

**RESPONSE FORM**  
**DRAFT SEAWEED POLICY STATEMENT 2013**

**1. Do you agree with policies 1-6?**

**Policy 1.** It appears that there has been little consultation outside the aquaculture sector, for example with creelers, other inshore fisheries, yacht organisations or the tourism sector, before this Policy statement. Whilst small-scale seaweed cultivation under strict regulatory control may be feasible; medium and large scale especially IMTA would be counter to everything Marine Scotland and SNH are attempting to do in the MPA network, SPA's, SPAs, SSSIs, and other closures under site definitions. Yes, traditionally Scottish seaweed (kelp) was harvested, and still is locally, but small scale, for fertilising local crops, and in the past for producing fertilisers, potash for glass and soap production, and alginates. But increasing scale cannot be assumed to have no environmental impact. Anchorage to the substrate will affect ecosystems. It will certainly impact on other sectors dependent on the pristine inshore marine environment.

**Policy 2.** This is obvious. However, does native species mean somewhere in Scotland or even the UK, or specific to the locality in question? But experience in Scottish waters and regulatory control that once some industry is established things change because "of the market", "production costs". Just look at the size of salmon fish farms requests being permitted. Non-native can mean "not from here". But somewhere fairly close

**Policy 3.** Clearly this is important.

**Policy 4.** Scottish seas are notoriously unpredictable, so it would seem these farms would need to be inshore. The environmental impact of farms breaking up in a hefty equinoctial gale spreading the seaweed far and wide, as well as posing a hazard to trawlers etc. So refer back to Policy 1.

**Policy 5.** Critical consideration; however history of marine farms does not give rise to confidence that other marine users will be heard.

**Policy 6.** The Precautionary Principle is being ignored here. Changing the ecosystem balance will produce differences in the marine ecosystem. This could seriously affect mobile marine species. Further once established the seaweed would in all probability spread beyond the farm, affecting other marine users, whether they are fishermen or tourists, upon which small communities depend. In considering the "economic" case for such a development, all these factors must be included. One firm's profit may mean the decimation of 20 small enterprises in a small community.

**2. Should Policy 2 require local provenance i.e. Stock must originate from the water body the seaweed is to be grown in?**

Yes from that exact area, or sea loch. However, it will be hardly surprising when seaweed not seen in that locality suddenly appears!

### **3. Do you agree with Policy 7? State your reasons**

There are serious reservations on this policy. The SEA Environmental report indicates there may be negative environmental impacts from sites of this scale. This will adversely affect the creeling industry in inshore waters, not only with shading, and the real threat of spread of the seaweed due to planktonic stages and through harvesting the loss of juvenile stages of crabs, prawns and lobsters. It has been shown through other aquaculture endeavours that the reality of environmental impacts is greater than promised and by then it is too late to really remedy for the longer term as the industry is established. A much tighter regime would be required so much so that it might be less intrusive and damaging to the environment if these seaweed farms are in tanks on land.

### **4. Do you agree with policies 8 & 9? Please state if you agree with or disagree with, and your reasons.**

**Policy 8.** Do not agree with IMTA.

- Environmental risk,
- Viability of other sectors of the community, from trawling, creeling to tourism
- Real risk of uncontrolled spread of seaweed into other areas
- Marine origin biofuels do damage the environment. Just because it is unseen does not mean it is not occurring.
- Carbon footprint of getting it to land and refining it does not make sense
- Salmon farms should be enforced to remedy their own pollution

**Policy 9.** As usual it will be the west coast lochs and inshore waters that will be targeted. The rush to finfish farms of huge size is disturbing. The use of toxic chemicals, antifouling chemical amongst others is being used as a good reason here to "clean up the environment" reducing negative impacts. Further down the line there will be combined planning applications to justify size of finfish farms etc. Not good for the environment. Instead, the Scottish Government and SEPA should be forcing the fish farms to clean up their act.

If the west coast is to be compelled to have these seaweed farms, so too should the east coast!

### **5. Do you think that the size scales set (shellfish (small), medium, and extensive), are appropriate? Give your reasons.**

The small size is appropriate. Both medium and extensive should be grouped with a much tighter regulatory framework and environmental controls. The present shellfish sites suggest there is already a great deal of activity. Does the west of Scotland sea lochs really require seaweed cultivation, potentially damaging to substrate, ecosystems, light penetration (making sea temperatures dip in summer) existing businesses?

