



Senegal, West Africa. The traditional Senegalese dish 'théboudienne'.
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EXPANDING FISHMEAL FACTORIES: A threat to food security & the environment

GREENPEACE

SUMMARY

The production of fishmeal and oil (FMFO) in West Africa has expanded rapidly in the past few years, particularly in Mauritania where FMFO exports doubled between 2014 and 2018, making the country the largest exporter of fishmeal and fish oil in the region. In 2017, it was estimated that nearly 550,000 tonnes of pelagic fish were harvested to supply FMFO processing plants in Mauritania. In Senegal there are four operational FMFO factories.

The primary species used by the FMFO industry are round and flat sardinella (*Sardinella aurita* and *S. maderensis*) and bonga (*Ethmalosa fimbriata*). These are all species that are an essential source of protein and income for people in West Africa fishing communities, particularly in Senegal and The Gambia. About 80 % of fish landings in Senegal come from the artisanal sector, and fish provides around 70% of the population's animal protein needs, and over 50% of protein needs in The Gambia.

The majority of West African FMFO is destined for overseas markets, largely Asia and the EU. The growing FMFO industry is seriously threatening the livelihoods and food security of millions of people in West African, who are increasingly deprived of hundreds of thousands of tonnes of fish ending up as feed in the industrial aquaculture industry and in livestock production.

A recent report from Greenpeace documented 50 FMFO factories operating in Mauritania, Senegal and The Gambia, of which at least 40 were active in March 2019.

For more details please read the Greenpeace report "[A Waste of Fish](#)".



Senegal, West Africa. Fatou Samba, a fish processor, leader, and activist in the fishing community Bargny in the suburb of Dakar.
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Senegal, West Africa. Senegalese fish processors outside the Fisheries Minister building, after they have presented the relevant authorities with their demand to stop fishmeal and fish oil production in West Africa.
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THE CASE OF CAYAR: DESTRUCTION UNDER CONSTRUCTION

A new FMFO factory has been under construction in Cayar - one of the biggest artisanal fishing ports in Senegal North of the capital Dakar. However, the factory has already had quite a chaotic history with construction work being suspended in late 2018 due to upscaling local resistance to the factory - in particular from fishermen organizations and women processors.

A few months after the suspension, the construction of the factory was resumed despite continued local protests. However, a coalition working against the factory alongside people from the community are keeping up their local resistance against the factory and making sure more people are now voicing their concerns and the need to stop the factory from operating. They are all starting to worry about possible negative

impacts from the FMFO plant in regards to their jobs, health, wellbeing, and the environment.

Traditionally, FMFO plants have been using fish waste from industrial and small-scale processors. These fish and waste were not fit for human consumption. In the last decade, plants have been settling in large numbers on the West African coast and instead of just using waste, they have started using fresh fish as their raw material with dramatic consequences for biodiversity, employment, and food security of thousands of people.

In Cayar a thriving fishery is absolutely key to food security and livelihood of fishermen, processors - mainly female- as well as for the consumers. Every year, between 20 000 and 40 000 tonnes of fish are landed in Cayar, mainly small pelagics like sardinella caught by the more than 9000 local pirogues (small fishing boats). In Senegal, the fisheries sector provides more than 600,000 jobs, however the number of people directly or indirectly deriving some income from fisheries could be as high as **825 000**. The arrival of the new FMFO factory could negatively affect this balance forever as FMFO factories are competing with traditional resource users (fishmongers and women processors) for access to raw material. This is leading to decreased availability of fish for locals and a decline in the number of

employments, mainly employment of women, in artisanal processing businesses.

In a [public allocation](#), the municipality of Cayar stated that the factory built by Barna would be similar to one owned by the same company and placed near Bilbao in Mundaka. This is a plant [with a total production capacity](#) of 18 000 tonnes of fishmeal and 6.350 tonnes of fish oil per year. Even if the factory would only be operating at a 25 % capacity, it would require around 23 000 tonnes of raw material every year. This is more than half of the total catches of all species landed in Cayar in the same period and the yearly fish consumption of around 1 million people in West Africa.

Average annual catches of sardinella in Northwest Africa are around 600 000 tonnes. Most of the stock of small pelagic in the subregion of West Africa are shared between Mauritania, The Gambia, and Senegal. In 2017, in Mauritania alone, more than 550 000 tonnes of small pelagic fish went into the FMFO factories [contributing to challenges for getting enough fish for people throughout West Africa](#).

Seen in this context, it is fair to say, that all of the pelagic fish landings in the port of Cayar could potentially be required to feed the new factory. Close to nothing or nothing at all would then be left for the local communities to process, sell,



Senegalese fish processors on board the Greenpeace ship, the Arctic Sunrise, to talk about their challenges with the fishmeal and fish oil factories.

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Senegal, West Africa. Fish processor Fatou Samba smoking fish in Bargny, a fishing community in the suburb of Dakar.
© Clément Tardif/Greenpeace.

and eat, and the local community and the factory would simply be competing for the same fish. Even though most FMFO factory owners claim they mainly use fish waste in their production, the reality is quite different.

To meet their own rising demand for fish, the FMFO industry is turning towards fresh fish, especially sardinella, fished by industrial and artisanal vessels as a source of raw materials. For the consumer, fish scarcity is already being felt through the rising prices of sardinella at the local markets. Thus, fishmeal production becomes a potential competitor on the consumers market, threatening the food security of especially vulnerable populations in West Africa ([source](#)).

A general rule is that roughly 4 to 5 kilograms of fish are needed to produce 1 kilogram of fishmeal. Fishmeal and fish oil production [has been demonstrated](#) to be unsustainable and inefficient use of resources, that is to say the processing of prime fish into feed for aquaculture as well as livestock operations around the world.

