

# **ECASA Environmental Statement Template**

**Site name**

**Country**

**ECASA Partners**

Authors

Version

**Non Technical Summary** A 1-page summary in layman's language.

## **0. Contents**

### **1. Introduction to the aquaculture operation**

**1.1 Introductory background statement** – Clarification of basic information such as:

- the developer is (i.e. the farm/company background),
- the contributors,
- Information sources – dates of site visits, other major sources
- who has been consulted and how,
- what methods have been used (in general terms, detailed procedures and protocols used given in an appendix),
- difficulties encountered,
- limitations of the report.

**1.2 Summary statement of key site specific environmental issues (this is basically a synopsis of section 3.0)**

**1.3 Information of farmer's environmental strategy:**

Environmental Policy and/or Environmental Management System if they exist; do the farmers follow any industry codes of Best Environmental Practice (give details and references).

Current regulatory status – consents, leases, licenses, monitoring requirements, etc

**Include brief overview of key regulatory controls.** Include voluntary agreements (e.g. Area Management Agreements)

## **2. Site specific regulatory and management background**

**2.1 The regulatory status of proposed location with respect to fish farming developments.**

How is this site designated in terms of any National Locational Guidelines or EU Directives? Are there any designated areas nearby or areas of High Visual Amenity? Is there a local Marine Framework or Spatial plan?

**2.2 Site description**

Describe the area (Zones B and C) in terms of habitats and ecosystem processes.

**2.3 Detailed description of the farm**

Describe the farm in general terms. Include employment and socio-economic benefits. What facilities does the development have for the staff, specifically related to waste disposal (toilets, showers,,)

#### **2.4 Proposed management strategy: biomass, medicines, chemicals, cycle, feed inputs, growth measurements.**

What is the proposed production cycle and what is the predicted biomass at the site, which medicines will it use, does it use normal photoperiod or photoperiod manipulated fish, where are these sourced (e.g. local hatchery), how much feed will be used, what is the expected FCR? Anticipated stocking densities, production (biomass) per sq m (in terms of impact/loading on the seafloor)?

Detail all chemicals and medicines used.

Anticipated growth rate and harvesting cycle for shellfish.

#### **2.5 Physical farm logistics, including type of gear used (Cages, long lines, rafts...), moorings, access, lighting and anti-predator measures (use maps, and diagrams).**

What are the physical structures, how are these moored to ensure integrity, how is access to the site achieved and from where, is there need for lighting either above or below water, how are navigational issues addressed, does the farm use predator nets or sea scarers?

#### **2.6 Production and Processing**

Where will stock be slaughtered, how transported and where processed? Are waste products dealt with hygienically?

Are there any air-borne emissions from the farm i.e. dust, smell, smoke, chemicals? How are solid and liquid (organic) wastes disposed of?

### **3. Description of the site and quantification of effects on the environment – existing information only, not collected by ECASA.**

#### **3.1 Land use, landscape and visual quality (use maps and photographs)**

How long has the farm been in the location? Size of development, , what efforts have been made to conceal activities/blend in with local environment? Number of other farms and distance to these farms in the area, other industry (including fisheries) in the vicinity.

Surrounding land class (urban, rural etc give maps).

Visual pollution, reduction in wilderness amenity, interactions with tourism or other water users.

Proximity to Marine Protected Areas.

### **3.2 Hydrography and water quality**

What are the important topographic or hydrographic features? Is there long deep water isolation, seasonal stratification? Has the residence time of water at the Zone B scale been calculated?

Physical data for the site – are wider scale models available? How is the site rated in terms of dispersiveness?

Flushing and potential for nutrient enrichment: What is the flushing rate for the system? Have calculations on Equilibrium Concentration Enhancements for nutrients been done?

Have calculations on dispersion of dissolved medicines been done?

What are the dissolved waste levels and what is the perceived risk of eutrophication?

Is there background information on pelagos: phytoplankton, zooplankton and wild fish studies?

### **3.2 Bathymetry, geology and habitats.**

Describe the site at Zone A and B scales. Have habitats been mapped? Is there a substratum map?

### **3.3 Benthos and sediments**

Show data (and list meta data) on benthic and sediment measurements at the site. Are there any unusual or rare species? Are there protected species in the area?

### **3.4 Marine mammals; seals, cetaceans, otters**

Are these animals abundant in the vicinity – give maps, describe seasonality etc. Are there any predator deterrents?

### **3.5 Birds**

How much known about birds in the area, are there important or rare species in the area or piscivorous birds that may have specific interactions (ducks, cormorants...)

### **3.6 Fisheries and wild fish populations.**

Is there a local fishery? What are the interactions?

Is there a policy or code on transmission of diseases/parasite and prevention and recapture of escapees? Are there records of escapes?

Will the site attract large numbers of wild fish? Are fishing and angling prohibited near the farm?

### **3.7 Noise**

Activities on site, either within daylight hours, night-time. Proximity of residential areas.

### **3.8 Transport**

Deliveries. Staff access. Site access-road quality. Shore bases.

### **3.9 Socio-economic impact**

Employment and socio-economic benefits. How many jobs are supported? Do these come from fragile remote communities? Are staff imported into the area? Are there any other socio-economic benefits e.g. retention of school or post office?

## **4 Results of specific field studies**

**4.1 Background to field programme: dates, staff, boats, stations sampled, etc.**

**4.2 Sampling methods and materials, analytical methods.**

**4.3 Models used and their parameterization.**

**4.4 Results.** (Give tables of bulk data/model outputs electronically and/or in appendices. Here only give highlights and summary information).

### **4.5 Site specific conclusions**

Use Indicators and Modelling results to determine the state of the environment at the Zone A and B scales, and comment on effects at the Zone C scale.

Consider the Ecosystem Approach including socio-economic aspects and the consequences of the farm for other users and stakeholders.

Comment on the capacity of the environment in terms of waste assimilation, provision of environmental services to aquaculture as well as aesthetic and cultural aspects. Comment on sustainability and future prospects for aquaculture within Zones A, B and C.

## **5. Discussion of major risks and mitigation**

Establish an order of risks at the site with reasons. For then riskiest aspects, discuss mitigation methods that should be employed including assessing alternative sites.

## **6. Acknowledgements**

## **7. References**

## **Appendices**

**1. Environmental policy, codes of good practice etc of farmer.**

**2. Details of all methods used (indicators, models, etc)**

**3. Environmental data.**

**4. Models and their output**

Give details of model output for all the models evaluated. Indicate model source and availability.