

Are innovations in seafood market in Europe more sustainable?

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Outline

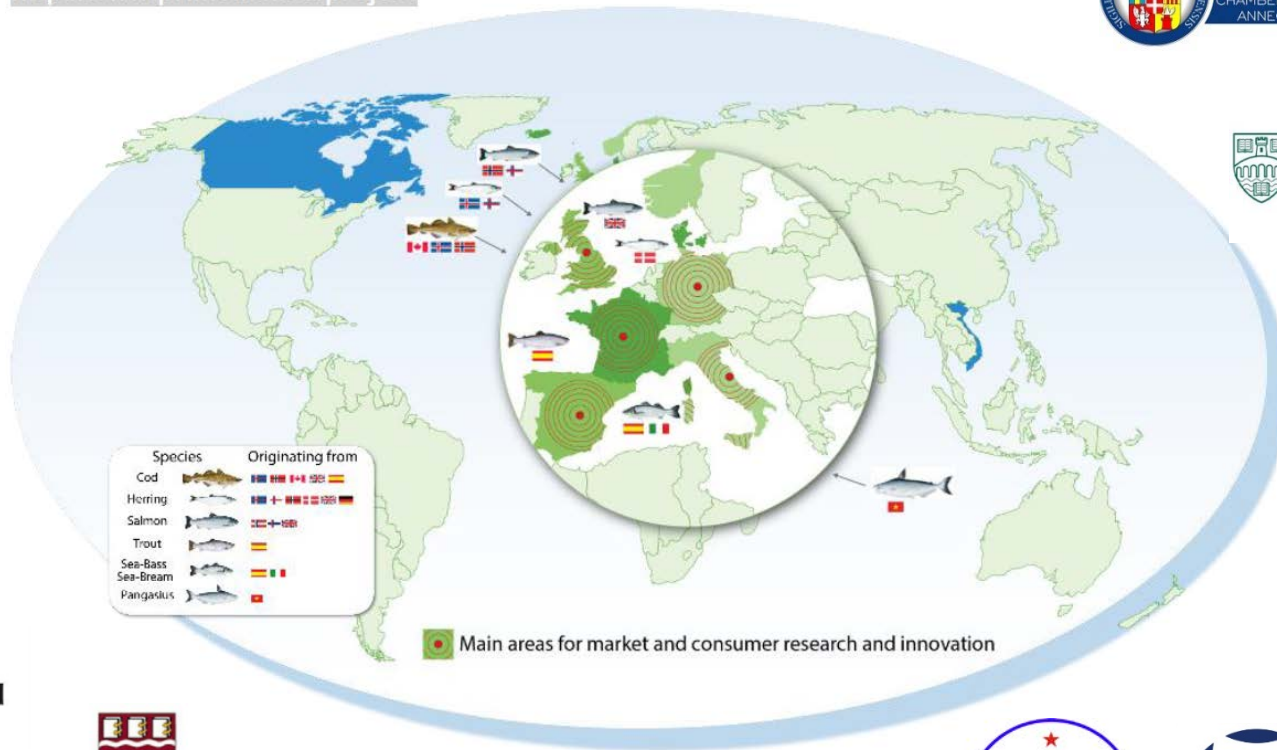
- ▶ Introduction
- ▶ Database and methodology
- ▶ Results (*preliminary*)
- ▶ Conclusion

PrimeFish project is developing an innovative market orientated prediction toolbox. It allows to strengthen the economic sustainability and competitiveness of European Seafood on Local and Global markets.

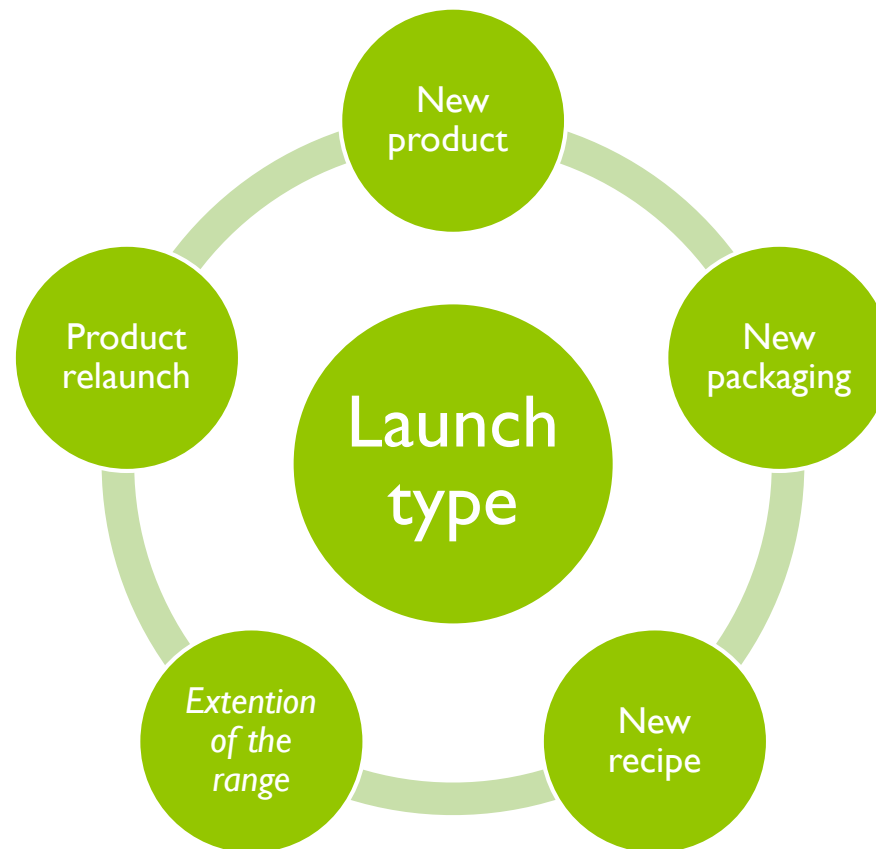
<http://www.primefish.eu/project>



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► Innovation by launch type:



