

New standards drive interest in fish used for fish meal

By Duncan Leadbitter

With the increasing focus on sustainability of aquaculture, attention is on the provenance of fish for fish meal.

Sustainable aquaculture production is a common goal for industry and community groups alike. Over the past few years, defining what is sustainability in the context of various aquaculture production systems has been the focus of several groups globally. In the case of some farmed species, the issue of the sustainability of the feed materials also requires attention and considerable effort is being devoted to understanding what species are used in fish meal production and whether the fisheries involved are sustainable.

From wild fish to fish meal

Fish from capture fisheries are used as feed by a variety of farmed products such as salmon, shrimp, groupers, cobia, spiny lobsters and some species of shellfish. In some circumstances, feed fish are supplied unprocessed, particularly the case in South East Asia, to feed marine fish such as groupers, spiny lobsters and carnivorous shellfish. Otherwise, as with feeding salmon and shrimp, the feed fish is processed and incorporated into formulated feeds to a greater or lesser degree, depending on nutritional and quality requirements.

The demand for feed fish has grown enormously in recent years in tandem with the growth in aquaculture production. In some situations, this is putting stress on the populations of wild fish. Moreover, given the fact that many of the species of interest provide some functional role in the overall marine ecosystem there are also concerns about the consequences of fishing of those aquatic species that depend on these fish for their long term survival.

The most well known feed fish species comprise pelagic species such as anchovies, sardines, sprats, mackerels, herrings and sardinellas. There are well managed fisheries for these species in some countries that can track the status of the stock and control catches. However, in other countries, the level of knowledge about the stocks and the effectiveness of management controls are lacking, and it is thus difficult to assure sustainable use. This in turn puts fish dependent communities, farmers, as well as the wider environment at risk.

A second source of fish for feed production is a wide range of species generally caught whilst trawling for shrimp or benthic fish. In Africa, this by-catch is food for local communities whereas in many western countries, it is simply discarded. In Asia, it is a major source of feed for animals (pigs, ducks, etc.) and fish.

In addition, trawl fisheries are well known for having significant impacts on the seabed itself and for harvesting a wide variety of species, especially in tropical areas where species diversity is high. If management is good then these impacts can be kept to an acceptable level.

The key concerns in these fisheries include:

- the uncontrolled fishing of species of conservation concern such as turtles and sharks/rays;
- the removal of species which cannot tolerate heavy fishing pressure, i.e. loss of species diversity; and
- removal of juveniles which if not caught can provide a good income for other fishermen, e.g. snappers and groupers.

Inadequate management in many countries has resulted in overfishing and major changes in marine ecosystems. The growing demand for fish meal has created a situation where efforts to control overfishing will result in lost catches of so called trash fish. Such controls are resisted by fishermen and the situation continues to decline.

Can standards help?

Most governments and industries recognise the need for good management. The rapid growth in demand for fish meal has created a

situation where the right balance between meeting this demand and creating benefits for others has not yet been found.

Channelling demand for fish in favour of sustainable production has proven to be a valuable mechanism for assisting the development of good management in capture fisheries. Existing standards for sustainable aquaculture as well as those in development, use the same logic. The two systems interact when the issue of sustainable fish meal is being considered.

Fish meal standards are in the aquaculture standards developed by the Global Aquaculture Alliance, GlobalGap and the Aquaculture Dialogues. In addition, the International Fishmeal and Fish Oil Organisation (IFFO) has released its Responsible Sourcing Scheme certification program which has requirements for the management performance of fisheries used to supply fish for meal production. Already, there is considerable diversity in the stringency of these standards and, thus, their ability to be a force for good when it comes to the improved management of fisheries.

At the weakest level there are systems which simply ask whether the species being used for fish meal is listed in the so called RED LIST of the IUCN (International Union for the Conservation of Nature). This body considers submissions from members (governments and non government bodies) regarding the status of species and allocates the species to a range of categories depending on how threatened the populations are. Very few marine fish are included as there is no regular evaluation of fish species and those that are listed are not subject to regular review. This is a very low bar in terms of standards.

