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< French decommissioning schemes appraising their place in public assistance to the fishing industry and their impact on fishing capacity. A preliminary analysis >

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ABSTRACT

This paper deals with the decommissioning scheme policy that was launched in France at the beginning of the 90' in order to meet EU requirements as regards fleet capacity reductions. The successive schemes that were implemented during the period 1991-97 are investigated from two points of view : their place in the global policy of assistance to the fishing industry, at the EU, government and local levels, and their relation with the actual evolution of the French fishing fleet during the period. The investigation is concentrated on the region of Brittany. The main conclusions are : 1) notwithstanding the sharp reduction in ship building during the 90', public funding of decommissioning schemes never could match with subsidies liable to have effects in contradiction with the official schemes target ; 2) the impact of the schemes on fleet capacity is ambiguous, because the reduction of the fleet format was paralleled by changes in the fleet structure, and because it is difficult to ascertain that the reduction of the fleet format is the result of the existence of the schemes. Further research is planned in order to model the dynamics of the fleet.

Key words

Fishing industry, decommissioning schemes, public subsidies.

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Introduction

In March 1991 the French government inaugurated, with the so-called "Mellick Plan", a policy of public subsidies to boat-decommissioning which helped meeting the European requirements expressed in the 2nd Multi-Annual Guidance Program (MAGP) concerning fleet capacity reductions for the period 1987-91. From 1993 to nowadays several other plans were adopted, aiming like the first one at fulfilling European fleet capacity reduction targets expressed in the following MAGPs (3rd MAGP 1992-96, 4th MAGP 1997-2001).

The first purpose of this paper is to investigate the place taken by this new tool in the global policy of assistance to the French fishing industry, at the EU, government and local levels. Due to the non-existence of comprehensive statistical data covering the public assistance of local communities in aid of the fishing industry, it was necessary to collect the data by enquiring each region and department individually. Consequently, the investigation was limited to the region of Brittany and the four departments composing this region.

The paper also aims at presenting a preliminary evaluation of the impact of the decommissioning schemes on the fishing capacity of the fleet (here again, the investigation is limited to Brittany). For this purpose, data collected by enquiring public authorities subsidising the schemes, were confronted with statistical data concerning the fleet produced by the French administration of *Affaires maritimes*.

The analysis presented in this paper is mainly descriptive. It should be regarded as a preliminary to further research, based on the modelling of the dynamics of the French fleet.

1. Decommissioning schemes in the frame of public assistance to the French fishing industry

With various methods, these decommissioning schemes were co-financed by the EU and national authorities, including both French government and local communities (regions and departments). The purpose of the first part of this paper is to characterise the place taken by the decommissioning schemes of the 90' within the general policy of public assistance to the fishing industry, at the national level but also at local levels. For practical reasons, the period under investigation ends in 1997, and the survey concerning local levels is limited to one region (Brittany).

1.1 EU and State levels

At the European and national (state) levels, the evaluation of the place taken during the 90' by decommissioning schemes within the general policy of public assistance to the French fishing industry, may rely on statistical data published by the French Government (MAP, 1997). However, these data are confined to public assistance through the channel of budgetary expenditures, and therefore do not give a complete view of the public assistance to the industry, which may also include fiscal assistance and non budgetary assistance (the field covered by French government data is represented in bold letters on the following figure).

Figure 1. Different types of public assistance to an industry

1. Budgetary assistance	1.1. Public expenditures	1.1.1. Direct financing of public investments and public services	
		1.1.2. Financial assistance to firms	1.1.2.1. Direct subsidies
			1.1.2.2. Compensation for reduced interest rates
	1.2. Fiscal assistance (derogatory arrangements concerning fiscal rules)		
2. Non budgetary assistance (protectionism, access to resources, derogatory arrangements concerning competition, social or environmental matters...)			

In the case of the fishing industry, fiscal assistance is of considerable importance due to the peculiarities of the rules concerning VAT, national insurance contributions, fiscal evaluation of capital depreciation, so called "professional tax" and other matters. Non budgetary assistance may be even more important, the first assistance being the monopoly freely given by the State to the existing firms over scarce resources which are by law *res nullius*.

