

# **Sustainable Water Network (SWAN)**

## **National Strategic Plan for Sustainable Aquaculture Development - Response to Public Consultation -**



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# 1. Introduction to SWAN

The Sustainable Water Network (SWAN) is an umbrella network of 26 of Ireland's leading environmental NGOs, national and regional, working together to protect and enhance Ireland's aquatic resources through coordinated participation in the implementation of the Water Framework Directive (WFD)<sup>1</sup>, the Marine Strategy Framework Directive (MSFD)<sup>2</sup> and other water-related policy and legislation. SWAN member groups are listed in Appendix I. SWAN has been actively engaged in Water Framework Directive (WFD) and other water policy implementation at both national and River Basin District (RBD) level since 2004, responding to water-related public consultations and representing the environmental sector on WFD River Basin District (RBD) Advisory Councils, the South Eastern RBD Management Group and other water policy-related fora. In 2013 SWAN published a report *'The Marine Strategy Framework Directive in Ireland: Requirements, Implications & Opportunities for Environmentally Sustainable Management of Our Marine Waters'*<sup>3</sup> and in 2014 *'Integrated Coastal Zone Management in Ireland, Meeting Water Framework Directive and Marine Strategy Framework Directive targets for Ireland's transitional and coastal waters through implementation of Integrated Coastal Zone Management'*.<sup>4</sup>

## 2. Introductory comment

SWAN welcomes the new European approach of multiannual strategic aquaculture plans with guidance and funding for Member states and the publication of *the National Strategic Plan for Sustainable Aquaculture Development* (NSPA)<sup>5</sup> and the opportunity to comment on it.

As an Island nation Ireland is blessed with a rich coastal, transitional and marine environment. These waters are traditionally among the richest in the EU and the sustainable utilisation of this vast resource has huge potential to contribute to the economic wellbeing of our country. Unfortunately we have seriously mismanaged and abused this resource over the preceding decades. This has led to the degradation of many aspects of the coastal and marine environment and EMFF<sup>6</sup> funding must be utilised to restore this environment through the implementation of the WFD, MSFD, CFP<sup>7</sup> and both the Habitats and Birds Directives<sup>8</sup>. We must move beyond aspects of the NSPA which may deliver short term economic gain for a few but will undermine already degraded ecosystems. The principle of sustainable development requires that the needs of the present population be met without compromising the ability of future generations to meet their own needs. In practice, this implies ensuring that environmental protection requirements, resource efficiency, sustainable management of natural resources, climate change mitigation and

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<sup>1</sup> [The Water Framework Directive](#) (Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy)

<sup>2</sup> [The Marine Strategy Framework Directive](#) (Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for Community action in the field of marine environmental policy)

<sup>3</sup> Brady *et al* (2013) [The Marine Strategy Framework Directive in Ireland](#)

<sup>4</sup> O'Mahony *et al* (2014) [Integrated Coastal Zone Management in Ireland](#)

<sup>5</sup> [National Strategic Plan for Sustainable Aquaculture Development](#)

<sup>6</sup> [European Maritime and Fisheries Fund](#)

<sup>7</sup> [The Common Fisheries Policy](#)

<sup>8</sup> [The Habitats and Birds Directives](#)

adaptation, disaster resilience and risk prevention and management. If we are to achieve sustainability in the aquaculture sector then it is pivotal that we meet our obligations under the WFD and MSFD.

Due to limited capacity and opportunity for full engagement, SWAN is not in a position to conduct a full critique of the National Strategic Plan for Sustainable Aquaculture Development<sup>9</sup>, the Strategic Environmental Assessment (SEA)<sup>10</sup> and the Appropriate Assessment (AA)<sup>11</sup>. Rather we have focused, in brief, on elements of the Plan that are related to fulfilling our obligations under the Water Framework Directive and the Marine Strategy Framework Directive, however again this is not a complete critique.

### 3. Public consultation process and public participation

Only through sincere engagement at all levels will Ireland and the other member states have the opportunity to restore the estuarine, coastal and marine environment and build towards the sustainable utilisation of this fragile resource. Only through open collaboration with all stakeholders and the meaningful and transparent adherence to the Union priorities, specific Objectives and Measures can we hope to achieve the goals of the WFD and MSFD and to make aquaculture sustainable – environmentally, economically and socially.