- ▶ Innovation by launch type
- ▶ Innovation by claims/positionning

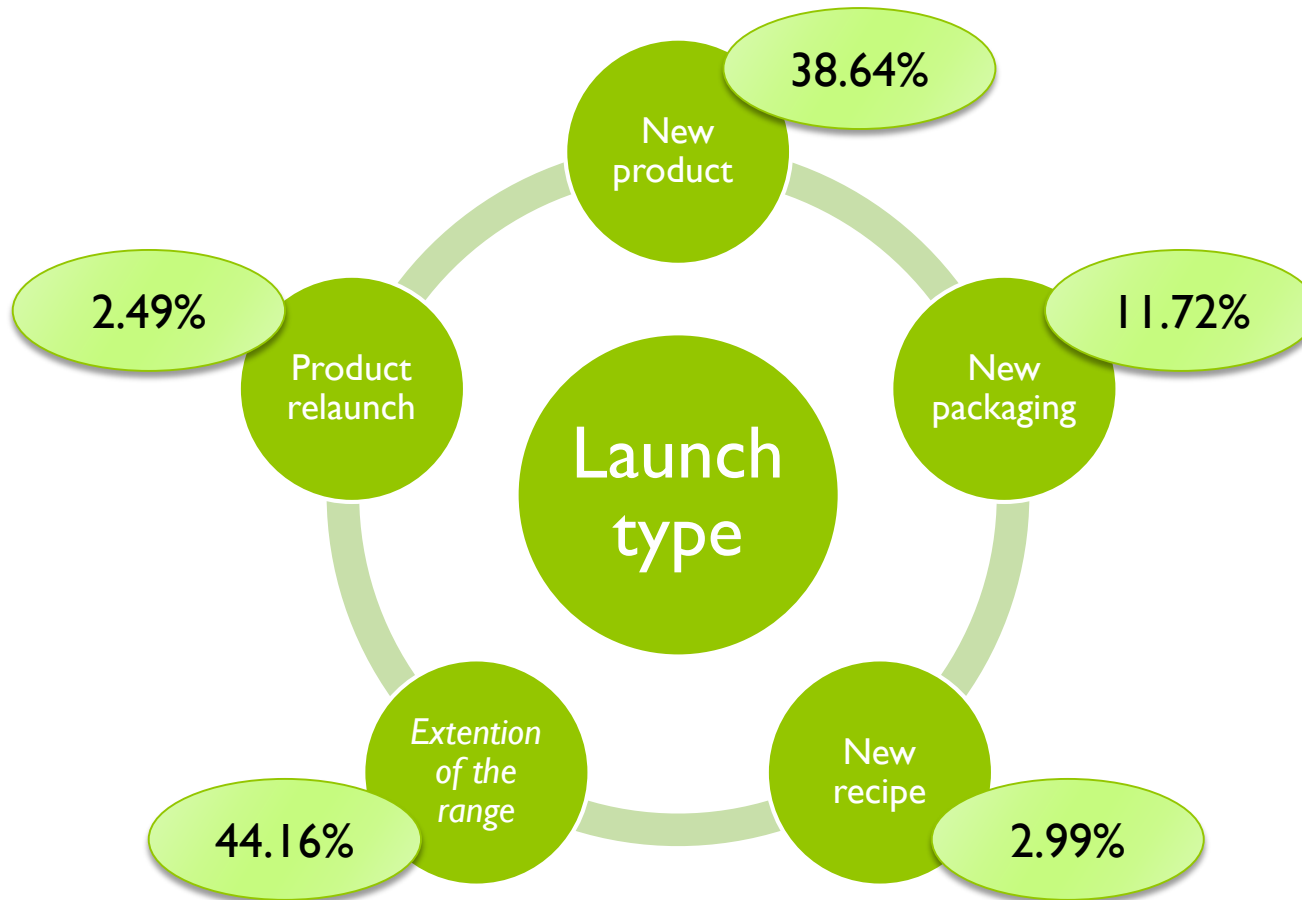


► Database :



- From GNPD Mintel database
- All accros Europe (Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Swiss, Turkey, United-Kingdom, Ukraine)
- Seafood products considered here are transformed products based on seafood as major ingredient
- Commercialized innovation between January 1st 2000 and December 31 2015 ↔ 22,406 observations

► Seafood innovation from 2000 to 2015:

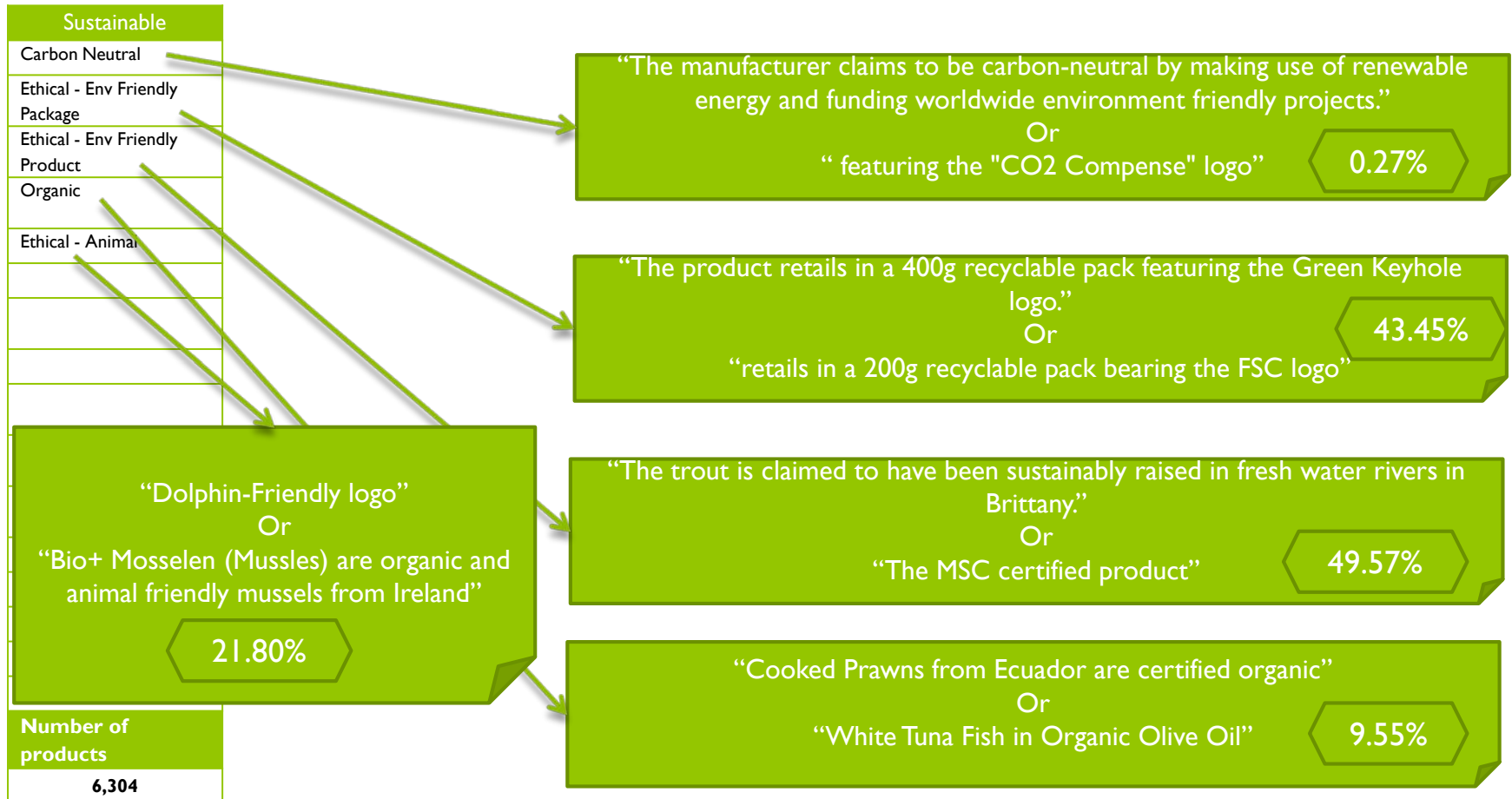


Source: GNPD–Mintel (2015); 22,406 observations ; period: January 2000 – December 2015

-
- ▶ Seafood innovation from 2000 to 2015:
 - ▶ In average :
 - ▶ 63.76% of seafood innovations have at least one claim
 - ▶ 1.62 claims by products
 - ▶ The number of products without any claim is continuously decreasing over the period considered. No claim products represent 69.64% of product launched in 2000 and only 28.27% in 2015.
 - ▶ Most used positioning are sustainable (28.14% of seafood products over the period) and convenience claims (28.19% of seafood products over the period)

Source: GNPD–Mintel (2015); 22,406 observations ; period: January 2000 – December 2015

► Scopes of sustainability :



Hypotheses :

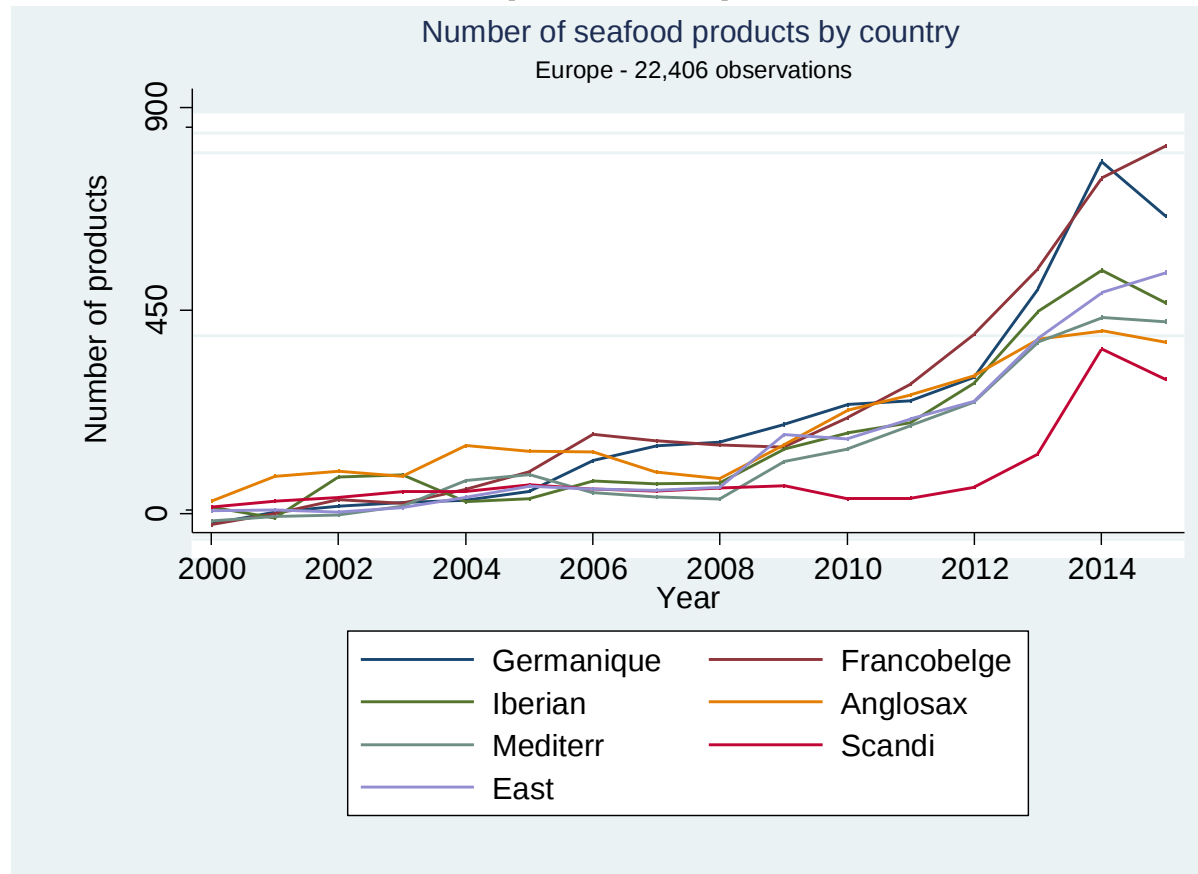
- 1) *North European countries are more inclined to prone sustainability on the commercialized products*

