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# Whole Fish Fishery Assessment Examples and Conditions Document

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IFFO RS STANDARD FOR FISHMEAL AND FISH OIL

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## Introduction

This document is designed to give actual examples of fisheries that have been assessed to the IFFO RS standard to highlight how and why they were rated as High, Medium or Low Compliance to the Standard. This document should be read in conjunction with the full Whole Fishery Interpretation Document and its only function is a guide. In addition the full assessment reports for fisheries that are approved to the IFFO RS standard can be found at <http://www.iffonet.net/whole-fish-raw-materia>. (note- fishery reports from non-approved fisheries are currently not in the public domain)

### 1. Section-by-section Examples

#### a. The Management Framework and Procedure

a.i. The management of the fishery must include a legal and administrative basis for the implementation of measures and controls to support the conservation of the fishery.

##### High compliance

- The [South African anchovy](#) fishery awarded high compliance under this clause in December 2011. “South Africa has in place a robust legal and administrative framework for the determination and implementation of fishery management measures and controls. This framework is applied to the anchovy fishery”
- The [North-East Atlantic blue whiting](#) fishery awarded high compliance under this clause in February 2013. “Fisheries management in Iceland, Norway and the EU is based on firm legal and administrative foundations. As a widely distributed stock, blue whiting is also subject to a considerable range of international management arrangements, which are coordinated by the NEAFC. The assessment team considers the management framework for the fishery to be both adequate and effective”.

##### Medium compliance

To date, no fishery has been awarded medium compliance in this clause.

##### Low compliance

To date, no fishery has been awarded low compliance in this clause.

a.ii. Fisheries management should be concerned with the whole stock unit over its entire area of distribution and take into account fishery removals and the biology of the species

##### High compliance

- The [Norwegian capelin](#) fishery awarded high compliance under this clause in August 2011. “The management area for Barents Sea Capelin directly reflects the area for which ICES provides scientific advice. The advice is formulated to take into account all fishery removals and the biology of the species,

and appears to be followed by fishery management bodies.”

- The [South African anchovy](#) fishery awarded high compliance under this clause in December 2011. “The information provided to the assessment team suggests that the South African anchovy fishery is considered by scientists to constitute a distinct population, largely separate from the more northern *E. encrasicolus* distribution, justifying its management as a distinct stock.”

#### Medium compliance

- The [Chilean anchovy](#) (regions V to X) fishery awarded medium compliance under this clause in July 2011. “Fisheries management is concerned with the whole stock unit over its entire area of distribution and takes into account the biology of the species but not all fishery removals (i.e. by-catch is not taken into account).”
- The [UK, Ireland & Denmark Boarfish](#) fishery awarded medium compliance under this clause in January 2012. “Current research suggests that this boarfish stock is distributed more widely than the area for which quotas are set. There is no directed fishery outside the TAC area, but boarfish are likely to be caught as by-catch in other fisheries. ICES advice includes consideration of both available survey indices; however it does not yet include consideration of by-catch.”
- The [South Africa red eye herring](#) fishery awarded medium compliance under this clause in December 2011. “Fishery management is concerned with the entire distribution of the redeye herring stock as currently understood. However, population data for the species currently appears not to be directly used in the management process, and as the fishery develops the spawning biomass estimates should be factored in more explicitly. The assessment team considers a medium compliance rating appropriate because despite fishery management not taking into account fishery removals or biomass estimates, exploitation rates have been very low for more than a decade.”

#### Low compliance

To date, no fishery has been awarded low compliance in this clause.

#### a.iii .Management actions should be based on long-term conservation objectives

##### High compliance

- The [North-East Atlantic blue whiting](#) fishery awarded high compliance under this clause in February 2013. “Management of the blue whiting stock is based primarily on an internationally-agreed management plan with long-term biomass and fishing mortality objectives. The plan, its objectives, and the harvest control rules utilized are under ongoing review.”

##### Medium compliance

- The [UK, Ireland & Denmark Boarfish](#) fishery awarded medium compliance under this clause in January 2012. “Boarfish has been subject to an interim management plan since 2010. The plan outlines quota calculations and closed seasons and areas until the development and evaluation of a science-based management plan. The plan has been and will continue to be superseded by improving scientific advice from ICES; however, because it is not currently based on robust science, and due to the interim nature of the plan, the fishery is awarded medium compliance in this section”
- The [Norway sandeel](#) fishery awarded medium compliance under this clause in August 2011. “There is no

management plan currently in place for the sand eel fishery. ICES advice is based on retaining sufficient SSB to maintain the population of both sand eel and predators in the long-term; however the lack of a formal statement that this is the long-term management objective leads the assessment team to award the fishery a 'medium' compliance level in this category."

