

October 2023 News Update

IFFO's monthly newsletter



Editorial

Due diligence, data sharing and stakeholder engagement are core to sustainability policies, now increasingly assessed by investors and value chain actors through an economic, social and governance (ESG) lens: economic, social and governance sit on an equal foot and all three are meant to create value and be a catalyst for change. [...]

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Registrations for IFFO Conference soon closed, side events registrations now open

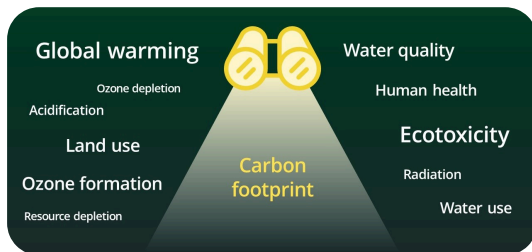
Registrations for the IFFO Conference, without accomodation, close on the 6th October. A range of side events is open for registration on a first come first served basis.

[Register for the side events](#)

Human rights impacts assessment in Mauritania and Senegal just released

Global Roundtable members have just released the findings of a study assessing the impacts of the fishmeal and fish oil industry in West Africa. They highlight the next steps.

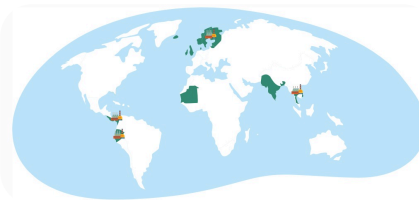
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All you need to know about IFFO's life cycle assessment project

IFFO is running a campaign to explain what a life cycle assessment consists of and what benefits this ongoing project will bring to its members.

[Explore further](#)



MarinTrust launches new resource on their Fishery Improvement Projects (FIPs)

A new interactive resource [page](#) has been launched by MarinTrust to provide an accessible and transparent centre for the completed and on-going Fishery Improvement Projects (FIPs) under MarinTrust's Improver Programme (IP).

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Membership information

Traders and Brokers
USA

PharmaCare Laboratories Pty Ltd

Health food industry
Australia

Santong Biotechnology Engineering (Weifang) Co., Ltd

Feed producers
China

Kontiki Traiding Group S.L.

Traders and Brokers
Spain

No longer IFFO Members:

Atakote, USA

Industry news

- [TheIntrafish](#): Market pressure is needed to keep advancing shrimp feed sustainability
- [UndercurrentNews](#): China's local fishmeal production to drop 40%
- [UndercurrentNews](#): Shrimp feed producers pray for ingredient price relief in India, Ecuador
- [Fishfarmingexpert](#): Info is key to increasing sustainability of aquafeed, says researcher
- [GlobalAquacultureAlliance](#): Projects look to improve carbon footprint and biodiversity impact of aquafeeds
- [UndercurrentNews](#): EU rules on composite products causing 'difficulties' for seafood importers, concedes official
- [FeedNavigator](#): Single Cell Proteins to advance bio-economy in animal feed
- [TheIntrafish](#): 'Totally feasible to rely on algae oil only'
- [InvestESF](#): The ocean can play a bigger role in fighting climate change than previously thought | World Resources Institute
- [Intrafish](#): Britain's fish populations are in a 'deeply troubling state' – report
- [TheStandard](#): To tackle overfishing in West Africa, cooperation is needed
- [Center for Strategic and International Studies](#): Event Summary: Seafood Alliance for Legality and Traceability Forum
- [Seafoodsource](#): F3 krill replacement challenge attracts 40 entrants

Innovation & Research

- **FISHMEALS and their competition**

Effects of **dietary soybean meal (SM) or extruded soybean meal (ESM) replacement of fishmeal on olive flounder** were compared in a recent [study](#). According to broken-line regression on growth rate, the optimal level of fishmeal replacement by SM and ESM was 22% and 34% respectively. Significant decreases in growth, muscle hardness and water holding capacity were observed when replacement of dietary fishmeal by SM exceeded 24% or by ESM exceeded 36%. Dietary ESM alleviated the adverse impacts of SM on digestive enzymes and muscle growth-related genes, which may contribute to the improved growth in ESM groups. Dietary ESM alleviated the adverse impacts of SM on protein degradation-related genes, muscle pH, collagen content and myofiber morphology, which may contribute to the improved muscle quality in ESM groups.