Question: Have you done any of the following for environmental reasons in the past month? (Recycling, cut down your energy consumption, cut down your water consumption, chosen local product, reduced waste, bought environmentally friendly products marked with an environmental label, used your car less)

Source: Special Eurobarometer, 2014, Attitudes of European citizens towards the environment

Country	% of positive answer
Europe	21%
Sweden	60%
Denmark	48%
Austria	44%
Luxemburg	40%
Malta	31%
Finland	31%
France	28%
Ireland	27%
Slovenia	25%
Netherland	22%
United Kingdom	22%
Belgium	21%
Germany	21%
Estonia	21%
Latvia	19%
Slovakia	19%
Czech Republic	18%
Croatia	18%
Republic of Cyprus	18%
Greece	17%
Spain	16%
Lithuania	15%
Polon	14%
Italie	13%
Romania	13%
Hungrie	12%
Bulgaria	11%
Portugal	9%

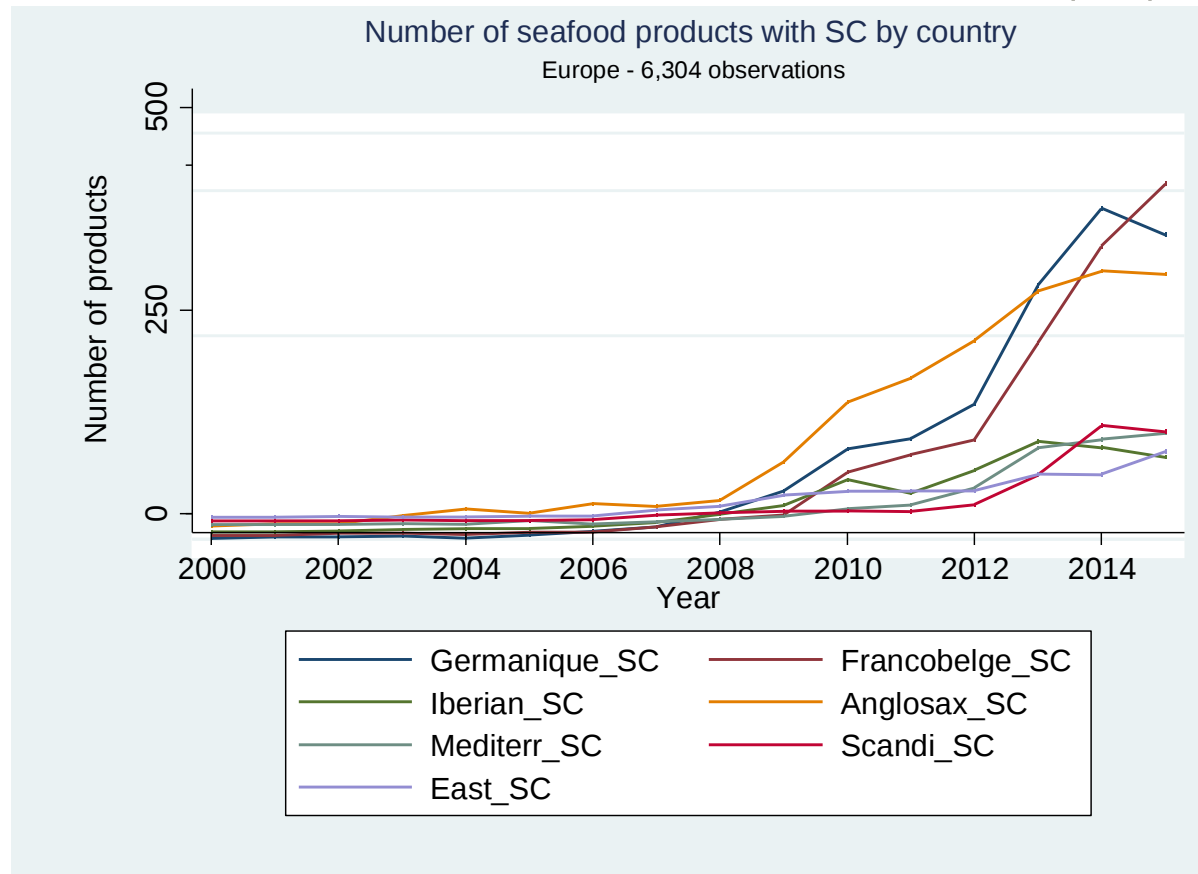
- Evolution of sustainable innovations in Europe from 2000 to 2015
 - Evolution of innovation by country



Source: GNPD–Intel (2015); 22,406 observations ; period: January 2000 – December 2015

- Are innovations in seafood market in Europe more sustainable?

- ▶ Evolution of sustainable innovations in Europe from 2000 to 2015
 - ▶ Evolution of innovation with sustainable claims (SC) by country



Source: GNPD–Mintel (2015); 6,304 observations ; period: January 2000 – December 2015

Hypotheses :

- 1) *North European countries are more inclined to prone sustainability on the commercialized products*
- 2) *The way the species is perceived by consumer has an impact over the tendency of sustainable claims*

► Companies the most innovative with SC (Top 20)

Firm	Firm Type	Firm nationality	Storage			Products with SC		
			Fresh	Frozen	Ambient	Number	% of total innovations with SC	% of innovation per firm
Marks & Spencer	Retailer	United-Kingdom	374	31	16	421	6.68%	57.36%
Lidl	Retailer	Germany	59	107	75	241	3.82%	28.93%
Tesco	Retailer	United-Kingdom	110	54	55	219	3.47%	44.06%
Iglo	Manufacturer	United-Kingdom	∅	194	∅	194	3.08%	74.33%
Findus	Manufacturer	United-Kingdom	∅	149	∅	149	2.36%	49.01%
Aldi	Retailer	Germany	30	53	64	147	2.33%	41.53%
Waitrose	Retailer	United-Kingdom	91	34	19	144	2.28%	66.98%
Young's	Manufacturer	United-Kingdom	20	111	∅	131	2.08%	73.60%
Sainsbury's	Retailer	United-kingdom	49	28	24	101	1.60%	47.20%
Bolton Alimentari	Manufacturer	Italy	∅	∅	87	87	1.38%	44.39%
Intermarche	Retailer	France	39	20	21	80	1.27%	41.24%
Asda	Retailer	United-Kingdom	46	11	22	79	1.25%	33.05%
John West	Manufacturer	United-Kingdom	1	∅	72	73	1.16%	53.68%
Birds Eye	Manufacturer	United-kingdom	1	71	∅	72	1.14%	73.47%
Fleury Michon	Manufacturer	France	72	∅	∅	72	1.14%	42,86%
Labeyrie	Manufacturer	France	68	2	∅	70	1.11%	44.03%
Morrisons	Retailer	United-Kingdom	37	19	14	70	1.11%	51.85%
Scamark	Retailer	France	19	11	26	56	0.89%	54.37%
Picard	Retailer	France	∅	53	∅	53	0.84%	21.63%
Glaces Thiriet	Manufacturer	France	∅	52	∅	52	0.82%	51.47%