Pelagic fish such as sardinella is the basis of protein for people in the West African region. In Senegal the year average fish consumption per capita is 23.9 Kg (FAO), and in the case of Cayar the pelagic fish caught and landed in the area are therefore a vital source of protein. In 2018, food scarcity in Senegal was estimated to reach around 341,000 people from June-to-August (source).

WHO IS BEHIND THIS?

The owner of the Cayar factory is the Spanish company [Barna](#), based in Cantabria in Spain, while the main investor is [Corpfin Capital](#), based in Madrid. Corpfin Capital claim to have [high standards of Social Responsibility](#) and have [signed the Principles of Responsible Investment of the United Nations](#), claiming to respect the Sustainable Development Goals (SDGs).

In addition to that, rural development and the fight against hunger are priority areas for the Spanish Agency for International Development

Cooperation (AECID). AECID remains fully committed to cooperating with other countries including Senegal in agriculture, rural development, food security and nutrition to help protect the human right of access to food. According to the AECID, the focus on the right to food takes into account elements of food security related to the availability, accessibility, stability and biological use of food, considering human dignity and cultural acceptability. Thus, citizens become holders of rights rather than receivers of aid ([source](#)). Unfortunately, the fishmeal plant project supported by Barna is in contradiction with the Spanish government's effort, and it will increase poverty and food security issues that will push young people towards immigration to European countries.



Cayar, Senegal, fishmeal factory.
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CONSEQUENCES OF FISHMEAL FACTORY EXPANSION



▪ For the food security of the people

- fish becomes more scarce and more expensive on the market. All three species used for fishmeal

and fish oil are over-exploited, according to the most recent stock assessments by the Food and Agriculture Organization of the United Nations (FAO) Working Group on Small Pelagics. Scientific advice is to significantly reduce catches of the three species, primarily those destined for fishmeal and oil factories. At the same time as catches have increased.



▪ For the jobs and the economy

- thousands of people live from the fishing activities in Cayar, the fishmeal factory would mean massive job loss for women transformers but

also for the resellers and other jobs of the sector such as fishmongers. A fishmeal factory in the region only employs on average between 20-40 people.



▪ For the environment

- Fishmeal factories take any kind of fish, no matter if it is destroyed, big or small, reproducing, etc. The important

thing is the protein it contains. Fish stocks in the region are already under huge pressure. Fishmeal factories can also generate air pollution and other similar damages to the local communities. The serious socio-economic and environmental impacts in the region have become increasingly obvious and are potentially impacting 40 million African consumers.



▪ For the successful implementation of the UN sustainability goals.

The conservation and sustainable use of our oceans and their contributions to poverty eradication, sustained economic growth, food security and creation of sustainable livelihoods and decent work is reflected in several of the [UN Sustainability Goals](#). Healthy ocean management is important to all people, however groups with a high dependency on natural resources and ecosystem services are especially depending on the benefits from a healthy ocean management. The expansion of fish meal and fish oil factories like the one in Cayar contradicts many international commitments on sustainable development, poverty alleviation, food security and gender equality.

WHAT IS FISHMEAL AND FISH OIL BEING USED FOR?

The production of FMFO in West Africa is diverting a valuable and essential source of food and livelihoods toward the supply of feed for aquaculture and livestock operations around the world, as well as food supplements, in the case of fish oil.

For more details on exports and products, please read the Greenpeace report "A Waste of Fish".

THE NEED FOR A CHANGE: GREENPEACE DEMANDS

- Abandoning of Cayar factory project;
- No new fishmeal plant to be established;
- No new authorization to be granted to fishmeal factories;
- National and regional plan to close the existing plants;
- Support to women processors activities;
- Support to small scale sustainable fishermen;

- Support to artisanal fishery processing and trade for local and regional markets;
- Effective fight against Illegal, unreported, and unregulated (IUU) fishing and establishment of an effective regional management regime by the Coastal States, in particular for the exploitation of shared stocks such as small pelagic fish, as required under International law, relevant national laws, pan-African and regional fisheries policies and other instruments.

CONTACTS

- **Awa Traoré**, Oceans Campaigner, Greenpeace Africa, atraore@greenpeace.org
- **Abdoulaye Ndiaye**, Oceans Campaigner, Greenpeace Africa, abdoulaye.ndiaye@greenpeace.org

ANNEX

Landings data for the artisanal fishery in Kayar for the year 2018:

- Total quantity of fish landed all species combined (in tonnes): 37275,900 tonnes;
- Estimated commercial value (in FCFA): 18 billion;
- Share for the local market: 13042.96 tonnes or 35%;
- Share for processed and exported products: 22585.790 tonnes or 60.6%;
- Share of artisanal processing: 1647,150 tonnes or 4.4%;

Diversity of landed species:

DESIGNATIONS	QUANTITIES (in tonnes)	%
Pelagic fish	28 330 T	76
Demersal fish	8879 T	23,6
Cephalopods	127 T	0,4
TOTAL	37336 T	100

Main species of pelagic fish landed:

Round Sardinella	7682,350 T	Plate Sardinella	1362,700 T
Black Sea Horse Mackerel	6311,700 T	Atlantic bumper	860,500 T
Spanish Mackerel	5726,800 T	Hora White Carp	391,450 T
Yellowtail Horse Mackerel	3030,800 T	Little tuna	378,400 T
Bigeye grunt (Pelon)	1814,850 T		

- Quantity of raw fish processed by hand: 1647,150 tonnes.
- Quantity of finished products after artisanal processing: 549,050 tonnes.

Distribution of processed products:

MARKETS	QUANTITIES	%
National	465 T	85
Subregional	84 T	15
TOTAL	549 T	100

Main destinations for export of processed products:

COUNTRIES	QUANTITIES
Guinea Bissau	72,7 T
The Gambia	11,2 T