The **effects of dietary black soldier fly (*Hermetia illucens*; HI) larvae meal on growth, plasma biochemistry and gut microbiota** was [tested](#) in gilthead sea bream. Four diets with different levels of HI larva meal (0% CTRL, 5% HI5, 10% HI10, and 15% HI15) in partial substitution to fish meal (FM) were fed to triplicate fish groups. No significant differences ($p > 0.05$) were observed in terms of final body weight, growth rate, feed intake, or feed conversion rate. Among over 20 plasma parameters analysed, the reduction of AST, ALT and ALP might suggest a potential beneficial role of HI for liver integrity and functionality. Concerning gut microbiome, HI was able to induce a shift in the GM structure at any inclusion level considered compared to the control. Taxa that can be involved in chitin degradation and has been recently recognised as novel probiotics for aquaculture.

- **FISHOILS and their competition**

A [study](#) aimed to evaluate the **effects of individual dietary fatty acids (FA) on the metabolism of omega-3 fatty acids in juvenile Atlantic salmon**. Five diets were formulated to be isoproteic, isolipidic, and isoenergetic. They were formulated to spike the concentration of a single FA while maintaining a constant supply of all other

FA across all diets. The selected FA used to formulate the experimental diets were 12:0, 16:0, 18:0, 18:1n-9, or 18:2n-6. The most interesting and unexpected finding was the identification of a direct link between the physical properties of dietary fatty acids, particularly their melting point, and the resulting changes in omega-3 fatty acid metabolic patterns. This study demonstrated, for the first time, that the melting point of dietary fatty acids plays a crucial role in regulating omega-3 fatty acid metabolism in Atlantic salmon.

In order to explore the **appropriate requirements of n-3 LC-PUFA in juvenile largemouth bass**, four diets were [formulated](#). The control diet used fish oil (FO) as the sole lipid source, and the other three diets used mixed vegetable oil as the main lipid source and supplemented with 0.50 %, 0.80 % and 1.10 % n-3 LC-PUFA, respectively. After the fish were fed the four diets for 75 days, the growth, serum and hepatic lipid metabolism were investigated. The growth performance of 0.50 %-1.10 % groups were equal to that of control group. With the increase of dietary n-3 LC-PUFA levels, the serum biochemical significantly decreased. Compared with the 0.50 % group, high hepatic mRNA expression levels of anti-inflammatory genes were observed. The results indicated that 0.80 % dietary n-3 LC-PUFA level is suitable for largemouth bass concerning the growth performance, muscle quality and hepatic lipid metabolism.

- **Sustainability**

In 2022 a paper appeared in Nature Sustainability entitled "**The environmental footprint of global food production.**" Its authors estimated environmental pressures of producing alternative foods using four indicators—greenhouse gas emissions, freshwater use, habitat disturbance and nutrient pollution—and compared the total environmental pressure of different foods. They found that capture fisheries had among the highest environmental pressures despite the fact that fisheries use no freshwater and produce no nutrient pollution, and most of this pressure came from habitat disturbance. However, according to a [recent paper by Ray Hilborn](#), their metric for habitat disturbance for fisheries was totally different from that used for livestock and agriculture, and if a similar metric had been used, the estimated environmental pressure for capture fisheries would have been much lower.

A recent [report](#) offers the **governments of West African states and the People's Republic of China** recommendations to foster sustainable fisheries management and counter IUU fishing in the Gulf of Guinea and beyond.

A [study](#) explores the **environmental impacts of traditional and 'alternative' aquafeed ingredients** and identify opportunities for retailers and seafood supply chains to support more sustainable feed ingredient production and use.

Calendar

- [23-25 October 2023: IFFO Annual Conference, Cape Town, South Africa](#)
- [12 December 2023: IFFO China workshop, Guangzhou, China](#)
- [23-25 January 2024: GOED Exchange, Athens, Greece](#): IFFO Members can benefit from the same ticket rate as GOED Members for this event: contact GOED for more information
- 15-17 April 2024: IFFO's Members Meeting, Miami, USA



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