

## SEA PRODUCTS CONSUMPTION EVOLUTIONS IN FRANCE:

### A stability hiding great transformations

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#### Abstract:

*Trends in french household consumption are globally analysed and studied over the eighties. Household consumption is described according to its main components (fresh, deep - frozen, processed, non - processed fish or others sea products). The diverging changes in household consumption at home (products, species) and in the catering sector is stressed.*

*With these informations, we consider the historical sea product consumption as a component of the consumption behaviour which finally expands among industrial countries. Sea food consumption evolution patterns are linked to household socio - demographic criteria (socio- professional groups, urban or rural localisation, region, age of the head of household, family size) and not only to economic criteria such as income and prices.*

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## **1. Introduction**

The French sea products consumption is rather important compared to EEC level. In 1985, France was ranked fourth with 20% more than the average EEC sea products consumption (after Spain, Portugal and Belgium) (figure 1).

Sea products consumption in France has increased over two decades (seventies and eighties). The progression of global sea products consumption per inhabitant is especially acute in the eighties ; there was an acceleration of the increase which appeared after 1985. From 1980 to 1985, the French Statistical Institute (INSEE) found a growth of 5,5 points in the volume index (base 100 in 1980) and from 1985 to 1990 a growth of 24,2 points (Figure 2).

However, apparent evolution needs further analysis. Since 1981, this evolution has covered important changes in the structure of consumption and in ways to consume sea products. Consumption habits are changing and sea products consumption integrates these new behaviours.

## **2. Trends in french household consumption**

Seafood household consumption, in contrast with global seafood consumption, is characterized by a small decrease : per capita average household annual seafood consumption has been 6,9 kilograms for 1978-1980 and only 6,6 kilograms for 1983-1985 period (figure 3).

Like for frozen or fresh fish, the same phenomenon of decrease appeared in total butchery meat household consumption (average of 23,7 kilograms of butchery meat from 1978 to 1980 and 21,7 from 1983 to 1985).

This global increase over the decade seems to be due to an important increase in non household consumption, i.e. in the catering sector. According to SECODIP Panel data

elaborated for the FIOM (Market Intervention and Organization Fund for sea products), the share between domestic consumption and catering sector consumption differs for the various kinds of products. In 1988, the catering sector represented both in volume and value around 20% of the total consumption for fresh fish, dried and smoked fish, fresh molluscs, canned fish. Its part is more important for fresh crustaceans and deep frozen fish: around 34% in value and 40% in volume (figure 4).

### 3. Characterisation of household consumption

Three main factors related to consumption habits characterise household consumption:

- the decrease of the number of meals eaten at home
- the increasing consumption of sea product prepared dishes - which is not included in seafood household consumption data-
- the changes in purchase places

#### *The decrease of the number of meals eaten at home*

For non agricultural population accounting for 83% of total population, 33 meals per week were eaten at home in 1981, and 32 in 1985. Rural and agricultural population consumes even less than the average sea products consumption. Taking this element into consideration it is possible to explain one of the reasons for the decrease in domestic consumption per capita while the household consumption unit mean is also decreasing over the period 1981-1985 (from 2,08 to 2,03). However, other explanations hypotheses and data are needed to explain the decline in household consumption after 1985 in which period fewer meals were eaten at home.

#### *The increasing consumption of sea product prepared dishes*

From 1980 to 1989, a larger period, consumption of fresh sea products decreased by 4,6% meanwhile consumption of canned sea products and frozen sea products increased by 62,7% and 47,4% in volume.

But seafood household consumption data - frozen and fresh fish - given by INSEE do not include sea product incorporated in prepared fresh or frozen dishes. Therefore a main change in sea products consumption is that all more consumers seem to prefer seafood already prepared and incorporated in fresh, frozen or canned dishes.

This tendency appears to be a real trend of food products consumption. In the last INSEE report on household consumption, M. Gombert argues that consumers are abandoning traditional food products which are not directly consumable (without processing at home before consumption) and prefer more sophisticated dishes already processed by industrial means. According to this hypothesis a consumer will prefer already prepared fish over traditional fish products. The new consumers choices are among fresh or frozen filets, coated fish, canned fish, prepared dishes containing fish and surimi. The only source of data on sea product processed and incorporated in prepared meals is the French Frozen and deep Frozen Industry federation which published annual statistics. No informations are available on vacuum packed sea products prepared meals.