Source: Authors, based on GNPD–Intel (2015); 6,304 observations ; period: January 2000 – December

► Companies the most innovative with SC

► Repartition by species :

Species	Top 5 firm	Products with SC	Share of top5 firm
Bluefish	Tesco, Aldi, Asda, Waitrose, Lidl	420	17.86
Trout	Aqualande, HiPP, Marks & Spencer , Distriborg, Monoprix	91	23.08
Cephalopods	Connorsa, Marks & S. , Compagnia Surgelati Italiana, Consum, Rodriguez pascual Y Cia	118	27.97
Herring	Appel Feinkost, Lidl , Aldi Nord, Nadler Feinkost, Aldi	329	29.79
Cod	Marks & Spencer, Findus, Iglo, Lidl, Birds Eye	498	32.33
Crustaceans	Marks & Spencer, Tesco, Waitrose, Lidl, Iglo	828	34.06
Flatfish	Marks & Spencer, Lidl , Femeg, Bofrost, Costa Meeresspezialitäten	101	30.69
Haddock	Marks & Spencer, Young's, Tesco, Waitrose, Asda	134	56.72
Shellfish	Marks & Spencer, Fleury Michon, Glace Thiriet, Tipiak, Picard	202	34.16
Mussel	Fleury Michon, Connorsa, Aldi, Consum, Conservas Cerqueira	136	24.26
Pangasius	Lidl, Young's, Aldi , Queens Products, Okoland	71	49.30
Pollock	Iglo, Findus, Young's, Birds Eye, Glaces Thiriet	627	40.83
Salmon	Marks & Spencer, Tesco, Labeyrie, Waitrose, Lidl	1342	26.75
Seabass	Marks & Spencer, Plasmon Dietetici Alimentari, Iglo, Picard, Tesco	26	53.85
Tuna	Bolton Alimentari, John West, Lidl, Tesco, Aldi	1411	19.42
Seafood	Marks & Spencer, Fleury Michon, Alliance Oceane, Young's, Iglo	435	25.52
Freshwater Fish	Marks & Spencer, Bofrost, Aldi, Circeo Pesca, Glaces Thiriet	46	30.43
Other fish (species specified)	Milupa, Lidl , Agriottica Lombarda, Arctic Royal, DM Drogerie Markt	61	26.23

Source: Authors, based on GNPD–Mintel (2015); 6,304 observations ; period: January 2000 – December 2015

► Share of innovation with SC by species :

Species	Number of products	Share in total seafood innovation (%)	Number of products with at least one SC	Products with SC	
				Share by species (%)	Share in SC total innovation (%)
All species	22,406	-	6,304	28.14	-
Bluefish	1,970	8.79	420	21.32	6.66
Trout	437	1.95	91	20.82	1.44
Cephalopods	1,097	4.89	118	10.76	1.87
Herring	917	4.09	329	35.88	5.21
Cod	1,508	6.73	498	33.02	7.89
Crustaceans	3,848	17.17	828	21.52	13.13
Flatfish	273	1.22	101	37.00	1.60
Haddock	327	1.46	134	40.98	2.12
Shellfish	999	4.46	202	20.22	3.20
Mussel	724	3.23	136	18.78	2.15
Pangasius	149	0.66	71	47.65	1.13
Pollock	1,608	7.18	627	38.99	9.94
Salmon	4,565	20.37	1,342	29.40	21.28
Seabass	91	0.41	26	28.57	0.41
Tuna	3,506	15.65	1,411	40.25	22.38
Seafood	3,265	14.57	435	13.32	6.90
Freshwater Fish	263	1.17	46	17.49	0.72
Other fish (species specified)	376	1.67	61	16.22	0.96

Source: Auhtors, based on GNPD-Mintel (2015); 22,406 observations ; period: January 2000 – December 2015

► Evolution of innovation with SC:

- Trend analysis on the share of products with sustainable claims with respect to the total number of products launched by species and country
- Trend analysis on the relative contribution of one specific species to the whole for a given outcome: Location quotient (Revoredo-Giha (2015))

$$LQ_i = \frac{\frac{x_i}{n_i}}{\frac{x}{n}} \quad \text{with:} \begin{cases} x_i & \text{Number of products launched with SC for the species } i \\ n_i & \text{Number of products launched for the species } i \\ x & \text{Number of products launched with SC} \\ n & \text{Number of products launched} \end{cases}$$

Source: Revoredo-Giha C. (2015) « Introduction of new food and drink products in the UK: is there a trend towards more sustainability? » Paper prepared for the presentation at the 148th seminar of EAAE.

