



THE IMPACT OF DEEP-SEA FISHING ON EMPLOYMENT IN FRANCE

KEY FINDINGS

- 98.5% of French deep-sea catch is made by nine ships, or 0.1% of the French fleet.¹
 - **None of these ships make their entire catch in the deep sea. Deep-sea catches represent between 25 and 40% of catches for each ship.**
 - In France, an estimated **112 full-time equivalent (FTE) on-board jobs** are directly linked to vessels targeting deep-sea species.
 - Pro-rata to the deep-sea species catch made by these ships, **44 on-board jobs are directly linked to deep-sea fishing in France.**
 - 44 to 112 jobs represent **0.2 to 0.5% of the 22 049 active French crew in 2012.**²
 - If multipliers of between 2 and 3.2 are used to obtain the number of jobs linked to one job at sea, **224 to 358 direct and indirect jobs** are linked to the activities of deep-sea fishing vessels in France.
 - **88 to 140 jobs are linked to deep-sea species catch alone.** This value corresponds to the jobs created by deep-sea fish catch (generating on-land jobs in processing, treatment, logistics, etc.)
 - The impact of the regulation on deep-sea fishing proposing a ban on deep-sea bottom trawling can be evaluated according to several scenarios:
 - If bottom trawlers targeting deep-sea species were converted to another more selective method such as longlining, **there would be a zero or a positive impact on employment**, because longlines seemingly require a higher workforce per kilo of fish caught than trawls.
 - If **jobs pro rata to deep-sea species catch disappeared, 88 to 140 jobs would be affected.**
 - If the boats partially targeting deep-sea species **ceased their activities entirely** (despite these species representing only 40% of their catch, which means that such a radical scenario need not be envisaged), a total of **224 to 358 jobs would be lost** in the entire French fishing sector.
- ⇒ This estimate contradicts the figures formerly given by a study financed by the Lorient planning agency, which gave a figure of 115 FTE seamen for the Lorient region alone and a total of 600 directly and indirectly linked jobs, on the basis of very high multipliers.
- ⇒ Despite our requests, the bases for the calculations in this study were not disclosed: PricewaterhouseCoopers (PwC), who made the estimates, stated that these bases were “confidential”.
- ⇒ PwC’s study uses two high multipliers: 3.2 AND 4.3, but it also refers to the publication by Greig et al., 1999, which uses 2.03 as a multiplier to estimate the related jobs. We consider this value to be more reasonable and normal.
- ⇒ Whatever values are retained, deep-sea fishing activities are of minor importance in terms of the amount of jobs created within the fishing sector as a whole.
- ⇒ The recent example of Euronor, a major player in deep-sea fishing until 2011, shows that ships can be converted without the loss of jobs or profits.

¹ 7305 fishing ships in total. Key figures for the fisheries sector 2012/Chiffres clef du secteur de la pêche 2012 - http://www.developpement-durable.gouv.fr/IMG/pdf/Chiffres_cle_peche.pdf

² Key figures for the fisheries sector 2012/Chiffres clef du secteur de la pêche 2012 - http://www.developpement-durable.gouv.fr/IMG/pdf/Chiffres_cle_peche.pdf



CALCULATION OF JOBS IN THE SECTOR

- Lorient's employment estimates

At the end of June 2012, the Lorient Agency for Planning and Economic Development (Audélor) published a study entitled "A characterization of the Lorient economy linked to deep-sea fishing activity" ("Caractérisation de l'économie lorientaise liée à la pêche de grands fonds"). This study, conducted by PricewaterhouseCoopers (PwC), highlights the importance of deep-sea fishing for the Lorient region and places particular emphasis on its "structuring" effect, which it states would entail the loss of at least 600 jobs if the activity were banned.

BLOOM has identified several problems with the study commissioned by Lorient, which invalidate its conclusions. These problems are explained below.