With provision for these restrictions, the following table depicts the place taken by decommissioning schemes (in bold characters) within the general frame of EU and Government assistance to the French fishing industry and aquaculture over the period 1991-1996 :

Table 1. EU and French government expenditures in aid of the French fishing industry and aquaculture.

Yearly average 1991-1996 (constant French Francs)

Area	Average yearly amount*	Structure	Sources of financing	
			French govt	EU
1. Exploitation of natural resources <i>of which :</i>	461	8.5%	65%	35%
1.1 Aquaculture	39	0.7%	33%	67%
1.2 Fishing industry <i>of which :</i>	422	7.8%	68%	32%
– Investment	211	3.8%	90%	10%
– Support to landing prices	100	1.8%	38%	62%
– Decommissioning	56	1.0%	27%	73%
– Temporary assistance	30	0.6%	100%	ε
– Miscellaneous	25	0.5%	60%	40%
<i>Other areas</i>				
2. Marketing and processing	91	1.7%	65%	35%
3. Research, training, administration	421	7.7%	100%	ε
4. National insurance	4462	82.1%	100%	0%
Total	5435	100.0%	96%	4%

* millions of constants 1996 French Francs. Calculated from MAP 1997 (INSEE 1997/1 for the price index).

With an average of 56 million French Francs per year, the amounts allocated by the EU and French Government to decommissioning schemes represent only slightly more than 1% of the total expenditures of these authorities in aid to the sector over the period 1991-96. The bulk of these expenditures consists in Government assistance to the special regime of national insurance of fishermen, which experiences a high deficit, due to demographic reasons but also to the relative weakness of the real contribution rates, much lower than in other sectors of the French economy.

Subsidies to decommissioning operations are classified by the French Ministry of Agriculture and Fisheries (MAP) in the so-called " exploitation of natural resources " area. As regards the fishing industry, this area mainly includes subsidies to investment in ship building and modernising, public support to landing prices, decommissioning schemes and occasional assistance to firms. The financing of decommissioning schemes represents 13% of the total EU and Government expenditures for the whole set (not including aquaculture), far behind subsidies to investment (representing 50% of the whole set, and constituted up to 98% by direct subsidies to ship building or modernising and by compensation of reduced interest rates of loans to fishing firms), and support to landing prices (24% of the whole set).

Thus it appears that, during the period under survey, EU and government subsidies, aiming at reducing the pressure on fish stocks, were outnumbered by subsidies liable to have the opposite effect. This phenomenon is all the more remarkable because subsidies to investment in the fishing industry experienced a sharp decrease during the period, being divided by three (in constant francs) between 1991 and 1995, as shown on the table below :

Table 2. Evolution of EU and French government expenditures in aid of the French fishing industry and aquaculture, 1991-1996 (millions of constant 1996 FF)

Area	1991	1992	1993	1994	1995	1996
1. Exploitation of natural resources <i>including :</i>	668.3	405.6	489.3	399.0	354.9	448.8
– Investment in the fishing industry	310.1	223.8	280.7	148.8	101.4	198.3
– Support to landing prices	85.9	80.2	79.9	141.1	144.9	69.1
– Decommissioning	195.8	13.5	29.8	15.6	37.6	41.7
– Temporary assistance	10.3	3.0	46.2	61.0	0.1	58.8
<i>Other areas :</i>						
2. Marketing and processing	51.9	60.5	102.3	87.8	131.8	110.8
3. Research, training and administration	414.0	421.2	426.5	420.9	418.5	421.5
4. National insurance	3989.2	4149.7	4292.5	4916.9	4939.1	4485.2
Total	5123.5	5037.0	5310.6	5824.6	5844.4	5466.2
<i>of which :</i>						
– French government funding	4879.5	4889.6	5123.8	5660.4	5674.1	5223.7
– EU funding	244.0	147.4	186.8	164.2	170.3	242.5

Calculated from MAP 1997 (INSEE 1997/1 for the price index)

The slump in subsidies to investment in the fishing industry during the first half of the 90' is connected with the crisis that struck this industry in France during the same period. The immediate origin of this " fishing industry crisis " was a fall in prices on the French fish market of approximately 25% in constant francs between 1991 and 1994 :

Table 3. French fishing industry : output, prices and production factors, 1991-1996