SWAN welcomes the National Strategic Plan for Sustainable Aquaculture Development however we wish there had been a longer time line and real public participation in drafting the plan so that alternative visions could be discussed and considered with adequate time.

It is the opinion of SWAN that the Draft Seafood Development Programme (SDP) has failed to meet its legal requirements due to the failure of the Irish Authorities to provide concurrently with the Draft SDP, this document the NSPA. The NSPA is required as part of the ex-ante conditionality's for the Draft SDP. The approach Ireland has taken to the Draft SDP through its failure to provide concurrently the draft NSPA for consultation – serve to compound Ireland's ongoing failures to adequately resolve a number of specific failures highlighted in the Judgement of the Court of Justice of the EU against Ireland in c-418/04 back in 2007, and which remain un-resolved. That judgement highlighted *inter alia* a legacy of failure by Ireland in respect of the legal compliance of our aquaculture with EU Environmental Law. The approach currently being pursued by Ireland remains of serious concern to a number of our member organisations involved in this area.

SWAN welcomes the statement in the NSPA that *'Openness, transparency and accountability are core considerations in the licensing and regulatory framework for aquaculture. Seeking public and local knowledge inputs during the process increases confidence in the decision-making process.'* We also welcome the identification for the *'Need to develop the aquaculture sector in harmony with nature, in compliance with environmental law and with the confidence of stakeholders.'* However apart from this consultation and consultations on license application there is no mention in the plan about how inputs will be incorporated or allowed to influence the decision making

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<sup>9</sup> [Draft Seafood Development Programme](#)

<sup>10</sup> [Draft Strategic Environmental Assessment](#)

<sup>11</sup> [Draft Appropriate Assessment](#)

process and no mention of participation. With the proposed increase in aquaculture and in license applications it is difficult to envisage the public and ENGO's having the capacity to engage in the consultation process.

SWAN sees informed public participation in environmental management and protection as a fundamental element of aquaculture, which as planned is a private economic use of our commons. The present aquaculture application, appeals, monitoring and law enforcement process is woefully inadequate on Aarhus compliance.

SWAN was not involved in the drafting process or given access to drafts even though this plan was produced over many years. It is now on the table 14 months after the deadline by when Member States were to have delivered their final plan to Brussels. The recent SDP consultation included spending on aquaculture and closed weeks before we had any sight of this strategic multiannual aquaculture plan which is to inform the spending. An Taisce are the only statutory Environmental NGO consultee for a range of issues including aquaculture licencing. They receive no funding in order to fulfil this role which could be a full time job with the increases proposed. Other NGOs who are not statutory consultees are finding it virtually impossible to get early notice of licence applications as they are not on the web, no local site notice and often the local papers where an application is advertised is not the one read locally – eg recent Lough Swilly case. SWAN welcomes the 'vision' in the NSPA of a *'streamlined and efficient licensing system that provides greater business certainty to applicants, and transparency to the general public.'*, however the only mention in the actions listed to achieve this is *'Public Viewer will deliver transparency for the aquaculture industry and the public'* with no further information provided.

There has been little/no opportunity to hear the concerns of those with an interest in wild salmon/sea trout throughout the process. It is difficult to see how to ensure *'any development of aquaculture must have minimal impact on the wider ecosystem'* without these voices of concern being at least heard.

#### 4. Water Framework Directive

The WFD adopts a holistic approach to water management by introducing broad ecological objectives for the protection and restoration of aquatic ecological health. It prohibits any deterioration in the current status of our waters and requires all surface (including transitional and coastal reaching to one nautical mile seaward from the Mean High Water mark) and groundwater's to achieve 'good' status by 2015 (with limited application of exemptions). This is defined by the Directive as slight deviation from qualitative, quantitative and hydro-morphological conditions *'normally associated with the water body type under undisturbed conditions.'* Good status is defined with reference to a wide range of physico-chemical and ecological indicators set out in Annex V.

The EC commissioned report on sustainable aquaculture development in the context of WFD and MSFD<sup>12</sup>, stated that *'high quality aquatic environments and the prevention of their deterioration are fundamental to the sustainable development of European aquaculture'* and aquaculture has been identified as a *'significant water management issue'* in the 2009-2015 River Basin Management Plans<sup>13</sup>, for which measures must be implemented, as part of the WFD Programme of Measures. The River Shannon RBD Plan states that *'Aquaculture activities (including harvesting) unless appropriately managed and controlled, can affect water quality, physical habitat, biodiversity and indigenous species populations. Finfish farming can cause increased nutrient loading and organic pollution around cages. Misuse of authorised chemicals and medicines to control disease and possible infection of wild fish with sea lice if not appropriately managed are other concerns'*.

