentary on Drivers

The drivers developed from the issues can be summarised into four general areas

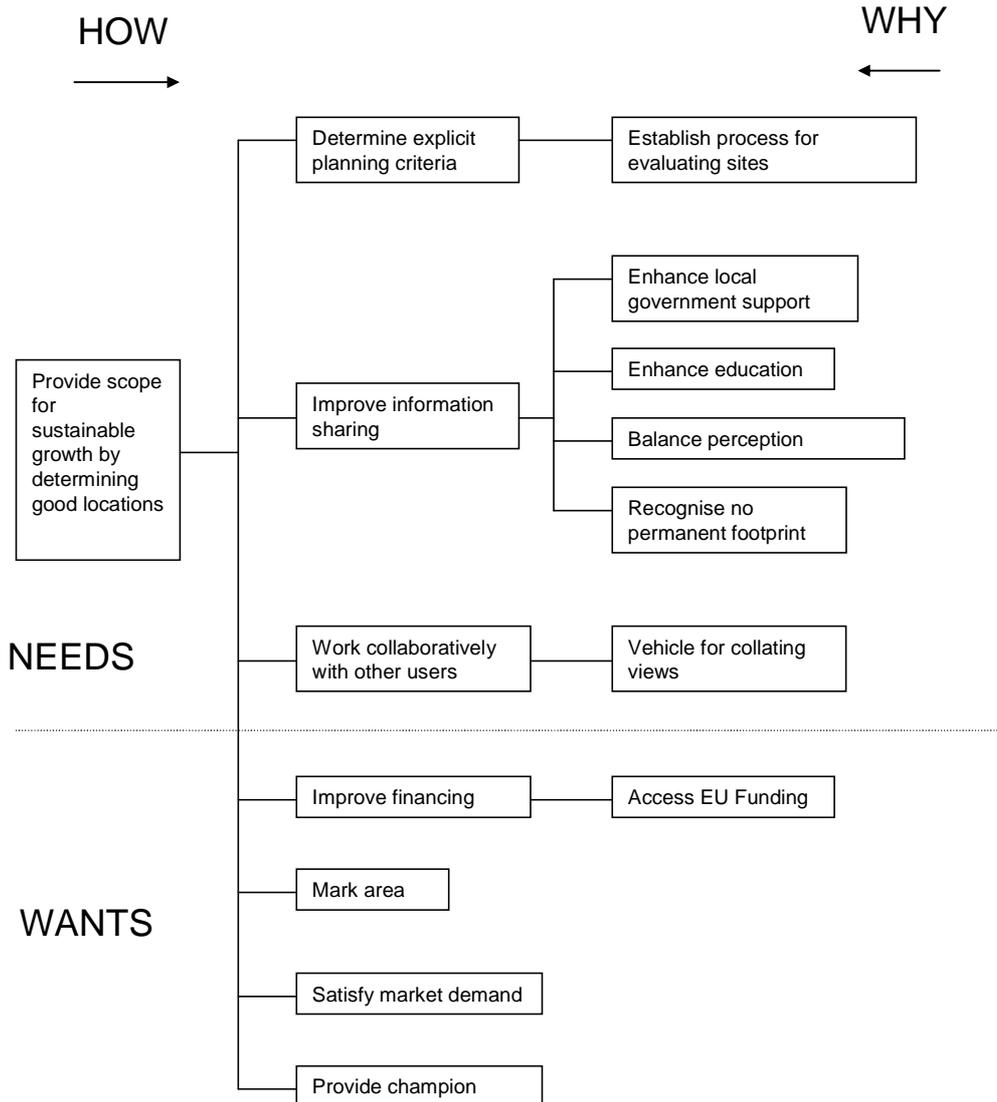
- ❖ There is a significant local market for the product
- ❖ The industry is sustainable and has the potential to increase production within an ideal environment
- ❖ There is a need to address a number of planning procedural issues
- ❖ There is a need to work constructively with others and enhance the industry's reputation through better PR

5. Functional Vision Statement

The functional vision statement was derived by brainstorming the function orientated requirements of mariculture. The succinct statements were organised into a diagram with the primary need or mission on the extreme left. The diagram's logic answers the question how when reading from left to right and why when reading from right to left. The diagram is organised into needs and wants. The needs convey the essence and characterise the absolute requirements. Without the satisfaction of needs the mission is compromised. The wants on the other hand are those functions which are nice to have or those functions which are conducive to the mission but are outside of the responsibility of the representative group. The diagram is reproduced overleaf.

The mission for the mariculture element of the Marine Spatial Plan is "Provide scope for sustainable growth by determining good locations". The three primary high level functions to meet the mission are:

- ❖ Determine explicit planning criteria
- ❖ Improve information sharing
- ❖ Work collaboratively with other users



Mariculture Function Vision Diagram

6. Strategic Options

In the short term the following actions are required

1. Establish & record specific requirements for a fin fish and a shellfish farm
2. Explain viability requirements in context of size and site characteristics
3. Map suitable sites in Clyde by liaising with farmers
4. Zoning of potential areas (capacity is a biological feature as well as visual feature)
5. Hold an open day for planners (involve Scottish Natural Heritage, SEPA, and local authority planners. Possible suggestion would be to hold a bi-annual meeting with shell fish and fin fish representatives, incorporate site visits to increase planners knowledge)
6. Use Clyde Forum
7. Encourage no planning fee for pilot sites (could look into this within Firth of Clyde pilot).
8. Describe the infrastructure consequence of permission for a farm facility (link onshore infrastructure facility planning ie pontoons for boats, processing sheds etc with the associated marine planning application).
9. Industry needs to sell case and liaise with local authorities
10. Undertake an economic review of mariculture within the Firth of Clyde (refer to Solway Firth review)