More precisely, taking this into account, the frozen seafood direct consumption <sup>2/</sup> has increased by 55% between 1985 and 1989 (figure 5), due to a growth in processed and non processed frozen products consumption (respectively 71% and 44%). For non processed sea products, frozen fish and crustaceans consumption rose while frozen molluscs levelled off.

The freshwater fish consumption rise (+ 69%) was due to imported salmon substitution for trout. In processed products, fritters, surimi and prepared dishes containing fish increased slightly.

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<sup>2/</sup> Direct consumption of frozen sea products is related to household demand and not to industrial demand for further processing.

The canned fish consumption structure is also changing in regards to species choices. Since 1980, the production of canned tuna enabled development of canned fish consumption (figure 6).

These observations show great transformations in seafood consumption options due to different elements such as global change in behaviour consumption linked with a new way of life and some substitution effect due to seafood price evolution. The price index increased from 100 to 164,5 between 1980 and 1985 and reached 197,4 in 1989. Sea product price increased over the period more than the household income growth : the household income index increased from 100 to 141,4 between 1980 and 1985. Thus, seafood consumption budget is rising steadily in the total consumption budgeting : 2.8% in 1985 compared to 2.4 in 1970.

#### *Changes in the purchase places*

Great variations in household consumption structure are also observable through changing in the marketplaces. In fact it would seem that changes in household consumption proceeded from development in the distribution sector over certain geographical areas (E. Meuriot, 1985).

Sea products purchases at specialist sellers (fishmongers) were decreasing except in Paris city, where buyers have specific behaviour according to sea product distribution context. An increase of sea products purchases in super/hypermarkets characterizes the evolution from 1981 to 1985 over all the areas and all the regions. This increase is due to unequal distribution development introducing delays in the homogenization of marketplaces . We can also notice an increase of the purchases in open air markets in all the regions : in 1985 a quarter of total sea products purchases comes from open air markets. Taking this element into consideration, we can assume that fresh fish and seafood are mainly bought at this type of markets (figure 7).

#### 4. Conclusion

Changes in seafood consumption in France over the studied period shows that two main consumer choices appeared, leading to two segmented consumptions : first a choice for easy and quick preparations with sea products already processed, second a choice for freshness and original products needed in elaborated recipes for the week-end meals.

However this analyse needs to be completed by a study of seafood consumption by type of household (size of the household unit, age of the head of the household, localisation,...). This would permit to identify the changes in consumer choices and demand that can be attributed to demographic and sociological patterns and those due to the economic patterns such as changes in own price of the seafood, in cross prices and in income.

#### 5. References

**Gombert (M.), 1991.** - La consommation des ménages en 1990, Collection de l'INSEE Resultats n°133-134, Série consommation et modes de vie n°27-28.

**Bertrand (M.), 1991.** - Consommation et lieux d'achat des produits alimentaires en 1985, Collection de l'INSEE Résultats n°112-113 serie consommation et modes de vie n°19-20.

**C.C.P.M., 1990.** - Rapport annuel sur l'industrie des Pêches maritimes.

**FICUR, 1990.** - Annuaire statistique.

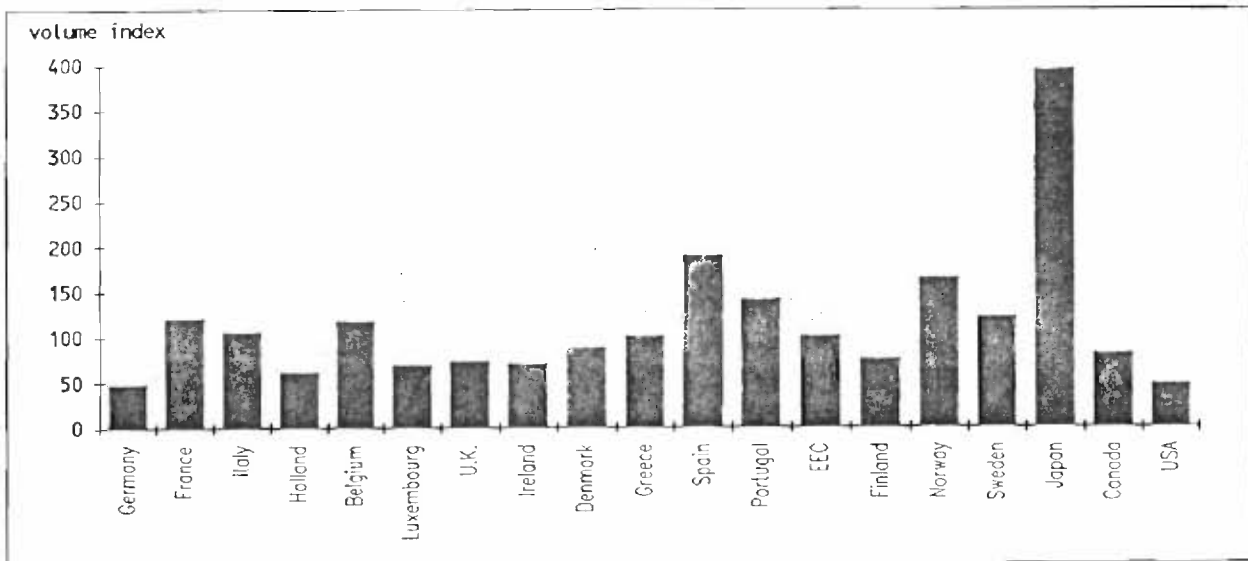
**FIOM, 1988.** - Rapport annuel d'activité.