The SEA states that the two *'key existing water issues of relevance to the draft NSPA are:*

- *Water quality impacts*
- *Contribution towards achievement of Good Environmental Status for WFD and MSFD'*.

However the WFD is only mentioned once in the NSPA *'Planning, licensing and regulation of the sector ensures full compliance with relevant European and National legislation, including .....legislation seeking to achieve and maintain good environmental status of coastal and marine waters (Water Framework Directive, Marine Strategy Framework Directive).'* DAFM must liaise closely with DECLG, other Depts., State Agencies and stakeholders to ensure that any aquaculture or other activities proposed in the NSPA is in line with WFD environmental objectives for the transitional and coastal waterbodies in question. According to the most recent EPA Environment Assessment Report<sup>14</sup> *'aquaculture and fisheries measures implemented nationally should be monitored and reported on to ensure that they bring about measurable improvements in the conservation status of species and habitats and in the provision of ecosystem services'*.

The WFD is mentioned in the SEA in regards to the WFD monitoring. It is worrying that the monitoring programme is based on risk assessments from 2005 which as it stands is inadequate as the SEA states that in relation to finfish aquaculture they *'do not specifically deal with risk to the wider water body as a whole'* with shellfish monitoring confined to human health issues and *'there are no monitoring programmes that can define the impact on the level of a water body as defined by the WFD'*. It is also worrying that, *'as a consequence of the lack of distinct information pertaining to the wider impacts of aquaculture activities on water bodies, at the time of the risk assessments in 2005, and acknowledging that aquaculture activities have inherent risks associated with them, all water bodies having licensed aquaculture activities were classed as 2a -probably not at risk but there is insufficient information to class as not at risk.'* It is vital especially with the proposed increase in aquaculture that all current and proposed sites must undergo risk assessment on a

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<sup>12</sup>Jeffery et al (2014) [Background information for sustainable aquaculture development, addressing environmental protection in particular. Sustainable Aquaculture Development in the context of the Water Framework Directive and the Marine Strategy Framework Directive.](#)

<sup>13</sup> [Ireland's River Basin Management Plans](#)

<sup>14</sup> EPA (2012) [Ireland's Environment, An Assessment.](#)

regular basis and that monitoring programmes are designed to determine the impact on the level of a water body as defined by the WFD and sufficient resources are made available to do this.

## 5. Marine Strategy Framework Directive

Regulations<sup>15</sup> transposing the Marine Strategy Framework Directive (MSFD) in Ireland were introduced in May 2011. The Directive requires Member States to put in place measures to achieve Good Environmental Status (GES) in their marine waters by 2020. Implementation stages required to be carried out in preparation for this include: An initial assessment of the current status of our seas; the establishment of specific environmental objectives; the putting in place of monitoring programmes and the implementation, by 2016, of management measures in order to achieve GES by 2020.

The MSFD is extremely relevant to the NSPA and all opportunities for developing synergies between the MSFD and NSPA should be taken. As a priority, actions within the NSPA must not compromise Ireland meeting our obligations under the MSFD. The Directive requires that we develop a marine strategy for our marine waters in order to achieve Good Environmental Status (GES) by 2020. It prescribes five specific tasks that must be undertaken: 1) An initial assessment of the current environmental status of marine waters; 2) The determination of a set of characteristics that describe what GES means for those waters; 3) The establishment of a comprehensive set of environmental targets and associated indicators; 4) The establishment and implementation of a coordinated monitoring programme for the on-going assessment of marine waters; 5) The establishment of a programme of cost effective measures designed to achieve or maintain GES.

The Directive defines what constitutes good environmental status: *'ecologically diverse and dynamic oceans and seas which are clean, healthy and productive'...* where *'...the structure, functions and processes of the constituent marine ecosystems, ....allow those ecosystems to function fully'*; *'human-induced decline of biodiversity is prevented'* and *'Anthropogenic inputs .... into the marine environment do not cause pollution effects'*. It also sets out a list of 11 qualitative descriptors upon which the determination of GES is to be based: Biological diversity; levels of non-indigenous species; commercially exploited fish and shellfish; food webs; eutrophication; sea floor integrity; hydrographical conditions; contaminants; contaminants in fish and seafood for human consumption; marine litter and the levels of energy including underwater noise. The NSPA SEA states that *'The three main pressures exerted on the environment as a result of the activities associated with aquaculture are introduction of nonindigenous species, physical loss [of habitat] and nutrient and organic enrichment. These in turn can be linked to all of the MSFD descriptors.'* As activities associated with aquaculture can be linked to all the descriptors it is likely that these activities will contribute to our waters not reaching and maintaining GES unless there is full compliance with the MSFD and other associated environmental legislation.