Other standards seek independently verifiable information that, the stock of fish being used is not in an overfished state; the impacts of fishing have been acted upon and that there is a working management regime in place. Such standards are far more in keeping with modern expectations about standards for fisheries management as set out by the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries.



However, some systems are more transparent than others. Given that one purpose of a standard is to educate and inform, a lack of transparency as to how decisions are made undermines credibility and is at odds with the FAO guidelines.

Does the supply chain have a role in promoting sustainable use?

One of the major changes in the fisheries industry in the last ten years has been the involvement of entities outside the traditional management mix of mainly government and the capture fisheries sector. Companies involved in fish processing, wholesaling and retailing have increasingly become involved in fisheries management (to a greater or lesser degree) for a mix of business and ethical reasons.

These companies have accepted that, as purchasers of fish, not only do they need to meet the expectations of their customers in terms of product attributes (sustainability is now an attribute like quality) but that corporate social responsibility is as relevant to the seafood industry as it is to others. In this regard, the fact that a company does not have a consumer presence does not mean it is not a target of public criticism, if it handles a product that is risky in some way.

Agreed and transparent standards that genuinely require sustainability (or are progressing towards it) are an important tool for seafood companies operating in markets that scrutinise their impacts (direct or indirect) on the environment. Companies should ensure that the standards they seek to be involved with have good stakeholder support. **More importantly, given the growing pressure on feed sources, there has to be more than a small amount of self interest in ensuring that supplies are in good shape for years to come.**

Transparency – good for markets

One of the current challenges in providing factual advice on the status of species used in fish meal production is the difficulty in finding out what species are used. Some companies freely divulge information when available, especially when the source fisheries are known to be well managed and a considerable amount of information is available on www.fishsource.org, a site operated by Sustainable Fisheries Partnership (SFP). However, when information is lacking or the status of the supply fishery is in question, obtaining information is difficult. Whilst this may be understandable, the market is evolving to expect such information to be made available and, in the future, lack of transparency may equal a lack of contracts.

A key objective of SFP involvement in aquaculture feed issues and related standards development is to ensure a much greater transparency in the supply chain. Sellers of seafood are increasingly being asked questions about **where does the seafood come from and what is 'in' the product.**

In the vast majority of cases the availability of a clear answer is more than sufficient and prevents speculation. Transparency works for all parties and is a key element in ensuring that the capture fisheries that fuel the growth of the aquaculture industry are well managed.

League Table of Fisheries used for Fishmeal and Fish Oil

The Sustainable Fisheries Partnership (SFP) works as a business to business catalyst, encouraging businesses to ask their suppliers to provide technical information. In March, it published a sustainability league table of the principal fisheries used for the production of fishmeal and fish oil. The 22 fisheries have been assessed using the FishSource (www.fishsource.org) methodology devised by SFP. In the top five scorers are herring (Norwegian spring spawner), herring (Canada autumn spawner), sprat (Baltic Sea), herring (Icelandic summer spawner) and horse mackerel (West stock, NE Atlantic).

The results of the table will prove invaluable to fishmeal and oil buyers seeking guidance on sustainable sourcing as well as manufacturers of aquaculture and farm animal feeds. Buyers of aquaculture products and organisations developing aquaculture standards will also find the data useful in helping to shape policies.

The analysis excludes fish taken from so-called 'trash fish' fisheries. These mixed species fisheries utilise fish not suitable for human consumption (whether because of size or palatability) and are frequently found in East and South-East Asia. These fisheries can be deliberately targeting a mixed species catch for the purpose of creating feeds or they may be targeting other species (e.g. shrimp) with relatively indiscriminate gear types and generating a high 'by-catch' which has a marketable value. These fisheries are generally poorly characterised with little data in the public domain but the total catch may be as high as 5 million tonnes (similar to Peruvian anchovy) (Asian Fisheries Today: the production and use of low value/trash fish from marine fisheries in the Asia Pacific region, FAO, 2005)



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