**Meuriot (E.), 1985.** - Tendances à long terme de la consommation des produits de la mer en France in "Valorisation des produits de la mer", Rapport interne DRV/SDA: 7-22.

**Mercier (M.A.), 1984.** - Consommation et lieux d'achat des produits alimentaires en 1981, Collection de l'INSEE Résultats n°463 série M n°108.

Figure 1 Fish Final consumption per capita (1985)  
in some countries

EEC COUNTRIES	Volume index	OTHERS	Volume index
EEC COUNTRIES	100	OTHERS	
Germany	47,4	Finland	74,9
France	120,3	Norway	164,6
Italy	105,9	Sweden	121,4
Holland	61,1	Japan	394,4
Belgium	117,6	Canada	80,8
Luxembourg	68,3	USA	46,7
U.K.	72,8		
Ireland	70,4		
Denmark	87,3		
Greece	99,7		
Spain	190		
Portugal	140,4		

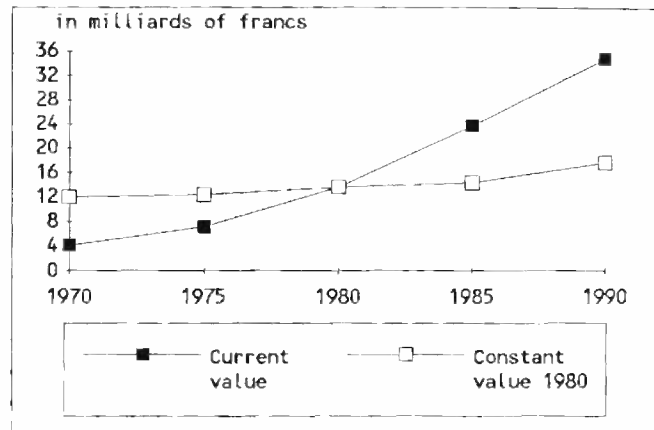


Source: Gombert (M), 1991: La consommation des ménages en 1990, Collection de l'INSEE Résultats n°133-134, série consommation et modes de vie n°27-28.

Figure 2: Household Fish products Consumption in France  
1970-1990

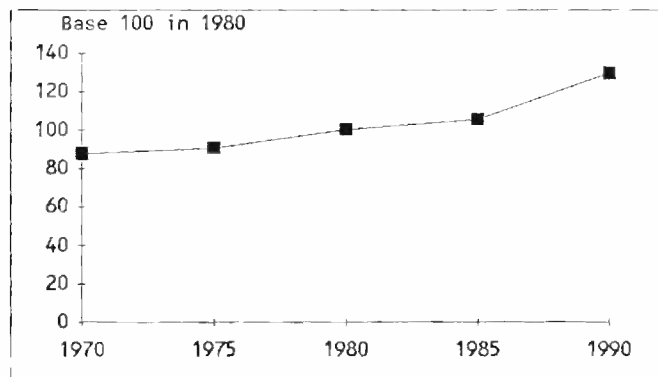
Consumption in value (in milliards of francs)

	Current value	Constant value 1980
1970	4,148	11,916
1975	7,165	12,318
1980	13,612	13,612
1985	23,677	14,363
1990	34,756	17,648



Consumption: volume index (100 = 1980)