► Evolution of innovation with SC (*project's species only*)

	Germanic		Franco-Belge		Iberian		Anglosaxon	
	trend	Const.	trend	Const	trend	Const	trend	Const
All species	3.889*** (0.404)	-12.490** (3.911)	3.295*** (0.381)	-12.901** (3.682)	1.584*** (0.254)	-2.748 (2.461)	5.684*** (0.379)	-12.876*** (3.666)
Trout	2.101*** (0.653)	-6.954 (7.117)	3.709*** (0.903)	-13.893 (9.180)	-1.848 (3.837)	46.533 (42.184)	4.501* (2.169)	-.725 (21.545)
Herring	7.788*** (1.082)	-33.214*** (10.468)	4.985*** (1.456)	-31.01* (15.510)	1.568 (1.635)	-0.876 (18.776)	7.727*** (1.688)	-37.717* (17.853)
Cod	7.018*** (1.032)	-29.080** (10.260)	3.896*** (0.675)	-20.104** (6.741)	0.819*** (0.206)	-2.307 (2.001)	6.667*** (0.754)	-24.499*** (7.293)
Pangasius	7.032** (2.785)	-39.204 (33.011)	10.544** (3.539)	-104.387* (43.114)	Ø	Ø	-4.285 (3.944)	134.523** (51.885)
Salmon	3.143*** (0.377)	-7.435* (3.654)	3.906*** (0.503)	-14.382** (4.865)	1.031** (0.465)	-1.703 (4.504)	5.985*** (0.584)	-13.186** (5.650)
Seabass	2.702 (6.527)	-22.297 (90.778)	3.730 (2.952)	-22.430 (33.931)	Ø	Ø	9.145*** (1.589)	-54.509** (16.611)

	Mediterranean		Scandi		East		Europe	
	trend	Const.	trend	Const	trend	Const	trend	Const
All species	1.548*** (0.181)	-5.787 ** (1.752)	2.669*** (0.258)	-9.906*** (2.495)	0.967*** (0.241)	-0.166 (2.457)	2.805*** (0.261)	--8.125*** (2.531)
Trout	3.405 (2.937)	-28.136 (34.337)	1.128** (0.448)	-4.430 (4.425)	0.454* (0.241)	-2.133 (2.560)	1.870*** (0.676)	-.822 (7.103)
Herring	10.069*** (2.605)	-80.902** (28.023)	5.539*** (1.194)	-25.416** (11.548)	0.903 (0.692)	-0.619 (6.696)	5.005*** (0.605)	-23.583*** (6.180)
Cod	2.047*** (0.382)	-7.005* (3.695)	5.496*** (0.826)	-23.090** (7.99)	1.728*** (0.452)	-8.536* (4.666)	3.970*** (0.407)	-16.569*** (4.004)
Pangasius	Ø	Ø	17.391** (5.144)	-178.260** (66.537)	0.684 (11.697)	30.821 (159.274)	5.732*** (1.859)	-35.319 (23.180)
Salmon	1.535*** (0.320)	-6.968** (3.203)	1.679*** (0.434)	-5.950 (4.200)	0.599** (0.201)	-2.364 (1.949)	2.552*** (0.329)	-7.406** (3.204)
Seabass	2.424 (1.448)	-14.099 (16.054)	Ø	Ø	0.862 (1.466)	-5.459 (18.104)	4.243*** (1.202)	-25.322* (14.063)

Note: Germanic (Germany, Netherland, Switzerland and Austria): 4,324 products (including 1,606 sustainable); Franco-Belge (France and Belgium): 4,545 products (including 1,370 sustainable); Iberian (Portugal and Spain): 3,308 products (including 555 sustainable); Anglosaxon (UK and Ireland): 3,484 (including 1,713 sustainable); Mediterranean (Italy, Croatia, Greece): 2,555 products (including 404 sustainable); Scandi (Denmark, Norway, Sweden and Finland): 1,598 products (including 341 sustainable); East (Czech Republic, Poland, Slovakia, Ukraine, Romania, Russia, Turkey and Hungary): 2,592 products (including 315 sustainable); Europe: 22,406 products (including 6,304 sustainable). Source: Own elaboration based on Mintel's GNPD Data. Sig:***1%, **5%, * 10%

► Evolution of innovation with SC

	Germanic		Franco-Belge		Iberian		Anglosaxon	
	trend	Const.	trend	Const	trend	Const	trend	Const
Pollock	6.918*** (0.822)	-23.855** (7.951)	5.119*** (0.707)	-21.372*** (6.838)	1.485*** (0.343)	-6.105* (3.323)	7.507*** (0.771)	-23.90*** (7.459)
Freshwater Fish	3.288*** (0.804)	-15.168* (8.278)	3.356 (2.224)	-21.103 (25.171)	0.993 (0.773)	-8.054 (9.199)	-8.054 (9.199)	23.333 (170.124)
Cephalopod	0.747 (0.693)	-1.012 (7.158)	2.351*** (0.654)	-7.632 (6.670)	1.033** (0.463)	-2.412 (4.485)	5.422** (1.824)	-13.451 (18.832)
Bluefish	3.119*** (0.789)	-15.147* (8.150)	3.585*** (0.684)	-15.517** (6.831)	1.687*** (0.289)	-6.571** (2.886)	5.350*** (0.541)	-18.717*** (5.240)
Tuna	4.947*** (0.434)	-12.155** (4.198)	3.455*** (0.472)	-8.531* (4.569)	3.981*** (0.484)	-6.015 (4.680)	6.019*** (0.916)	2.298 (8.862)
Other fish	4.189*** (1.081)	-19.886 (11.442)	3.037** (1.144)	-15.860 (11.743)	0.276 (0.455)	0.404 (5.106)	5.647*** (1.828)	-13.263 (18.503)

	Mediterranean		Scandi		East		Europe	
	trend	Const	trend	Const	trend	Const	Trend	Const
Pollock	1.433 (1.386)	-2.256 (14.802)	6.054*** (0.673)	-20.03*** (6.514)	2.768* (1.290)	-18.443 (14.765)	4.461*** (0.484)	-16.433*** (4.845)
Freshwater Fish	2.477* (1.123)	-14.905 (12.535)	2.261 (3.715)	-9.547 (38.522)	0.556* (0.264)	-2.848 (2.775)	2.856*** (0.731)	-15.148* (8.132)
Cephalopod	0.705** (0.245)	-2.974 (2.373)	1.471 (1.299)	-8.784 (15.106)	0.351 (0.280)	-0.833 (2.979)	1.717 (0.421)	-5.416 (4.306)
Bluefish	1.099*** (0.274)	-6.172** (2.738)	1.664** (0.598)	-8.665 (6.174)	0.564 (0.449)	-1.178 (4.341)	2.412*** (0.306)	-9.834*** (3.063)
Tuna	3.236*** (0.377)	-11.368** (3.771)	4.970*** (1.085)	-18.509 (10.832)	3.639*** (0.979)	-1.389 (9.472)	4.211*** (0.362)	-7.402** (3.538)
Other fish	1.542*** (0.453)	-9.362 (5.202)	1.331 (0.725)	-8.988 (8.184)	0.154 (0.184)	-0.861 (2.078)	2.224*** (0.581)	-8.608 (6.294)