- The [South Africa red eye herring](#) fishery awarded medium compliance under this clause in December 2011. "Long-term management aims of the fishery are currently limited to ensuring that annual catch remains below 100,000t. However, on-site interviews of government scientists have revealed an intention to develop the management of this fishery along the same lines as other, highly compliant South African fisheries, and the redeye fishery is more likely to score highly in this section in future."

**Low compliance**

To date, no fishery has been awarded low compliance in this clause.

**b. Stock Assessment Procedures and Management Advice**

bi. Research in support of fisheries conservation and management should exist.

**High compliance**

- The [Norwegian capelin](#) fishery awarded high compliance under this clause in August 2011. "ICES provides an annual assessment of the fishery using acoustic survey data and a stock model designed specifically for the Capelin fishery. There is additionally an annual larval survey, and a number of peer-reviewed articles examining the stock".

**Medium compliance**

- The [Chilean anchovy](#) (regions V to X) fishery awarded medium compliance under this clause in July 2011. "Research to support the conservation and the management of the stock exist, and existent research is considered adequate for the long term conservation of the target species. However, information on the effects of the fishery on non-target species could not be established during this assessment."
- The [UK, Ireland & Denmark Boarfish](#) fishery awarded medium compliance under this clause in January 2012. "Research in support of fishery conservation and management exists, but could be significantly improved. As this has only become a major directed fishery in the past few years, historical data is lacking. However, ICES will now provide annual advice for the stock and research is likely to develop according to the requirements of this advice."

**Low compliance**

To date, no fishery has been awarded low compliance in this clause.

b.ii Best scientific evidence available should be taken into account when designing conservation and management measures

**High compliance**

- The [Peruvian anchovy](#) fishery awarded high compliance under this clause in December 2012. “The anchovy fishery is subject to both temporary and permanent management measures which are primarily concerned with the conservation of the stock and have been recommended by IMARPE. There is recent evidence that in-season scientific recommendations are also implemented, up to and including localised fishery closures.”

**Medium compliance**

- The [UK, Ireland & Denmark Boarfish](#) fishery awarded medium compliance under this clause in January 2012. “Scientific information is sparse for this species, and advice has only been provided by ICES since 2011. For these reasons current management measures such as closed seasons and areas appear to be based on precautionary principals and not scientific research. However, ICES quota recommendations have already been implemented, and it is likely that as scientific evidence improves, management measures will be adapted to take this into account.”

**Low compliance**

To date, no fishery has been awarded low compliance in this clause.

**c. The Precautionary Approach**

c.i The precautionary approach is applied in the formulation of management plans.

**High compliance**

- The [South African anchovy](#) fishery awarded high compliance under this clause in December 2011. “South African fisheries policy states the application of the precautionary approach as one of the primary aims. The small pelagic OMP utilizes a risk-based approach to setting annual quotas, factoring in a large number of research variables.”
- The [Norwegian Norway pout](#) fishery awarded high compliance under this clause in September 2011. “ICES has concluded that a precautionary approach is adopted for the management of this Norway Pout stock. In a multinational agreement, EU Common Fisheries Policy and Norway Fisheries Management oversees the Norway Pout, and by its application implicitly follows the precautionary approach.”

**Medium compliance**

- The [Chilean anchovy](#) (regions V to X) fishery awarded medium compliance under this clause in July 2011. “The precautionary approach is applied in management plans for the target stock; however not all uncertainties are taken into account.”
- The [UK, Ireland & Denmark Boarfish](#) fishery awarded medium compliance under this clause in January

2012. “The interim management plan has not been evaluated by ICES for adherence to the precautionary approach; however it does appear to be highly precautionary compared to previous landings data and initial ICES advice. A risk-based assessment would improve the compliance of the fishery whilst scientific information remains so sparse.”

- The [Iceland blue whiting](#) fishery awarded medium compliance under this clause in October 2012. “The 2011 surveillance assessment awarded the fishery a medium compliance in this section due to the discrepancy between the management plan and a highly precautionary approach, which would have led to a closed fishery in 2011. For the 2012 season this discrepancy is less pronounced but still present, and so the fishery retains a score of medium compliance.”
- The [Norway blue whiting](#) fishery awarded medium compliance under this clause in August 2011. “The level of precaution employed in the management of the fishery is ambiguous. ICES has reviewed the current management plan and found it to follow the precautionary approach; however, SSB is currently below  $B_{pa}$  (and indeed  $B_{lim}$ ), yet the TAC has not been set at 0 as should occur under the precautionary approach.”
- The [Norway sandeel](#) fishery awarded medium compliance under this clause in August 2011. “The EU Common Fisheries Policy is based on the precautionary approach, regional sand eel fisheries have been closed to comply with the approach, and ICES consider the new advice format to be a major improvement in terms of uncertainty. However, there are still several important sources of uncertainty which prevent this fishery obtaining a ‘high’ rating.”
- The [South Africa red eye herring](#) fishery awarded medium compliance under this clause in December 2011. “South African fisheries policy states the application of the precautionary approach as one of the primary aims. There is little information available on redeye herring specifically, and as a result a highly precautionary catch limit is in place. It is the opinion of the assessment team that given the scarcity of specific scientific information on the species, this approach is satisfactorily precautionary; however there is room for improvement, and a more thorough risk-based assessment should be developed as the directed fishery develops. Initial models are already in development.”