1970	87,5
1975	90,5
1980	100
1985	105,5
1990	129,7



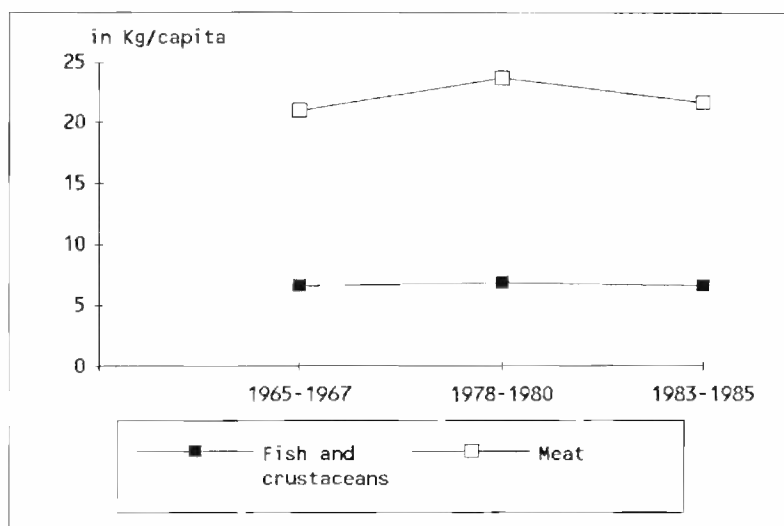
Source: GOMBERT (M.), 1991: La consommation des ménages en 1990, collection de l'INSEE  
Résultats n° 133-134, série Consommation et modes de vie n°27-28



Figure 3: Household Consumption of Fish Products per capita in France

Quantities consumed at home (in Kg /capita)

	1965-1967	1978-1980	1983-1985
Fish and crustaceans	6,6	6,9	6,6
Meat	21	23,7	21,7



Consumption by type of fish products

	1981 (in kg)	1985 (in Kg)	1985/1981 (in %)
Fish (wet, frozen, other)	6,8	6,43	-5,44
Wet fish	5,48	5,17	-5,66
Frozen fish	0,98	0,94	-4,08
Prepared frozen meals	1,03	1,68	63,11
Canned fish or meals	3,46	4,46	28,9

Source: Mercier (A.), 1984, op.cit.; Bertrand (M.), 1991, op.cit; Gombert (M.), 1991, op.cit.

Figure 4: Catering and home Sea products Household Consumption in France, 1988

	Home Consumption	Catering Consumption	Total Consumption	Share of demand by household	share of demand by catering sector
Fresh fish(1)					
volume (tonnes)	152,404	37,428	189,832	80%	20%
value(millions of francs)	6,969 MF	1,671 MF	8,640 MF	81%	19%
Smoked dried salted fish(1)					
volume	12,616	3,157	16,133	78%	22%
value(millions of francs)	1,195 MF	284 MF	1,479 MF	81%	19%
Fresh Shellfish (1)					
volume	124,807	31,216	156,023	80%	20%
value(millions of francs)	2,339 MF	620 MF	2,959 MF	79%	21%
Fresh Crustaceans(1)					
volume	22,209	13,905	36,114	61,50%	38,50%
value(millions of francs)	1,399 MF	728 MF	2,127 MF	66%	34%
Fresh Molluscs (1)					
volume	4,341	920	5,261	82,50%	17,50%
value(millions of francs)	187MF	26 MF	213 MF	88%	12%
Frozen sea products (2)					
volume	106,706	69,213	175,919	60,50%	39,50%
value(millions of francs)	4,778 MF	2,230 MF	7,008 MF	68%	32%
Canned and semi canned fish (2)					
volume	62,313	14,945	77,258	81,50%	19,50%
value(millions of francs)	2,491 MF	381 MF	2,872 MF	86,50%	13,50%
TOTAL ALL PRODUCTS					
value(millions of francs)	19,358 MF	5,940 MF	25, 298 MF	76,50%	23,50%

(1) All quantities sold in all forms without corrections (fillets whole steaks)