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<sup>15</sup> [S.I. No. 249 Of 2011](#): European Communities (Marine Strategy Framework) Regulations 2011

It is clear from the two MSFD consultation documents issued so far, *'Ireland's Marine Strategy Framework Directive Article 19 Report Initial Assessment, GES and Targets and Indicators'*<sup>16</sup> and *'Marine Strategy Framework Directive Article 11 Monitoring Programmes Public Consultation Document'*<sup>17</sup> that significant knowledge gaps exist regarding the current status of the marine environment, especially in relation to biodiversity-related descriptors and cumulative impacts. These gaps need to be addressed with comprehensive and specifically targeted monitoring programmes, which are currently not being implemented due to resource constraints.

The EMFF is an ideal funding mechanism for filling these significant data gaps, in addition, to those identified in the SDP itself. In addition, without a clear baseline understanding of the marine ecosystem, it is impossible to assess the sustainability or otherwise of the draft NSPA, or indeed to meet our obligations under the MSFD. Furthermore, implementation of the required programme of cost effective measures in order to achieve MSFD objectives should be supported by the EMFF.

The MSFD also requires *'an ecosystem-based approach to the management of human activities, ensuring that the collective pressure of such activities is kept within levels compatible with the achievement of good environmental status and that the capacity of marine ecosystems to respond to human-induced changes is not compromised, while enabling the sustainable use of marine goods and services by present and future generations.'* It is vital that this approach is also embedded in the NSPA in order to ensure the sustainable management of our coastal and marine waters. It further requires that *'the structure, functions and processes of the constituent marine ecosystems ....allow those ecosystems to function fully'*. The NSPA must be fully compatible and compliant with these and other requirements of the MSFD.

Our state of knowledge on the marine environment obviously needs to be urgently addressed and it is required that we do so under the MSFD, the CFP and the Habitats and Birds Directives. It is clear from the consultation document *'Ireland's Marine Strategy Framework Directive Article 19 Report Initial Assessment, GES and Targets and Indicators'* that there are substantial data gaps and a low level of baseline information on many aspects of the marine environment, especially in relation to ecosystem functioning and cumulative impacts: *'the presence of significant gaps in our knowledge, both in the occurrence and distribution of Ireland's natural [marine] features and the status of the pressures acting upon them. This has, in some instances, prevented an evaluation of current status of those pressures and ecological characteristics.'* This is coupled with very limited resources and low capacity in both government agencies and non-government organisations, which makes the implementation of this Directive challenging for all sectors.

## 6. Licensing

Aquaculture is licensed by the Department of Agriculture, Fisheries and the Marine (DAFM) under the Fisheries (Amendment) Act, 1997. Regarding finfish licences, limits on the amount of fish that may be grown, in addition to the use of chemicals and medicines, are set. For other aquaculture

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<sup>16</sup> [Public consultation on Initial Assessment, GES, Targets and Indicators](#)

<sup>17</sup> [Public consultation on Monitoring Programmes](#)

the conditions are less detailed. The River Basin Management Plans (RBMPs) state that *'All licences will be reviewed to ensure compliance with the WFD objectives ... for the receiving waterbody, taking into account the assimilative capacity of receiving waters.'* It is not clear whether this licensing review has taken place for aquaculture to date.

We still have an estimated >500 aquaculture areas being run on lapsed licenses some have been in this limbo for over a decade. Neither a citizen nor the lapsed license holder has any democratic way of influencing the timing of the Minister's decision to refuse or grant an extension to that license, as the Minister hasn't commenced section 13 of the Fisheries Act which sets a time limit for decision making. If lapsed license conditions are not complied with, citizens can't do anything about it. An aquaculture operator who really tries his best and runs a low impact well sited operation may not get that renewal ahead of a totally new applicant - as there is no prioritising on good track record or any other transparent way.