	1991	1992	1993	1994	1995	1996	yearly average 1991-96
Output							
Landings (1000 tons)	590	591	614	645	603	585	605
Turnover (millions of constant 1996 FF)	7158	6746	6279	5892	5514	5685	6212
Average landing price (constant 1996 FF /kg)	12.13	11.41	10.23	9.13	9.14	9.73	10.27
Labour							
Number of fishermen in activity*	1648	1583	1454	1399	1404	1399	14815
	8	8	1	1	3	1	
Capital							
• number of fishing boats*	7393	7139	7021	6837	6593	6475	6908
• cumulated GRT (1000 GRT)	196.0	191.2	183.8	179.0	175.1	176.0	183.5
• cumulated HP (1000 kW)	1072.	1049.	1034.	1010.	990.5	987.6	1024.1
	4	4	0	8			
• average boat GRT	26.5	26.2	26.2	26.2	26.6	27.2	26.5
• average boat HP	145	147	147	148	150	153	148

* 31 December of each year. Data source : *Affaires maritimes*. Calculated from CCPM 1992, CNPEM 1993, FIOM 1994 to 1996, FIOM 1997, INSEE 1997/2, and INSEE 1997/1 for the general price index.

The international causes of this price movement have been analysed by Guillotreau et al. (1998). Whatever the importance of these external causes, it is clear that their negative impact became critical for some segments of the French fleet (in particular recent 16-25 meter trawlers of South Brittany) because of the perilous financial situation of many boats built with important public subsidies and excessively optimistic bank loans in the 80' (MAP, 1995). The slump in investment of the first half of the 90' was merely the consequence of the over investment of the 80'. The resulting fall in subsidies to investment was more than balanced by a rise in emergency assistance measures, public support to landing prices and subsidies to the national insurance system of fishermen (see table 2 above), all these phenomena being direct consequences of the " fishing industry crisis ". Financial support to decommissioning, which had fallen in relative and absolute terms after the achievement of the « Mellick Plan » at the beginning of the decade, increased again with the new schemes that were launched from 1993, without reaching the level of 1991.

For the whole period, EU and government funding of decommissioning schemes represented less than 1% of the cumulated turnover of the French fishing industry, a figure to be compared with the ratio of EU and government subsidies to investment, reaching 3.4% on the same period despite the low level of investment :

Table 4. EU and State expenditures in aid of the French fishing industry (" exploitation of natural resources " area) compared to the turnover of the industry. Average 1991-1996

Purpose	Public expenditures / industry turnover (1991-96, constant FF)
Investment	3.4%
Support to landing prices	1.6%
Decommissioning	0.9%
Temporary assistance	0.5%
Miscellaneous	0.4%
Total (exploitation of natural resources)	6.8%

Sources : see tables 1 and 3

1.2 Local levels

Regions and departments also provide budgetary assistance to the fishing industry, and in the course of their own assistance policy they have participated in the financing of the decommissioning schemes of the 90'. However, unlike assistance at EU and Government levels, no data give a comprehensive view of the public expenditures of French regions and departments in aid of the fishing industry. It was therefore necessary to collect the data by getting in touch with each region and department, a task which up to now has been undertaken only for the region of Brittany and its four departments (Finistère, Côtes d'Armor, Ille-et-Vilaine, Morbihan).

Brittany was not chosen simply for practical reasons of proximity, but mainly for its prominent position in the French fishing industry :

Table 5. Indicators of the importance of Brittany in the French fishing industry (average 1993-1995)

	Brittany / France
Landings	
– Tons	52%
– Value (constant FF)	49%
Number of fishermen	39%
Fishing boats	
– Number of boats	29%
– Cumulated HP	41%
– Cumulated GRT	52%

Calculated from FIOM (1994 to 1996), and INSEE (1997/1) for the price index.

Data collection concerning public subsidies to fishing boats in Brittany has been completed at the regional level for the period 1990-97². As regards departments, some data concerning the same period have not yet been collected. We shall therefore limit our presentation to the

² Regional data were collected by Pascal Le Floc'h.

department of Morbihan³, for which a complete set of data concerning public subsidies at the national, regional and department levels has been collected.

The two following tables present data concerning subsidies decisions taken at the regional level. The first one concerns the whole region, and the second one concerns only boats from the department of Morbihan. The third table below concerns subsidies decisions taken at the level of the department of Morbihan.