(2) net weight or net minimal weight of fish depending on the presentations

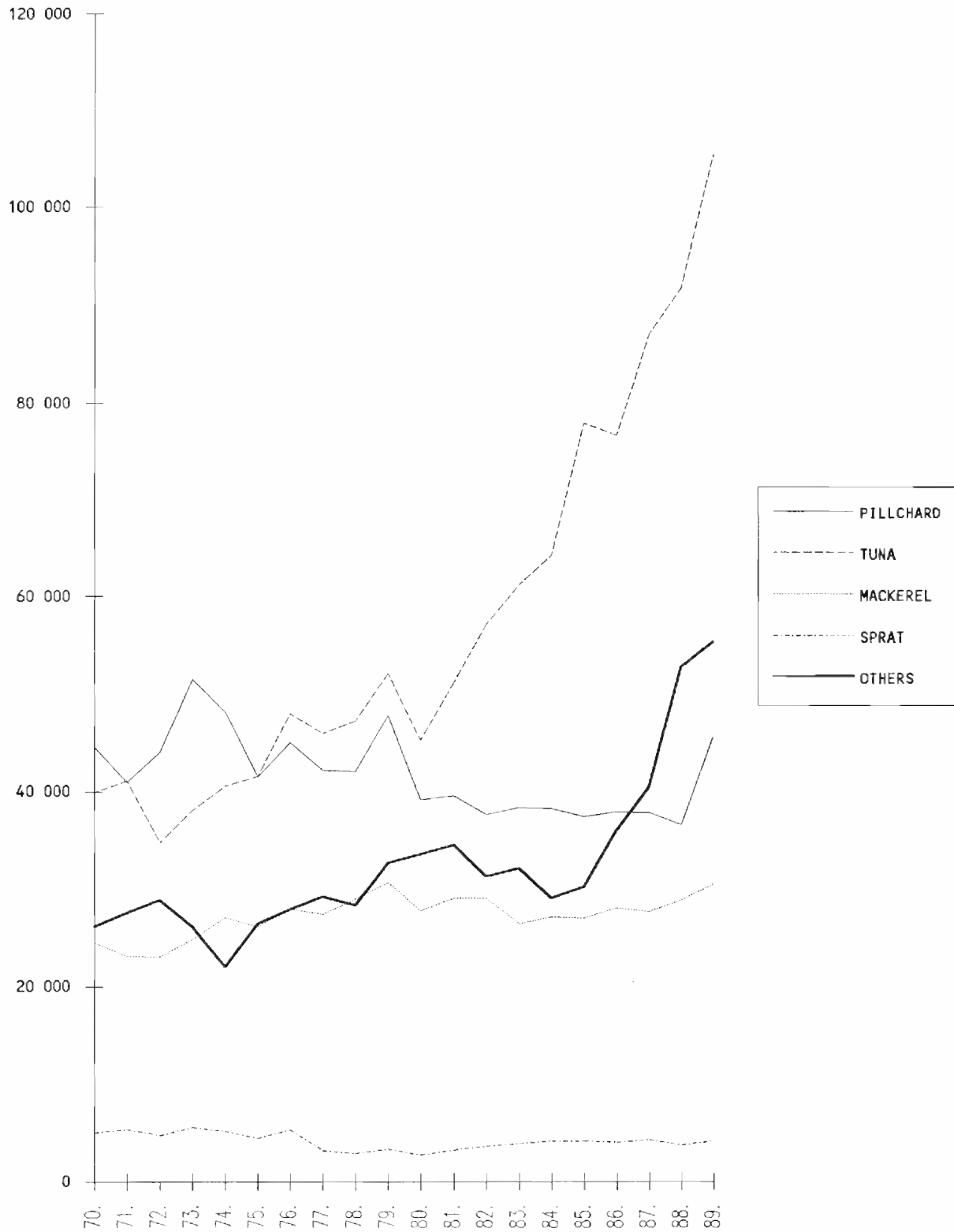
Source: FIOM, 1988, Rapport annuel d'activité.

Figure 5: Consumption of Frozen and deep frozen sea products  
by category (in tonnes)

	1985 (in tonnes)	1985 in %	1989 in tonnes	1989 (in %)	evolution 1989/85 (in %)
<b>Non Processed</b>	<b>67,398</b>	<b>39,68%</b>	<b>115,685</b>	<b>43,92%</b>	<b>71,64%</b>
whole fish	23,193	13,66%	47,123	17,89%	103,18%
crustaceans	27,178	16,00%	49,181	18,67%	80,96%
molluscs	17,027	10,03%	19,381	7,36%	13,83%
<b>Processed</b>	<b>102,441</b>	<b>60,32%</b>	<b>147,703</b>	<b>56,08%</b>	<b>44,18%</b>
fillets	38,375	22,59%	46,738	17,74%	21,79%
coated fish	30,318	17,85%	33,819	12,84%	11,55%
fritter and surimi	9,966	5,87%	20,376	7,74%	104,46%
sea product prepared meal	23,782	14,00%	46,77	17,76%	96,66%
<b>TOTAL</b>	<b>169,839</b>	<b>100,00%</b>	<b>263,388</b>	<b>100,00%</b>	<b>55,08%</b>

Source: Statistiques de la FICUR , 1990.