#### Low compliance

To date, no fishery has been awarded low compliance in this clause.

### d. Management Measures

d.i The level of fishing permitted should be set according to management advice given by research organisations.

#### High compliance

- The [Danish sand eel](#) fishery awarded high compliance under this clause in July 2011. “This year in accordance with ICES advice, the traditional single Sand eel TAC was divided up into 7 ‘Sand eel area’ TACs. With the exception of Area 3, all of these were set according to ICES advice. ICES advised that there be no fishery in Area 3; however the TAC was set at 10,000t to allow scientific monitoring of the Sand eel population.”
- The [South African redeye herring](#) fishery awarded high compliance under this clause in December 2011. “The level of fishing is limited by a Precautionary Upper Catch Limit, which was recommended and is

reviewed by research organisations, and has never been exceeded by the fishery. There is no allocation of quota to vessels, and the level of fishing appears to be largely self-regulating. There appears to be a trend towards increasing catch, and a particular focus of future surveillance audits should be to ensure that mechanisms are put in place to limit fishing effort should the PUCL (or other quota recommendation) be reached.

#### **Medium compliance**

- The [Chilean anchovy](#) (regions V to X) fishery awarded medium compliance under this clause in July 2011. “The management advice from IFOP is not readily available publicly; however, the Total Allowable Catch (TAC) for the stock in region V-X was significantly lower in 2011 than previous years, which reflects the available data.”

#### **Low compliance**

- The [Iceland blue whiting](#) fishery awarded low compliance under this clause in October 2012. “The total international TAC for 2012 was set according to the advice provided by ICES for adherence to the agreed management plan. However, landings in 2011 were more than double the agreed TAC, which raises further concerns about the reaction of fishery managers to low biomass estimates.”

d.ii Where excess fishing capacity exists, mechanisms should be established to reduce capacity to allow for the recovery of the stock to sustainable levels.

#### **High compliance**

- The [Peruvian anchovy](#) fishery awarded high compliance under this clause in December 2012. “Excess fishing capacity is not currently an issue in this fishery, and fishing effort is managed by issuing strictly enforced quotas. The fishery is closed to new entrants.”
- The [North-East Atlantic blue whiting](#) fishery awarded high compliance under this clause in February 2013. “The management of excess fishing capacity is handled differently, though satisfactorily, in each of the countries under assessment. Annual quotas remain the primary mechanism for limiting fishing effort, although capacity-reducing processes are also in place.”

#### **Medium compliance**

To date, no fishery has been awarded medium compliance in this clause.

#### **Low compliance**

To date, no fishery has been awarded low compliance in this clause.

d.iii Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment.

#### **High compliance**

- The [Norwegian capelin](#) fishery awarded high compliance under this clause in August 2011. “The evidence suggests that the directed Capelin fishery has a minimal impact on other species, including the PET species of which many are present in the region. Norway implements a number of management

measures to reduce the impact of the fishery, including gear and season restrictions, and the gear types used are commonly considered to have minimal impact on the physical environment.

#### **Medium compliance**

- The [Chilean anchovy](#) (regions V to X) fishery awarded medium compliance under this clause in July 2011. “This fishery has virtually no direct negative impact on the physical environment. There are management measures to prevent the impact of the fishing methods and fishing practices on some non-target species. However, very little information is available to assess the impact of fishery by-catch. Onsite assessment shall verify the type of by-catch data collected by SERNAPESCA when fishing vessels land their catches.”
- The [UK, Ireland & Denmark Boarfish](#) fishery awarded medium compliance under this clause in January 2012. “Management measures general to EU fisheries and specific to the boarfish fishery are in place to attempt to minimise the impact on non-target species and the physical environment. At present, due to the recent development of the fishery, there is insufficient information on bycatch of non-target and PET species such as cetaceans.”
- The [Norway blue whiting](#) fishery awarded medium compliance under this clause in August 2011. “The available evidence suggests that the fishery has a minimal impact on non-target species and the physical environment. By-catch information is somewhat lacking, and an improvement in this respect would be useful.”
- The [Norway Norway pout](#) fishery awarded medium compliance under this clause in August 2011. “The management of the Norway Pout has taken account of by-catches of other important fish species by introducing technical measures to minimize the effect on these fisheries. The fishery is therefore acting in a responsibly compliant manner to non-target species. However, the effect of fishing activity on endangered species is not fully known.”