Table 6. Subsidies of the Brittany region to fishing boats of the whole region. Cumulated data, 1990-1997.

Purpose	Decisions		Amounts		Average amount per decision *
	Number	%	Total*	%	
Ship building	78	4%	28455	13%	365
Modernising	572	31%	36188	17%	63
Purchase of second hand boats	356	19%	70064	33%	197
Decommissioning	539	29%	27628	13%	51
Temporary assistance	285	16%	49531	23%	174
Total	1830	100%	211866	100%	116

* Thousands of constant 1998 French Francs. Source : Conseil régional de Bretagne (INSEE 1998 for the price index)

Table 7. Subsidies of the Brittany region to fishing boats of Morbihan. Cumulated data, 1990-1997.

Purpose	Decisions		Amounts		Average amount per decision *
	Number	%	Total*	%	
Ship building	10	3%	2380	7%	238
Modernising	125	33%	4530	13%	36
Purchase of second hand boats	72	19%	12083	36%	168
Decommissioning	113	30%	5075	15%	45
Temporary assistance	55	15%	9904	29%	180
Total	375	100%	33973	100%	91

* Thousands of constant 1998 French Francs. Source : Conseil régional de Bretagne (INSEE 1998 for the price index)

Table 8. Subsidies of the Department of Morbihan to fishing boats. Cumulated data, 1990-1997.

	Decisions	Amounts	Average amount

³ Data collected by Typhaine Giguelay.

Purpose	Number	%	Total*	%	per decision *
Ship building	16	5%	1581	8%	99
Modernising	87	29%	5173	26%	59
Purchase of second hand boats	71	24%	4940	25%	70
Decommissioning	75	25%	2153	11%	29
Temporary assistance	52	17%	6253	31%	120
Total	301	100%	20100	100%	67

* Thousands of constant 1998 French Francs. Source : Conseil général du Morbihan (INSEE 1998 for the price index)

The field of local subsidies to fishing boats covered by the three tables above approximately corresponds to the area " exploitation of natural resources " of the classification used by the Ministry of Agriculture and Fisheries at the national level (see table 1 above). The main differences are due to the fact that local communities, unlike the EU and French government, do not support landing prices, and, on the contrary, subsidise the purchase of second-hand fishing boats.

The participation of the region of Brittany to decommissioning schemes has represented 13% of its total subsidies to fishing boats during the period 1990-97 (table 6), and for the department of Morbihan the corresponding ratio is 11% (table 8). These ratios are close to the one observed at the EU and government level for the period 1991-96 (13% - see table 1 -). As regards Brittany and Morbihan at least, regional and department subsidies to ship building and modernising are higher than their funding of decommissioning schemes, which suggests that orientations of the government policy on this subject are not balanced by the intervention of local authorities, the main originality of which is the important subsidising of second-hand boat purchases.

Comparing tables 7 and 8 (both relative to fishing boats of Morbihan) indicates that the region usually provides more substantial subsidies than the department, a feature which extends to decommissioning schemes. The predominance of regional subsidies is generally increasing over time, and this again applies to decommissioning schemes since departments in Brittany, unlike the region, have stopped financing these schemes after the « Mellick Plan »⁴.

2. Decommissioning schemes and fleet capacity reduction

The purpose of the second part of this paper is to investigate the impact of decommissioning schemes on the fishing fleet in the 90'. This matter is complicated by the disturbed economic situation of the French fishing industry in the first part of the decade. For practical reasons, the investigation is limited to the region of Brittany (see above).

The fishing fleet in Brittany has experienced major changes in the 90', as shown on the table below :

⁴ with a minor exception for the department of Côtes d'Armor.