Figure 6: Consumption of canned fish products by species (in tonnes)

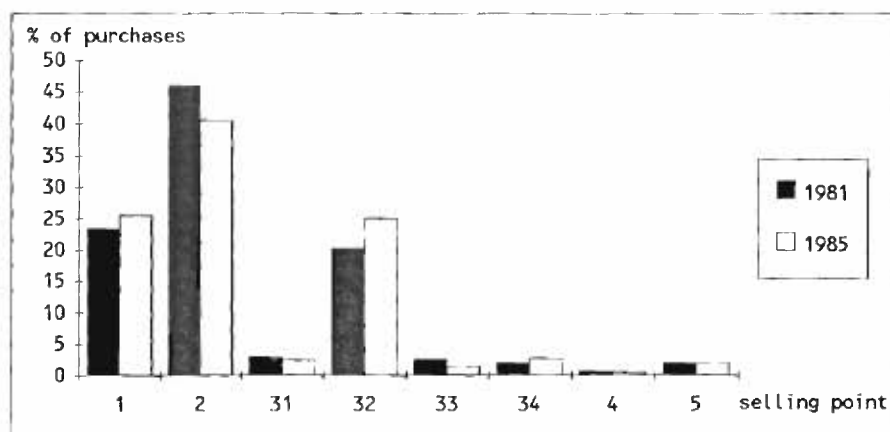


Source: C.C.P.M., rapport annuel 1990

Figure 7: Purchase by selling points in France (in %) 1981-1985

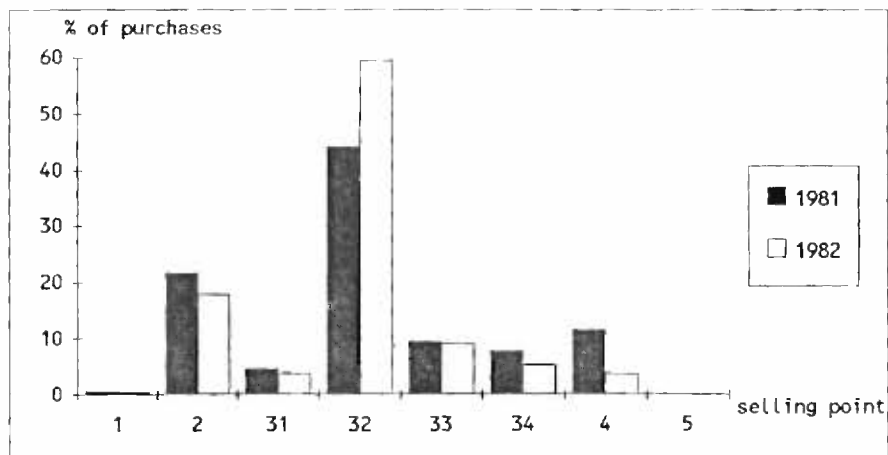
Fish shellfish crustaceans

	1981	1985
1	23,42	25,42
2	45,99	40,51
31	2,99	2,39
32	20,21	24,91
33	2,63	1,49
34	2,04	2,73
4	0,71	0,5
5	2,01	2,05



All frozen products

	1981	1982
1	0,62	0,51
2	21,71	17,88
31	4,55	3,85
32	44,17	59,57
33	9,53	9,13
34	7,83	5,22
4	11,46	3,72
5	0,13	0,12



Selling points by type

- 1 Markets
- 2 Specialized trade (Fishmongers)
- 3 Grocery store
  - 31 Traditional
  - 32 Hyper and supermarkets
  - 33 Others self services
  - 34 Door to door sales
- 4 Wholesalers, co-op or enterprises stores
- 5 Direct buying to producers

Source

Mercier (M.A.), 1984: Consommation et lieux d'achat des produits alimentaires en 1981, Collection de l'INSEE Résultats n°463 Série M n°108.