Note: Germanic (Germany, Netherland, Switzerland and Austria): 4,324 products (including 1,606 sustainable); Franco-Belge (France and Belgium): 4,545 products (including 1,370 sustainable); Iberian (Portugal and Spain): 3,308 products (including 555 sustainable); Anglosaxon (UK and Ireland): 3,484 (including 1,713 sustainable); Mediterranean (Italy, Croatia, Greece): 2,555 products (including 404 sustainable); Scandi (Denmark, Norway, Sweden and Finland): 1598 products (including 341 sustainable); East (Czech Republic, Poland, Slovakia, Ukraine, Romania, Russia, Turkey and Hungary): 2,592 products (including 315 sustainable); Europe: 22406 products (including 6,304 sustainable). Source: Own elaboration based on Mintel's GNPD Data. Sig:***1%, **5%, * 10%

► Evolution of innovation with SC

► Results :

- At the European level, the share of sustainable products for all project's species has been growing over time. The largest slopes, i.e. the faster growth, were observed for Pangasius and Herring and the lowest rate was observed for Trout and Cephalopod.
- For project's species, the situation is not identical across country:
 - For Pangasius the growth is the most important in the *Scandinavian* and *Franco-Belge* groups while for Herring the faster growth is in *Mediterranean*, *Anglosaxon* and *Germanic* groups.
 - For Trout the slower growth is for *East* and *Scandinavian* groups
- If we look for all species, the share of sustainable products has the faster growth for *Germanic*, *Franco-Belge*, *Anglosaxon* and *Scandinavian*, while it is the slower for *East*, *Iberian* and *Mediterranean* groups.

► Evolution of innovation with SC (Location Quotient) (project's species only)

	Germanic		Franco-Belge		Iberian		Anglosaxon	
	trend	Const.	trend	Const	trend	Const	trend	Const
Trout	0.038 (0.032)	0.049 (0.348)	0.118 (0.097)	-0.288 (1.071)	-1.555 (0.787)	22.039* (9.350)	-0.733 (0.460)	9.248* (4.573)
Herring	0.148*** (0.035)	-0.370 (0.342)	0.127** (0.044)	-0.739 (0.470)	0.071 (0.164)	0.089 (2.044)	0.106*** (0.032)	-0.422 (0.343)
Cod	0.157*** (0.034)	-0.561 (0.343)	0.113*** (0.016)	-0.644*** (0.169)	0.050*** (0.015)	-0.181 (0.158)	0.093*** (0.013)	-0.235* (0.133)
Pangasius	-0.463 (0.315)	7.422* (3.736)	0.227** (0.075)	-2.247* (0.917)	Ø	Ø	-0.178* (0.072)	3.606** (0.947)
Salmon	-0.050 (0.043)	1.506*** (0.422)	-0.060 (0.096)	1.97* (0.990)	0.056* (0.028)	-0.105 (0.298)	-0.003 (0.024)	1.091*** (0.233)
Seabass	0.056 (0.122)	-0.488 (1.709)	0.106 (0.113)	-0.569 (1.299)	Ø	Ø	0.127*** (0.022)	-0.753** (0.237)

	Mediterranean		Scandi		East		Europe	
	Trend	Const	trend	Const	trend	Const	Trend	Const
Trout	0.294 (0.265)	-3.061 (3.373)	0.036 (0.055)	-0.062 (0.636)	0.048 (0.030)	-0.278 (0.351)	-0.303** (0.135)	4.472 (1.512)
Herring	0.541*** (0.135)	-4.464** (1.509)	0.242* (0.116)	-1.353 (1.322)	0.065 (0.092)	0.111 (1.014)	0.151*** (0.027)	-0.643 (0.301)
Cod	0.031 (0.117)	1.053 (1.329)	0.227*** (0.062)	-1.142 (0.707)	0.159*** (0.045)	-0.864 (0.500)	0.123*** (0.017)	-0.426** (0.187)
Pangasius	Ø	Ø	0.525** (0.153)	-5.404** (1.979)	0.037 (1.026)	2.982 (13.970)	0.015 (0.122)	1.091 (1.536)
Salmon	0.086* (0.042)	-0.272 (0.485)	0.055 (0.039)	-0.083 (0.444)	0.061** (0.025)	-0.338 (0.278)	-0.005 (0.020)	0.863*** (0.211)
Seabass	0.134 (0.101)	-0.915 (1.230)	Ø	Ø	0.096 (0.227)	-0.802 (2.999)	0.127** (0.052)	-0.733 (0.629)

Note: Germanic (Germany, Netherland, Switzerland and Austria): 4,324 products (including 1,606 sustainable); Franco-Belge (France and Belgium): 4,545 products (including 1,370 sustainable); Iberian (Portugal and Spain): 3,308 products (including 555 sustainable); Anglosaxon (UK and Ireland): 3,484 (including 1,713 sustainable); Mediterranean (Italy, Croatia, Greece): 2,555 products (including 404 sustainable); Scandi (Denmark, Norway, Sweden and Finland): 1,598 products (including 341 sustainable); East (Czech Republic, Poland, Slovakia, Ukraine, Romania, Russia, Turkey and Hungary): 2,592 products (including 315 sustainable); Europe: 22,406 products (including 6,304 sustainable). Source: Own elaboration based on Mintel's GNPD Data. Sig:***1%, **5%, * 10%

► Evolution of innovation with SC (Location Quotient)