BLOOM is sensitive to the loss of employment that could arise in France from the prohibition of deep-sea fishing. However, we wish to emphasise that the proposal for a regulation of the European Commission **does not aim for a ban on deep-sea fishing** - it only concerns those fishing methods judged most destructive by the scientific community: bottom trawling and bottom-set gillnets used in deep waters.

By extending the employment calculation to France as a whole and by examining various scenarios rather than a single scenario of a definitive halt to deep-sea fishing as the Lorient study does, BLOOM hopes to offer a constructive contribution to the debate and give objective and verifiable data to the MEPs and Member States called to pass judgement on the proposal for a regulation of the European.

- The employment multiplier

The Lorient study uses a range from a lowest value of 3.2 to a highest value of 4.3. For the sake of comparison, the study also refers to another report (Greig et al.), which mentions an employment multiplier of 2.03. We have retained two multipliers for our calculations: a median of 2 and a high value of 3.2.

VESSELS AND SEAMEN CONCERNED BY DEEP-SEA FISHING IN FRANCE

- Scapêche in Lorient: up to 85% of France's deep-sea species catch

SHIPS	Size (meters)	Crew	FTE jobs ⁽¹⁾	FTE jobs pro-rata to deep-sea species catch 40% of total ⁽²⁾
Deep-sea fishing				
Mariette le Roch II	45.95	14	20	8
Jean-Claude coulou II	45.95	14	20	8
Héliotrope	33.80	9	13	5.2
Claude Moinier II	32.80	8	11	4.4
Pierre-Jacques Matigny	32.80	8	11	4,4
Julien Coléou	30.10	8	11	4.4
Total	6 SHIPS	61	86	34.4

Sources: Scapêche website

FTE: full time equivalent

⁽¹⁾ Calculation based on 330 days' fishing per year, one week of rest per seaman for 27 days at sea, with 10 weeks of annual paid leave.

⁽²⁾ Numerous statements by Scapêche, for example on 14/02/2013.



The tonnage landed by Scapêche represents up to 85% of France’s total deep-sea species catch, or up to 7700 tonnes³ out of a total 9029 tonnes in 2010.⁴

- Euronor in Boulogne-sur-Mer: around 9% of France’s deep-sea species catch

The deep-sea species tonnage landed by Euronor accounts for around 9% of the French total (818 tonnes declared at fish auction in Boulogne-sur-Mer in 2011).

SHIPS	Size (m)	Crew	FTE jobs	FTE jobs pro-rata to deep-sea species catch
Deep-sea fishing				40% of total ⁽¹⁾
Cap Saint Georges	44	14	20	8
Total	1 ship	14	20	8

(1) Estimate made by a comparison with Scapêche’s 45.95m boats, which concurs with Euronor’s statements in the press mentioning that the Cap Saint-Georges targets deep-sea species for only six months per year.⁵ The Cap Saint Georges, which has an overall capacity of around 2000 tonnes per year, landed around 800 tonnes of deep-sea species in 2011, equating to around 40% of its activity.

- Dhellemmes in Concarneau: around 4.5% of France’s deep-sea species catch

In 2010 and 2011, around 400 tonnes of deep-sea species were declared at fish auction in Concarneau, which equates to around 4.5% of the French tonnage (FAO 2010). In 2011, three ships had special deep-sea fishing licences (*Saint Gothard, Corail, Roselend*). In 2012, there were only two (*Corail, Roselend*).

The corresponding number of jobs, estimated by extrapolating Scapêche’s and Euronor’s calculations, was around **5 FTE seamen** (106x4.5/94). The number of jobs pro-rata to the deep-sea species catch made by Dhellemmes’ ships was estimated at **1.25 full-time jobs** (deep-sea species make up around 25%⁶ of these vessels’ catch).

- The remaining 1.5%

The remaining landed tonnage represents around 1.5% of the French total. We did not attempt to identify the other ships, given that they account for a very small proportion of the total landings. By extrapolation, this tonnage corresponds to (106x1.5/94) **1.7 FTE jobs, or 0.4 FTE jobs pro-rata to deep-sea species catch** (we used a high and conservative value of 25% for the proportion of catch made in deep waters).