Bertrand (M.), 1991 : Consommation et lieux d'achat des produits alimentaires en 1985, Collection de l'INSEE Résultats n°112-113, Série "consommation et mode de vie n°19-20



Issy le 9/09/92

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Madame PADOUX  
Institut Océanographique

Madame,

Suite à votre demande, veuillez trouver ci joint le résumé en français de l'article présenté au colloque de la SFJO pour parution dans Haliotis.

Je vous adresse également le tableau de la figure 1 scindé en deux ainsi que la traduction des légendes. Je tiens cependant à vous signaler que je dispose d'un jeu complet des figures en français si vous le souhaitez.

Veuillez agréer, Madame, l'expression de mes respectueuses salutations,

Martine ANTONA

## Résumé

Les tendances de la consommation des ménages concernant les produits de la mer sont analysées pour la période 1980-90. La consommation est présentée pour les différents segments (produits frais, surgelés, transformés, non transformés et nouveaux produits). L'accent est mis sur les évolutions différenciées que connaissent la consommation des ménages à domicile et la consommation hors foyer (espèces et nature des produits consommés).

Ces éléments permettent de situer la consommation des produits de la mer en référence à des comportements de consommation qui se généralisent parmi les pays industrialisés. Les caractéristiques de l'évolution de la consommation des produits de la mer ne sont pas liées uniquement à des critères strictement économiques comme le revenu et les prix. On note une influence des critères socio-démographiques (catégories socio-professionnelles, habitat rural ou urbain, région, âge du chef de famille et taille de la famille).

## Légende des figures

Figure 4:

- (1) Toutes quantités vendues sous toutes formes sans correctifs (filets, entiers, blocs)
- (2) Poids net ou poids minimal net selon la présentation.

Figure 6:

Sardine  
Thon  
Maquereau  
Hareng  
Autres

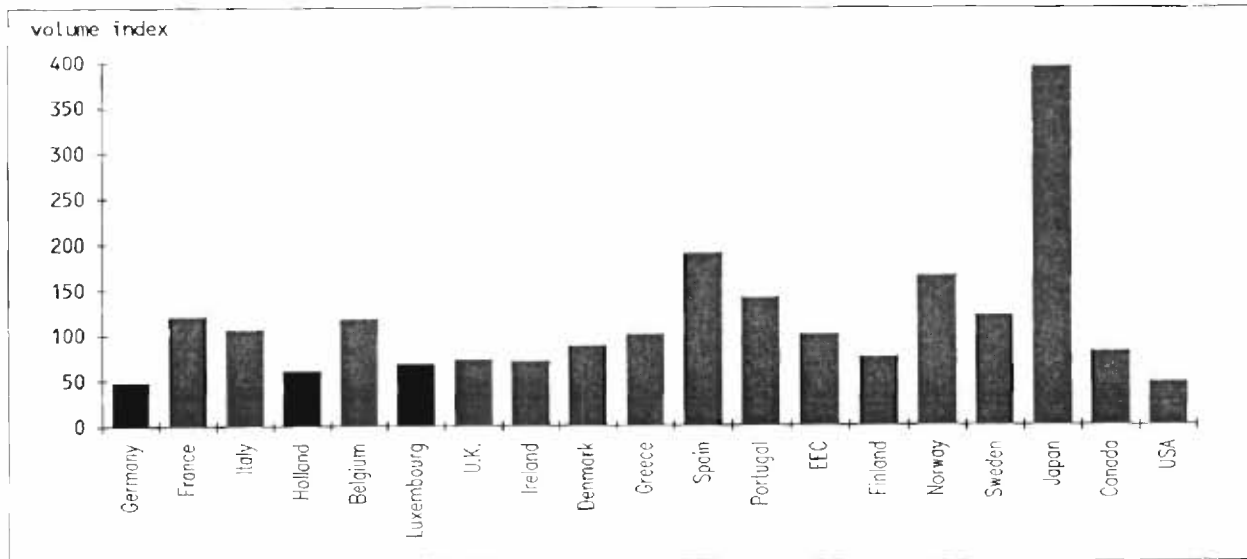
Figure 7:

Points de vente par type:

1. Marchés
2. Commerce spécialisé (poissonnier)
3. Alimentation
  - 31 Traditionnelle
  - 32 Hyper et supermarchés
  - 33 Autre libre - services
  - 34 Vente ambulante
4. Grossistes, Coopératives d'achat ou magasins d'entreprises
5. Vente directe par le producteur.

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Source: Gombert (M), 1991: La consommation des ménages en 1990, Collection de l'INSEE Résultats n°133-134, série consommation et modes de vie n°27-28.