### **6. Which consenting option would be most appropriate for seaweed cultivation, and why? Give your reasons.**

**No change** except for large seaweed planning and IMTA. It is vital that those who have knowledge and understanding of the marine environment, ecosystems and the precautionary principle are involved in the consenting process. To many local authority planning authorities, there is a major lack of that understanding of what lies beneath the water, and to many seaweed will sound attractive.

**Provide main consent through terrestrial planning regime.** As noted above there is a major concern about the lack of scientific knowledge and understanding of the marine environment and ecosystems within Local Authorities. Some of the planning consents recently for major fish farm developments have been lamentable. Marine Licensing under Marine Scotland must be maintained for all developments.

**Use both planning and marine licensing regimes but differentiate by scale**  
Small scale could be one set of regulatory regime, but must still be under marine Licensing. Larger (medium and extensive) with strict planning and licensing. ALL regulated by Marine Scotland.

There needs to be much fuller consultation about these options, especially outside the finfish farm and seaweed cultivation sectors.

**Transfer seaweed to planning only if it is part of IMTA development**

No. It would be a way to creep under the radar for finfish farms by saying holistically it would be better environmentally to have seaweed nearby in the same body of water. Not enough research here at all. Keep them separate.

**7. Should guidance be developed for the harvesting of wild seaweed? If not what (if any) alternative arrangements would you suggest?**

There needs to be close examination of this process. The danger of seaweed spread by tides, currents etc will create potential environmental and physical hazards. Planktonic stages and waste on beaches are just two of the potential impacts. The SEA highlights possible negative impacts. It is critical that at any early stage a regulatory control is in place. If there continues to be no control there is a potential risk to other sectors of marine users. Good practice is important, backed by a legal framework, just as there is on land with harvesting crops.

**8. Should the 197 Act be amended to provide the flexibility to farm other species, or specifically named species? What named species should be included? Please give your reasons**

No species in mind, but whatever is suggested a thorough EIA must be required for the site and monitoring of outcomes over time instigated at the cost of the developer.

#### **FURTHER GENERAL COMMENTS**

1. When commercially harvesting wild seaweed how easy is it to deplete the locality of the species of seaweed required for the business and therefore either compromise the business or allow invasive species from elsewhere to colonise the area, thus altering the ecological balance? More research required.

2. There would be considerable commercial pressure and business opportunity to import to an area of sea bed seaweed which is totally alien to the Scottish marine habitat but in demand from say Asia thus endangering the diversity of a whole spatial

area of the marine ecosystem. This could result in a very invasive species colonising the inshore sea to the detriment of existing habitats. Measures will be needed in any legislation to prevent importation and growing of alien species

3. The concept that advantage could be taken of a chain of interaction in bioproductivity by for example seaweed commercially grown downstream from a fin fish farm is fraught with problems. It is all very well assuming that waters enriched with nitrogen and phosphorus nutrients might promote vegetal growth but at the same time sediment waste in the form of faeces and excess food will have the effect of smothering any growing marine vegetation. Then there is the toxic chemical dosing associated with fish farms and the dependence on dilution and dispersion to assimilate without harm arising from these contaminants. Harvesting of seaweed supported by higher nutrient levels would at the same time run the risk of high levels of chemical absorption with resulting food safety issues. The very principle of promoting a marine crop for food grown in a stream of waste from a fin fish farm would seem to be a non-starter.

4. Even the suggestion of growing seaweed as a source of biomass raises questions of sustainability. Bioproductivity is linked with a large number of factors including temperature of the environment, seasonal considerations, availability of various forms of light and nutrient content of the growing medium. It would be counterproductive and indeed very harmful in an uncontained marine environment if artificial enhancing activity such as addition of nutrients or introducing artificial light were needed to achieve levels of biomass productivity achievable on land.

5. Recent articles on growing seaweeds (from The Guardian: Seaweed biofuels: a green alternative that might save the planet; paper by Lane, Mayes, Druehl and Saunders on seaweed adjacent to fish farm cages in northwest Scotland) indicate the push for seaweed production. Clearly there is money to be made. But at a time Marine Scotland is proposing Marine Protected Areas to enable Scotland to meet legal obligations and to enhance the marine environment, it is ironic a new industry is being proposed that will, according to Mike Cowling, involve 15,000 square km of UK water by 2050.