The Minister regularly grants multiple licenses for one bay area in one newspaper advert, yet citizens are required to produce individual appeals to the Aquaculture Licensing Appeals Board (ALAB) with individual fees for each license. There is an advisory committee to help the minister decide on applications which sits without names or minutes behind closed doors. One repeat controversial advice is to grant licenses where each application is treated on its own as though no other operation existed. This then leads to the conclusion that no EIS is needed as there won't be an impact from the one applicant. In other words, cumulative impacts are not considered, despite the legal requirement to do so.

There has been a delay in granting and renewing licences in Natura 2000 sites, which stems from a European Court of Justice (ECJ) judgment that found Ireland in breach of the Habitats Directive because the State had not subjected shellfish aquaculture licence applications to 'appropriate assessment' in accordance with Article 6 of that Directive. As an interim arrangement, an extra section 19A was inserted into the Fisheries act in 2006 to allow aquaculture to continue in previously licensed areas as though there were a license.

The NSPA has indicated that procedures have been put in place to address this and to allow the issuing of licenses to resume. Once the procedures are in place and finalised a large number of licences are expected to be granted as can be seen over the past couple of years with an increase in applications and licences granted and this will expand significantly.

## **7. The Unsustainability of Irish Aquaculture**

The SWOT analysis identifies a number of needs for the aquaculture industry. SWAN would recognise the following as being particularly relevant from an environmental and planning perspective:

- Need to develop the aquaculture sector in harmony with nature, in compliance with environmental law and with the confidence of stakeholders.

- A streamlined and efficient licensing system that provides greater business certainty to applicants and more transparency to the general public.
- Need to develop marine spatial planning and equitably incorporate aquaculture into that framework.

There is a clear obligation for the aquaculture sector to move towards a more sustainable model. SWAN is concerned by the repeated assertion that Ireland's aquaculture sector is currently sustainable from an environmental point of view. This is clearly not the case. Widely accepted sustainability issues within the sector include:

- Ireland's failure to properly address our environmental obligations during the aquaculture planning process (ECJ case C418/04).
- The accidental and deliberate introduction of non-indigenous species. Unsustainable and environmentally damaging fish farms.
- Mussel production has decreased due in part to insufficient seed supply and is a clear indication of the unsustainable utilisation of mussel beds.

The public's confidence in the environmental credentials of aquaculture has been severely eroded and far reaching action needs to be taken to resolve many of the sustainability issues associated with the sector if its reputation is going to be salvaged. The fact that '*spatial restrictions on aquaculture activities to protect Natura 2000 designated species and habitats*' has been identified as a threat appears to indicate that the interests of the industry are in some way in conflict with coastal and marine conservation.

In Ireland it is proposed that the open net-cage salmon farming industry will undergo large expansion over the coming years. There are a number of environmental issues associated with this form of aquaculture in its current form including: sea lice, chemical treatments, disease, algae blooms, marine mammal deaths, marine debris, waste on the ocean floor, escapees and fish feed. There have also been issues surrounding the unauthorised extraction of freshwater for the treatment of amoebic gill disease. Many aspects of these intensive fish farms are not environmentally friendly and as a result there is considerable public opposition to the planned expansion of the industry. Focusing on fish like salmon which need to eat other fish in their feed is an erroneous strategy to feed the world -the focus needs to be on species that do not require this unsustainable input. Salmon needs wild fish to be captured in order to make feed. It takes more fish to make the feed than you get in finished salmon. This is not sustainable.

In relation to the salmon farming part of the plan there is a total reliance on "Organic" labelling and, without that as a marketing tool, the industry would not be viable because of losses due to the unsuitability of Irish waters for open pen Salmon Farming (too warm, too shallow, not enough fresh water to treat amoebic gill disease. The real danger here is that pesticides that should not be used near water are used in open waters and when the "discerning" market discerns the label as being less than genuine when compared to the ethos and practice of "Organic" there could be a backlash that will damage the whole Organic market.

We hope that the Irish Government will provide funding for alternatives, such as closed containment systems. Closed containment systems are the best way to ensure that parasites, diseases, nutrients and escapes are contained and are not released into the aquatic environment. Instead of dismissing recirculation systems for production of salmon the logic of protecting the environment should have us become leaders in this field instead of following the failed open pen systems -if there is to be an insistence on salmon production. Ranching would be a more lucrative and suitable option for Ireland and the value added to all areas would far exceed the current system which has a track record of abject failure here.