Table 9. Brittany : fishing fleet in 1990, 1994 and 1997

Length class (metres)	under 8	8 to 12	12 to 16	16 to 25	25 and over	total
<u>Number of boats</u>						
• Fleet in 1990						
Total	851	874	370	376	152	2623
Structure	32%	33%	14%	14%	6%	100%
• Fleet in 1994						
Total	522	727	293	332	101	1975
Structure	26%	37%	15%	17%	5%	100%
• Fleet in 1997						
Total	488	685	239	290	83	1785
Structure	27%	38%	13%	16%	5%	100%
• Cumulated rate of change						
1990-94	-39%	-17%	-21%	-12%	-34%	-25%
1994-97	-7%	-6%	-18%	-13%	-18%	-10%
1990-97	-43%	-22%	-35%	-23%	-45%	-32%
<u>Average building year</u>						
• Fleet in 1990	1974	1973	1976	1980	1975	1975
• Fleet in 1994	1977	1978	1978	1983	1978	1979
• Fleet in 1997	1978	1979	1980	1984	1981	1980
<u>HP (kW)</u>						
• Fleet in 1990						
average per boat	36,5	99,4	195,4	340,0	1168,3	189,0
Total	31020	86892	72302	12785	17758	49564
Structure	6%	18%	15%	26%	36%	100%
• Fleet in 1994						
average per boat	41,3	103,9	202,8	350,41	1369,7	208,2
Total	21571	75538	59429	11633	13833	41121
Structure	5%	18%	15%	28%	34%	100%
• Fleet in 1997						
average per boat	44,3	106,3	205,0	363,9	1543,9	211,3
total	21632	72820	48983	10552	12814	37710
structure	6%	19%	13%	28%	34%	100%
• Cumulated rate of change 90-94						
average per boat	13%	5%	4%	3%	17%	10%
total	-30%	-13%	-18%	-9%	-22%	-17%
• Cumulated rate of change 94-97						
average per boat	7%	2%	1%	4%	13%	1%
total	0%	-4%	-18%	-9%	-7%	-8%

• Cumulated rate of change 90-97						
average per boat	22%	7%	5%	7%	32%	12%
total	-30%	-16%	-32%	-17%	-28%	-24%

Source : Affaires maritimes

According to official statistics, the number of fishing boats in Brittany has decreased by nearly one third during the years 1990 to 1997, and the cumulated HP of the fleet has decreased by almost a quarter (a look at 1994 data indicates that the major part of this evolution was realised during the first part of the decade). For the main part, this evolution is the result of two simultaneous forces : an important flow of decommissioning and a drastic reduction in ship-building as compared with the former decade.

The gap between the decrease in the number of boats and the more moderate decrease in the cumulated HP is caused by the combination of two phenomena : a general increase in the HP of boats in each length class, and a structural effect. The main changes in the structure of the fleet between 1990 and 1997 were the reduction in the share of the smallest boats (under 8 metres in length) and, for so-called " industrial " boats, the slump in the 25 to 38 metres length class (on the contrary, the number of boats over 38 metres decreased at a slower rate than the rest of the fleet).

As regards the age structure, the fishing fleet of Brittany keeps on getting old. Indeed, before the start of the first decommissioning scheme the average age for Brittany vessels was 15 years while in 1997 the average age was 17 years.

The following table compares the number of boats involved in decommissioning schemes and the change in the number of boats composing the fleet over the period 1990-97 :

Table 10. Decommissioning schemes in Brittany and evolution of the number of boats in regional fleet (1990-1997)

	Number of boats
Decommissioning schemes	
• First scheme (1991-92)	380
• Further schemes (1994-97)	190
<i>of which : "regular" decommissioning</i>	<i>16</i>
<i>emergency measures</i>	<i>9</i> <i>21</i>
• Total	570
<i>of which : "regular" decommissioning</i>	<i>54</i>
<i>emergency measures</i>	<i>9</i> <i>21</i>
Fishing fleet	
• 31.12.1990	2623
• 31.12.1994	1975
• 31.12.1997	1785
• Variation 1990-94	-648
• Variation 1994-97	-190
• Variation 1990-97	-838
Comparing schemes / fleet (%)	
• 1st scheme / Fleet in 1990	14%
• Further schemes / Fleet in 1994	10%
• All schemes / Fleet in 1990	22%
• 1st scheme / Fleet variation 1990-94	59%
• Further schemes / Fleet variation 1994-97	100%
• All schemes / Fleet variation 1990-97	68%

Sources : Conseil régional de Bretagne, Conseils généraux, MAP, Affaires maritimes.

The above table indicates that boats involved in successive decommissioning schemes over the years 1991-97 represent 22% of the total number of boats in the regional fishing fleet in 1990, and account for more than two-thirds of the global reduction in the number of boats during the period⁵. This suggests an important contribution of decommissioning schemes to the reduction of the global size of the regional fleet during the 90'.