- Direct jobs in France

FLEET	SCAPECHE	EURONOR	DHELLEMMES	RESTE	TOTAL
FTE jobs	86	20	5	1.7	112.7
FTE jobs pro-rata to deep-sea species catch	34.4	8	1.25	0.4*	44

* We estimated that the deep-sea species catch representing 1.5% of French catch did not exceed 25% of the vessels’ catch.

³ Scapêche’s catches do not all go to fish auction, but the proportion kept by the Intermarché network is unknown. The estimate for deep-sea species catch is thus based on the fleet’s declarations. See BLOOM’s presentation at the European Parliament (19 February 2013) detailing the catch by vessel:

<http://www.bloomassociation.org/download/Parlement%20UE%20Audition%20pêches%20profondes%2019Fev2013.pdf>

⁴ FAO source based on the list of deep-sea species provided as an annex to EC 2347/2002. Scapêche’s catch does not all go to fish auction, but the proportion kept by the Intermarché network is unknown. The estimate for deep-sea species catch is thus based on the fleet’s declarations.

⁵ *La Voix du Nord*, 1 August 2012.

⁶ *Le Marin*, 12 March 2010, “Grands fonds: peut-être faudrait-il écouter les pêcheurs”.



Overall, vessels engaged in deep-sea trawling employ **112 FTE seamen** in France, and not the 115 FTE seamen in the Lorient region alone stated by Audelor's study.

Approximately pro-rata to deep-sea species catch, **44 FTE jobs are directly linked to deep-sea fishing in France.**

These results correspond to the estimates made in 2011⁷ by Greenpeace France, indicating that 150 jobs at sea were linked to deep-sea trawling. Since then, certain ships have stopped targeting deep-sea species and the activity has shrunk somewhat. This explains the slightly lower value in our 2013 estimate.

- **Jobs directly and indirectly linked to the sector**

There are three possible scenarios:

- **If bottom trawlers targeting deep-sea species converted** to another more selective method such as longlining, **there would be a zero or a positive impact on employment**, because longlines seemingly require a higher workforce per kilo of fish caught than trawls.

Thus, the 55m longliner, *Ile de la Réunion*, belonging to the company COMATA (owned by Intermarché) and targeting Patagonian toothfish in the waters of Kerguelen and Crozet, employs 30 seamen and officers⁸ for around 2000 landed tonnes per year⁹, compared to the 14-seaman workforce onboard Scapêche's 46m trawlers, landing 2200 to 2300 tonnes per year.

- **If jobs pro rata to deep-sea species catch disappeared, 88 to 140 jobs would be affected.** This is the most accurate value to show the total jobs created by deep-sea species catch and reflects the impact that an end to deep-sea species catch would have on the sector.

- If the boats partially targeting deep-sea species **ceased their activities entirely** (despite these species representing only 40% of their catch, which means that such a radical scenario need not be envisaged), a total of **224 to 358 jobs would be lost** in the French fishing sector.

- **Conclusion**

The overall job loss that would arise from a total ban on deep-sea fishing therefore lies somewhere between 0 and 358 jobs for the whole of France, depending on the chosen scenario, and not at over 600 jobs in the Lorient region alone as stated by the Lorient (Audélor/PwC) study.

Moreover, the theory that a ban on deep-sea trawling would compromise the activity of the vessels concerned lacks credibility. Euronor serves as an example demonstrating that boats can be converted without loss of jobs or profitability.

WHY IS PWC'S LORIENT STUDY NOT ACCEPTABLE?

- **The numerical results are difficult to verify**

The calculation of jobs related to deep-sea fishing involves the use of "upstream" and "downstream" employment multipliers. The methodology is explained, but the sources used for the calculation are not provided. It is therefore impossible to verify the validity of the published results.