#### **Low compliance**

To date, no fishery has been awarded low compliance in this clause.

### **e. Implementation**

e.i There should be a framework for sanctions of violation of Laws and regulations.

#### **High compliance**

- The [Peruvian anchovy](#) fishery awarded high compliance under this clause in December 2012. “The legal basis for sanctions is firmly established and there is clear evidence that such sanctions are both applied and effective.”

#### **Medium compliance**

To date, no fishery has been awarded medium compliance in this clause.

#### **Low compliance**

To date, no fishery has been awarded low compliance in this clause.

e.ii A management system for fisheries control and enforcement should be established.

**High compliance**

- The [Denmark, UK & Ireland boarfish](#) fishery awarded high compliance under this clause in January 2012. “Fisheries control and enforcement is largely the responsibility of individual EU Member States, with oversight at the European level. Denmark, Ireland and the UK all have in place robust management systems for fisheries control and enforcement.”

**Medium compliance**

To date, no fishery has been awarded medium compliance in this clause.

**Low compliance**

To date, no fishery has been awarded low compliance in this clause.

## Fishery Conditions

One of the key strengths of the IFFO RS assessment is the ability to place conditions on the approval of fisheries. These requirements are usually instigated at the time of the initial fishery assessment, and must be acted upon by the time of the next re-assessment. In many cases, conditions describe potential improvements to aspects of fishery management which are not sufficiently sub-optimal to deserve a low compliance rating, but which substantially impact the adherence of the fishery to the IFFO RS standard.

The following are examples of conditions which have been placed on fisheries, along with a brief explanation.

### [Norwegian Norway pout, September 2011](#)

- Interactions of gear with sea mammals/ sea turtles/sharks must be recorded and all this evidence used for future scientific research.
- Where sea mammals/ sea turtles/sharks are captured there must be documented procedures in place to establish an effective release of the animal without causing it damage.

These conditions were placed on the fishery and imposed on the clients that wished to use this whole fish as a raw material for IFFO RS compliant Fish Meal and Fish Oil ,as a result of a score of medium compliance in section D3. The assessment team concluded that the impact of the fishery on PET species was unknown.

### [Norwegian sand eel, August 2011](#)

- All fishermen involved in the catching of Sand eel in all regions covered by the fishery management plan of this stock must be encouraged to cooperate with the research programmes.

This condition was placed on the fishery and imposed on the clients that wished to use this whole fish as a raw material for IFFO RS compliant Fish Meal and Fish Oil, as a result of a score of medium compliance in section C1. The assessment team concluded that the lack of fishery dependent data represented a substantial source of uncertainty.

#### **South African redeye herring, December 2011**

- Any development of the targeted fishery should be accompanied by the development of the species-specific stock assessment and management process.

At the time of assessment, the targeted redeye herring fishery was comparatively new, and as such the assessment team recognised that some aspects of fishery management were still under development. Assessment determinations were influenced by this knowledge, and the condition aims to ensure that as the fishery develops so does the management regime.

#### **Chilean small pelagic fisheries (Sardine, anchovy), 2011/12**

- Improve by-catch data collection & assessment

A lack of by-catch data collection resulted in a number of medium compliance ratings during the four Chilean small pelagic fishery assessments, including under sections A2, B1 and D3. This condition recognises the importance of monitoring the effects of the fishery on non-target species, and additionally the potential effects of sardine and anchovy removals in other fisheries.

- One member of each of the supplying vessel's crew must receive training in sea mammal/sea turtle species identification. Evidence of training must be documented for future review.
- Each supplying vessel must maintain a log book record of sea mammal/sea turtle interactions and evidence of marine mammal interactions collated for scientific and evaluation purposes.
- Where sea mammal/sea turtle encounters occur, there must be concerted attempts to allow release of the animal without damage through identified effective release measures.
- The Client must support investigations/reviews into avoidance of sea mammals/sea turtles, including the use of fishing devices should be undertaken.

These conditions also reflect the lack of data on the impacts of the fishery on non-target species, but pertain specifically to PET and other large marine fauna species. They represent key aspects of Chilean fishery management which could be changed to improve the compliance rating of the fishery.