⁵ These figures might underestimate the reality, due to possible inaccuracy in the statistical sources, particularly as regards the first decommissioning scheme.

But the number of boats gives a poor representation of the fishing capacity of a fleet, particularly when important changes in boat characteristics and in the structure of the fleet occur, which was clearly the case in Brittany during the 90' (see table 9 above). It is therefore necessary to investigate more precisely the characteristics of the boats involved in the decommissioning schemes, and to compare them with the corresponding characteristics of the fleet at the beginning of the period under investigation :

Table 11. Decommissioning schemes in Brittany (1991-97) and regional fleet (1990) : comparative characteristics

Length class (metres)	under 8	8 to 12	12 to 16	16 to 25	25 and over	total
<u>Number of boats (structure)</u>						
• Fleet in 1990	32%	33%	14%	14%	6%	100%
• Decommissioning schemes	42%	34%	12%	7%	4%	100%
<u>Average building year</u>						
• Fleet in 1990	1974	1973	1976	1980	1975	1975
• Decommissioning schemes	1968	1967	1965	1970	1969	1967
<u>HP (kW)</u>						
• Fleet in 1990						
average per boat	36.5	99.4	195.4	340.0	1168.3	189.0
structure	6%	18%	15%	26%	36%	100%
• Decommissioning schemes						
average per boat	33.5	74.7	156.8	266.2	842.3	113.4
structure	12%	23%	17%	17%	31%	100%
<u>GRT</u>						
• Fleet in 1990						
average per boat	3.1	8.1	27.0	59.6	470.5	43.3
structure	2%	6%	9%	20%	63%	100%
• Decommissioning schemes						
average per boat	3.1	7.3	26.3	46.4	374.4	26.2
structure	5%	10%	12%	13%	61%	100%
<u>Crew</u>						
• Fleet in 1990						
average per boat	1.4	2.2	4.0	5.9	13.4	3.4
structure	13%	22%	17%	25%	23%	100%
• Decommissioning schemes						
average per boat	1.4	2.0	4.3	5.7	13.0	2.8
structure	21%	25%	19%	15%	20%	100%

Sources : see table 10

The above table indicates that the boats involved in the decommissioning schemes were smaller and less powerful than the average of the fleet in 1990. This suggests that decommissioning schemes contributed to increase the average size and HP of the boats in the fishing fleet during the period. Consequently, their contribution to the reduction of the fishing capacity might be less impressive than what is suggested by the mere accounting of the number of boats involved.

Moreover, the age of boats involved in decommissioning schemes (24 years on the average for the first scheme, 28 years on the average for the following schemes) raises questions as to the efficiency of these schemes, in terms of reduction of fishing capacity. Not only " old " HP and GRT boats are less productive than more recent ones because of wear-and-tear and obsolescence, but one may wonder how many of the boats involved in the schemes of the 90' would have been spontaneously decommissioned during this decade, had the schemes not existed.

A sample survey of fishing activities in Northern-Brittany indicated that the life duration of boats regarded as " normal " by fishermen ranged between 20 and 35 years, with a mean of 28 years and only very few skippers regarding as " normal " a life span over 30 years (Boncoeur, Bailly and Le Floch, 1997). This result suggests that part of the subsidies to decommissioning schemes might have resulted merely in creating windfall profits for boat-owners who would have, anyhow, decommissioned their boat during the decade. Testing this hypothesis implies modelling the dynamics of the fleet, in order to be able to simulate what would have happened if the schemes had not existed.

Conclusion

Two main conclusions can be underlined:

1. Notwithstanding the sharp reduction in shipbuilding during the 90', public funding of decommissioning schemes never could match with subsidies liable to have effects in contradiction with the official schemes target.
2. The impact of the schemes on fleet capacity is ambiguous. The real reduction is less important than the apparent one, and in many cases it is doubtful whether the schemes are the real cause of decommissioning.

The purpose of our further research is to set up a « life table » of fishing boats for the period 1991-1997 when decommissioning schemes were launched and a life table for the 80's. A comparison of the two tables would enable us to conclude on the existence or the non-existence of a windfall effect. However, this task is complicated by the low availability and poor quality of data for the period before the decommissioning schemes.

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