## 8. Marine Protected Areas and Aquaculture

The majority of the marine protected areas (MPAS) in Ireland are located in our coastal waters therefore any change to the aquaculture sector will impact upon these valuable ecosystem and our various legal obligations to protect them. If Ireland's Prioritised Action Framework [PAF] for Natura 2000 identifies that the conservation objectives of a site are not compatible with aquaculture then EMFF funding should be used to move the sector towards practices which are compatible with coastal and marine conservation. MPAs may also provide alternative employment in the form of recreational employment and tourism. These alternatives have traditionally been poorly developed and communicated in Ireland and as a result there is deep mistrust towards designation.

In order for the benefits associated with protection to accrue, MPA's must be well managed and must properly protect ecosystems. Management measures are required to be implemented via programmes of measures in the MSFD which Ireland is still in the process of developing. There must be a good mix of top-down and bottom-up management practices involving local community groups and stakeholders.

- Maintaining biodiversity and providing refuges for endangered and commercial species
- Protecting critical habitats from damage by destructive fishing practices and other human activities and allowing them to recover
- Providing areas where fish are able to reproduce, spawn and grow to their adult size
- Increasing fish catches (both size and quantity) in surrounding fishing grounds
- Building resilience to protect against damaging external impacts, such as climate change
- Helping to maintain local cultures, economies, and livelihoods which are intricately linked to the marine environment

## 9. Planning and Aquaculture

Another outcome of the SWOT analysis and identified as actions in the NSPA is to '*Progressively remove the current aquaculture licensing backlog*' and '*Review and revision of the aquaculture licensing process, including the applicable legal framework.*' SWAN would warn that any attempt

to streamline aquaculture applications must not come at the expense of public participation in the planning process or environmental standards.

SWAN is also supportive of the identified need in the SWOT analysis *'to develop marine spatial planning and equitably incorporate aquaculture into that framework'*. This is part of the EU's Integrated Maritime Policy (IMP)<sup>18</sup> and is covered in Union Priority 6. The risk exists that rather than being used as a tool to promote the sustainable use of our coastal resources, it will be used to streamline unsustainable developments along our coasts. According to the SDP one of the key elements of Ireland's IMP is to *'develop an integrated approach to marine and coastal planning and licensing in order to maximise the potential for Ireland's ocean economy'*. The focus on economic return over sustainable utilisation is troubling. In the past the assessment of aquaculture licences under Environmental Impact Assessments (EIA) and Natura Impact Assessment (NIA) has been carried out on an individual basis. As a result the legal requirement to assess in combination effects have not been addressed. The current case by case approach to the expansion of aquaculture is unsustainable and is an example of our poor management of Ireland's marine environment and its natural capital. An example of Ireland's failure to properly address our environmental obligations during the planning process are the ECJ case C418/04 in which the court found against Ireland for failing to comply with Article 6 (3) and (4) in regard to aquaculture licensing. In SWAN's opinion marine spatial planning should require, that management plans are developed at a bay level, taking into account cumulative impacts. The limitations of the supporting environment should not be exceeded and the necessity to protect both the health of the human population and ecosystems must be met.

Sites for aquaculture should not solely be selected based on the potential for Ireland's ocean economy. Sites should be selected so as to avoid environmental impacts. Management plans should set out the need for rigorous and independently informed cumulative impact assessment as part of the EIA consent process for aquaculture, together with an independent and regular monitoring system. EIAs should also take into account the potential impact of the aquaculture facility over its entire lifecycle, including the construction, operation and decommissioning phases of the facility. When necessary Strategic Environmental Assessment must also be carried out. In order for the aquaculture sector in Ireland to develop sustainably it should:

- adopt the precautionary principle
- adhere to the ecosystem-based approach
- consider in combination and cumulative impacts

Another aquaculture issue which has been raised at various meetings attended by SWAN is the lack of engagement with the Northern Irish authorities on cross border impacts of aquaculture development in Lough Foyle and Carlingford Lough. This situation is not good for our international reputation or that of the industry and there is an urgent need to resolve cross-border lough protection, use and planning issues and actively widen the scope of cross-border cooperation on nature protection. The Northern Ireland native oyster action plan could be an all-Ireland one. Recent illegal aquaculture problems which have grown to bizarre

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<sup>18</sup> [Integrated Maritime Policy](#)

proportions and are wrecking the seafloor must be halted, the habitats restored and a mechanism of licensing put into place urgently.