- **A public study with "confidential" sources**

BLOOM's letter to PwC, requesting that the bases of the study's calculation be provided, received an evasive response: *"The calculations are based on data that we are contractually bound to keep strictly confidential. You*

⁷ Investigation dossier n°2, Autumn 2011:

<http://www.greenpeace.org/france/PageFiles/266559/SOS%20Oceans%20Immersion%20Partie%202.pdf>

⁸ <http://www.scapeche.fr/qui-sommes-nous/notre-flotte/> and <http://www.scapeche.fr/notre-metier/pecher-l-armement-mousquetaire/&idboat=1>

⁹ Estimate based on COMATA's turnover as published in the company's audited accounts, and on the annual Patagonian toothfish quota allocated to COMATA. BLOOM thus estimated that the longliner catches 900 to 950 tonnes of toothfish, around 550 tonnes of grenadier and 340 tonnes of rays per year: an approximate rounded total of 1840 tonnes per year.



can understand that although we are able to present the findings of our work, we regret that we cannot share the data on which our calculations are based.”

- **Results distorted by inaccurate data...**

- The calculation of indirect jobs for the Lorient region is based on a number of seamen between 115 FTE (full time equivalent) jobs and 150 jobs. In fact, given that only six of the Scapêche fleet’s vessels partially or fully target deep-sea species, the number of seamen required for their operation does not exceed 86 FTE jobs (see table below).

- Audélor’s study indicates that, for any reference list, eleven species are “listed as deep-sea species: tusk, leafscale gulper shark, Portuguese dogfish, orange roughy, ling, blue ling, scorpionfish, redfish, scabbardfish, grenadier and rabbit fish”. However, two of these species (tusk and ling) are not on the list of deep-sea species as defined by the current European regulation (EC 2347/2002), but on the list of six additional deep-sea species proposed by the European Commission in July 2012 (COM(2012) 371 final). This calculation is not based on the reality of deep-sea fishing, but on a scenario of what it could become following a political process of which nobody can predict the outcome. In fact, the text proposed by the Rapporteur for the regulation at the European Parliament’s Fisheries Committee (dated 4 March 2013)¹⁰ omitted straightaway two of the species proposed by the Commission. On the other hand, the decision to retain ling and tusk allows catch figures to be inflated.

- **...and biased reasoning**

- The study thus indicates that deep-water species represent 53% by quantity and 57% by value of the tonnage landed by Scapêche in 2011 (undoubtedly an exaggeration due to the list of species used). This contradicts the elements systematically provided by Scapêche (40% of turnover). We have decided to use the more reliable source: that of Scapêche, stating 40%.

- According to Audélor, the activity of the ships concerned would be compromised if significant changes were made to deep-sea species fishing regulations. Euronor, a major operator in deep-sea fishing until 2010 has demonstrated that vessel conversion is possible without job losses, even significantly improving its profitability.

- **Conclusion concerning the Lorient PwC study**

The findings of the study conducted by PwC and published by Audélor, being both incorrect and difficult to verify, cannot constitute a reasonable basis for discussion. PwC’s refusal to disclose its sources only adds to the suspicious nature of this study.

For more information on deep-sea fishing, visit

<http://www.bloomassociation.org/en/deep-sea-fishing>

About BLOOM www.bloomassociation.org

Founded in 2005, BLOOM is a non-profit organization working to protect the oceans and promote sustainable fishing through awareness-raising and scientific mediation, by producing independent scientific studies, as well as by participating in public consultations and institutional processes. Our actions target both political and economic decision-makers, as well as the general public.

BLOOM is a member of the **Deep Sea Conservation Coalition**, a coalition of over 70 NGOs working to protect vulnerable deep-sea ecosystems: <http://www.savethehighseas.org>

¹⁰ <http://www.europarl.europa.eu/sides/getDoc.do?type=COMPARL&reference=PE-506.025&format=PDF&language=EN&secondRef=01>