	Germanic		Franco-Belge		Iberian		Anglosaxon	
	trend	Const.	trend	Const	trend	Const	trend	Const
Pollock	0.052 (0.074)	0.974 (0.721)	0.155*** (0.033)	-0.518 (0.349)	0.100*** (0.024)	-0.542 (0.254)	0.109*** (0.029)	-0.167 (0.286)
Freshwater Fish	0.062* (0.029)	-0.098 (0.302)	0.132 (0.089)	-1.073 (1.058)	0.063 (0.049)	-0.514 (0.587)	-0.029 (0.192)	1.435 (2.679)
Cephalopod	0.014 (0.036)	0.114 (0.371)	0.060 (0.047)	0.026 (0.526)	0.055* (0.029)	-0.110 (0.302)	0.063 (0.079)	0.203 (0.816)
Bluefish	0.065** (0.024)	-0.234 (0.257)	0.091 (0.051)	-0.113 (0.535)	0.104*** (0.012)	-0.500*** (0.128)	0.075*** (0.013)	-0.142 (0.128)
Tuna	-0.040 (0.090)	2.284** (0.872)	-0.380*** (0.124)	6.404*** (1.284°)	-0.011 (0.081)	2.842*** (0.843)	-0.122 (0.079)	3.046*** (0.771)
Other fish	0.069 (0.046)	0.018 (0.489)	0.079** (0.034)	-0.439 (0.364)	0.013 (0.021)	0.008 (0.241)	-0.161 (0.193)	2.916 (1.953)

	Mediterranean		Scandi		East		Europe	
	Trend	Const	trend	Const	trend	Const	Trend	Const
Pollock	-0.007 (0.215)	1.315 (2.442)	0.119 (0.114)	0.965 (1.304)	-0.345 (0.411)	5.959 (4.707)	0.077 (0.047)	0.504 (0.499)
Freshwater Fish	0.129 (0.084)	-0.754 (1.026)	0.085 (0.184)	-0.285 (2.006)	0.068 (0.038)	-0.527 (0.450)	0.080*** (0.026)	-0.394 (0.305)
Cephalopod	0.041 (0.042)	-0.100 (0.480)	0.071 (0.064)	-0.632 (0.821)	0.032 (0.027)	-0.131 (0.319)	0.040** (0.018)	0.024 (0.206)
Bluefish	0.074** (0.024)	-0.533* (0.273)	0.047 (0.062)	-0.093 (0.715)	0.033 (0.058)	0.152 (0.637)	0.068*** (0.013)	-0.181 (0.141)
Tuna	-0.287** (0.104)	5.961 (1.183)	0.045 (0.148)	1.389 (1.691)	0.062 (0.109)	2.910** (1.203)	-0.087** (0.041)	3.344 (0.430)
Other fish	0.088 (0.055)	-0.468 (0.664)	0.049 (0.036)	-0.382 (0.448)	0.0189 (0.022)	-0.148 (0.2666)	-0.015 (0.040)	0.708 (0.455)

Note: Germanic (Germany, Netherland, Switzerland and Austria): 4,324 products (including 1,606 sustainable); Franco-Belge (France and Belgium): 4,545 products (including 1,370 sustainable); Iberian (Portugal and Spain): 3,308 products (including 555 sustainable); Anglosaxon (UK and Ireland): 3,484 (including 1,713 sustainable); Mediterranean (Italy, Croatia, Greece): 2,555 products (including 404 sustainable); Scandi (Denmark, Norway, Sweden and Finland): 1,598 products (including 341 sustainable); East (Czech Republic, Poland, Slovakia, Ukraine, Romania, Russia, Turkey and Hungary): 2,592 products (including 315 sustainable); Europe: 22,406 products (including 6,304 sustainable). Source: Own elaboration based on Mintel's GNPD Data. Sig:***1%, **5%, * 10%

► Evolution of innovation with SC (*project's species only*)

► Results of LQ trend:

- At the European level, the share of sustainable products for Herring and Seabass has been growing faster compared to the average of others species, and the share of sustainable products observed for Trout is growing lower compared to the average of others species.
- For project's species, the situation is not identical across country:
 - The growth of SC Pangasius is faster in the *Scandinavian* and *Franco-Belge* groups
 - Herring the faster growth is in *Mediterranean*, *Anglosaxon* and *Germanic* groups.
 - The progression of SC Seabass is significant only for *Anglosaxon* groups.

➡ This confirms previous results

- Tuna sustainable products share is growing slower than other species (especially in France-Belgium and Mediterraneans countries.)

► **Evolution of innovation with SC** (*project's species only*)

Cod and Herring are the most innovatives species in regards of sustainability at European level

Pangasius is one of the most innovative species in regards of sustainability in France, Belgium and Scandinavian groups

Despite few references, Seabass products succed on sustainability in United Kingdom and Ireland

Trout is the less innovative species in regards of sustainability at the European level

► Evolution of innovation with SC

- *The share of SC is increasing across European countries*
 - *It's faster for northern countries*
- This trend is very different depending on the species

Are innovations in seafood market
in Europe more sustainable?

THANK YOU

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Seafood innovation – Annexes

Annexe I: Species classification

Species	Detailed species
Bluefish	Clupeidae, mackerel, anchovy
Trout	Trout
Cephalopods	Squid, calamari, cuttlefish, octopus, sepia, ...
Herring	Herring
Cod	Cod
Crustaceans	Crab, crustaceans, urchin, lobster, nephrops, scampi, crayfish, shrimp, prawns
Flatfish	Plaice, flounder, flatfish, goldbutt, sole, turbot, halibut
Haddock	Haddock
Shellfish	Molluscs, scallops, clams, shellfish, St Jacques, oyster, ...
Mussel	Mussels
Pangasius	Pangasius, cobbler, Iridescent Shark, Shark Catfish, ...
Pollock	Pollock, merlan, abadejo, whiting, colin, pollack, pollachius, hake, molva molva
Salmon	Salmon
Seabass	Seabass, bass, sea bream
Tuna	Tuna, Bonito
Seafood	Fish, seafood, surimi, roe, tarama, seaweed,...
Freshwater Fish	Bream, carp, catfish, eel, perch, pike, tilapia, vendace, zander
Other fish (species specified)	Barramundi, blackscabbardfish, bluefish (Pomatomus saltatrix), bramidae, capelin, char, john dory, escolar, hoki, lutjanidae, lumpfish, mahimahi, marlin, monkfish, mugilidae, scorpaenidae, Sebastes, shark, smelt, sturgeon, swordfish, wolffish