## 10. Non-Indigenous Species and Aquaculture

The SDP and NSPA have identified the introduction of novel species as an opportunity and a need for the aquaculture sector however has also identified the introduction of alien species as a threat. The introduction of non-indigenous species (NIS) is a serious issue as they pose a major threat to global biodiversity, and incur significant economic costs. The introduction of NIS is completely at odds with sustainable development on any level. There is a requirement to reduce the impact of marine non-indigenous species under the MSFD (Descriptor 2). There is a clear need to deal with the marine and fresh water invasive species that are currently established in Irish waters. The proposal to introduce more potentially invasive species is completely extremely high risk. The introduction of more novel species is also at odds with the precautionary principle, the ecosystem approach and the conservation of many native habitats and species under the Habitats and Birds Directives.

The issues surrounding NIS are clearly known to the Marine Institute as they have had to report to the Commission on them as part of the MSFD Ireland's Initial Assessment Reporting Sheet for Non-Indigenous Species. Globally aquaculture is one of the main vectors for the introduction of harmful NIS<sup>19</sup>. The aquaculture sector therefore has a great responsibility not only to insure that more NIS are not introduced in the future but also that already present NIS are dealt with. The NIS Gigas/Pacific oyster (*Crassostrea gigas*) was introduced into Irish water specifically as stock for aquaculture. The thought at the time was that it could not breed in the relatively cooler coastal waters off Ireland. The Gigas Oyster is now recognised as being an invasive species and has established itself in Lough Swilly, Lough Foyle and Strangford Lough all Natura 2000 sites. It is a serious threat to our native oyster (*Ostrea edulis*). Rising sea temperatures off Ireland as the result of climate change are likely to facilitate the spread of NIS. SWAN would support the action points outlined by Coastwatch to address the issues of the invasive Gigas Oyster<sup>20</sup>.

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<sup>19</sup> Minchin, D. (2007). Aquaculture and transport in a changing environment: overlap and links in the spread of alien biota. *Marine Pollution Bulletin*, 55(7), 302-313

<sup>20</sup> <http://coastwatch.org/europe/wp-content/uploads/2014/02/The-Native-Oyster.pdf>

## ***Appendix I***

### **SWAN Member Organisations**

<b><i>SWAN National Groups</i></b>		<b><i>SWAN Regional &amp; Local Groups</i></b>	
1.	An Taisce	16.	Carra Mask Corrib Water Protection Group
2.	Bat Conservation Ireland		
3.	Birdwatch Ireland	17.	Cavan Leitrim Environmental Awareness Network
4.	Coastwatch Europe Network		
5.	Coomhola Salmon Trust Ltd.	18.	Celebrate Water
6.	Eco-UNESCO	19.	Cork Environmental Forum
7.	Friends of the Earth	20.	Longford Environmental Alliance
8.	Friends of the Irish Environment		
9.	Irish Doctor's Environmental Association	21.	Macroom District Environmental Group
10.	Irish Peatland Conservation Council	22.	Save Our Lough Derg
11.	Irish Seal Sanctuary	23.	Save Our Lough Ree
12.	Irish Water and Fish Preservation Society	24.	Save The Swilly
13.	Irish Whale and Dolphin Group		
14.	Irish Wildlife Trust	25.	Shannon Whale & Dolphin Foundation
15.	Voice Of Irish Concern for the Environment (VOICE)	26.	Slaney River Trust

## **Appendix II**

### **SWAN Board of Directors**

<i>SWAN Board of Directors:</i>	
<b>Mark Boyden, Chair</b>	<b>Coomhola Salmon Trust</b>
<b>Mindy O'Brien, Vice Chair , Company Secretary</b>	<b>Voice of Irish Concern for the Environment (VOICE)</b>
<b>Geoff Cooper, Director</b>	<b>Irish Water and Fish Preservation Society</b>
<b>Karin Dubsky, Director</b>	<b>Coastwatch Europe</b>
<b>David Healy, Director</b>	<b>Friends of the Irish Environment</b>
<b>David Lee, Director</b>	<b>Cork Environmental Forum</b>
<b>Elaine Nevin, Director</b>	<b>ecoUNESCO</b>
<b>Joachim Schaefer, Director</b>	<b>Cavan Leitrim Environmental Awareness Network</b>