APPENDIX 1 – List of attendees

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John Donnelly SSMEI Clyde Pilot

Professor John Kelly Facilitator
Pamela Thomson Reporter

APPENDIX 2 – Agenda

**SECTORAL SUB GROUP WORKSHOPS
MARICULTURE
STRATEGIC WORKSHOP
Monday 19th May 2008**

AGENDA

09:45	Arrival & Coffee
10:00	Introductions Opening remarks – John Eddie Donnelly Project Officer
10:15	Issues Analysis Brainstorming of issues & sorting under headings
11:00	Coffee
11:15	Evaluating issues and identifying drivers
12:30	Lunch
13:15	Diagrammatic representation of sector orientated functional vision statement
14:00	Formalise strategic options
15:00	Tea
15:15	Confirm success criteria for sector Measures of success taking account of: <ul style="list-style-type: none">▪ Factors conducive to enhancing vision▪ Factors likely to compromise vision
16:00	Action plan for developing strategic options
16:30	End

APPENDIX 3 - Background Paper Circulated Prior to the Workshop

Mariculture Strategic Workshop

1 Introduction

The SSMEI Clyde Pilot is taking a novel approach to the development of a conservation and biodiversity strategy for the Firth of Clyde Marine Spatial Plan (FoCMSP). Facilitated workshops have been identified as the most appropriate way of engaging with the key stakeholders from each sector to inform development of Sectoral Plans. Through these facilitated workshops a strategic option for each sector will be developed that will guide the creation of policies and proposals for the FoCMSP.

2 Background

Scottish Sustainable Marine Environment Initiative

The Scottish Executive instigated the Scottish Sustainable Marine Environment Initiative (SSMEI) in November 2002. The SSMEI is intended to inform future Scottish Government policy with respect to management of the marine environment. The Clyde Pilot is one of these schemes, with the others being located in the Shetland Isles, Berwickshire Coast and the Sound of Mull.

SSMEI Clyde Pilot

The SSMEI Clyde Pilot is tasked with the development and delivery of more integrated and sustainable management of the marine and coastal areas of the Firth of Clyde through an effective and integrated stakeholder-regulator partnership. It aims to achieve this through the creation of a Marine Spatial Plan, together with improved decision support mechanisms and integrated decision making. These will be underpinned by the application of an ecosystem based approach to sustainable development.

Firth of Clyde Marine Spatial Plan

The FoCMSP will establish an overarching policy framework to guide the sustainable development of activity within the Firth of Clyde. It is intended to streamline the development applications process encouraging investment and sustainable development. It will be strategic in nature and in this respect may be likened to a terrestrial structure plan.

Vision

The FoCMSP will support the delivery of the following 20-year sustainable vision for the Firth of Clyde:

"The Firth of Clyde will have a healthy marine and coastal environment, rich in biodiversity and natural resources. This will enhance the quality of life for local communities and contribute to a diverse and sustainable economy for the West of Scotland"

High Level Aims

In the context of this long-term vision, the FoCMSP's high-level aims are:

- Social: Maintaining the well being and cultural diversity of coastal communities.
- Economic: Providing a framework that supports current economic activity, opportunities for growth and attracts investment.
- Environmental: Maintaining and enhancing the biodiversity, landscape and seascape of the Firth of Clyde, by protecting and improving its natural resources.

Sectoral Plans

An important aspect of the FoCMSP is the integrated management of future sectoral developments. Through the development of Sectoral Plans a better understanding of the cross-sectoral and intra-sectoral measures needed to enable businesses operating in the Firth of Clyde to develop sustainably will be achieved.

These strategic forward plans will be fed into the development of FoCMSP. They will be formed through identifying the key drivers that are likely to affect the sectors, both externally and internally which will enable the strategic position of the sector to be recognised.

Location

The SSMEI Clyde Pilot and the FoCMSP encompasses all the marine or tidal extents within the Firth of Clyde, from the tidal weir at Glasgow Green, to the heads of Loch Long and Loch Fyne. The seaward boundary is from the tip of the Mull of Kintyre across to Finnarts Point, north of Loch Ryan. The project area includes at least 620 miles of coastline and a surface water area of some 3,650 km².



1 Strategic Sectoral Planning Workshops

These workshops are strategic in nature. The aim of this workshop is to identify the strategic objectives of the Mariculture sector within the Firth of Clyde and consider how the FoCMSP can assist in delivering these.

Workshop Objectives:

1. Determine where each sector wants to go (their 20 year vision)
2. Identify the key internal and external drivers that are likely to affect the sectors, particularly over the coming 5 years
3. Establish the strategic position of the sector
4. Develop strategic options for each sector

Preparation

We ask that you read the [Environment Baseline: Issues by Sectors](#), [Sectoral Interaction Survey Summary](#) and [Socio Economic Review Extract](#). These are a starting point of what we have identified as key issues that can be addressed by the FoCMSP. Please consider what issues of a strategic nature you wish to raise.

Outputs

It should be noted that the outputs of the workshops must be considered in terms of the existing legislative and regulatory mechanisms and frameworks, or within what might be a realistic expectation of the legislative framework over the next 5 years. However, this does not preclude the potential for voluntary approaches to be utilised in the delivery of any strategy.

The output of the workshop will be the development of strategic options that respond to issues and requirement highlighted during the workshop process. These will then be used in the development of the policies, proposals and targets in the FoCMSP.