

ErgoMare – 5 au 7 octobre 2006

**« ERGOSPACE » PROJECT :
INTERACTIONS BETWEEN WORKING SPACES, ERGONOMICS AND
OCCUPATIONAL ACCIDENTS PREVENTION.
PROGRESS SITUATION**

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- Non profit organisation ; created in 1992 and located in Lorient.
- Occupational accidents prevention for seafarers : commercial fishing, merchant marine and shell farming.
- Mainly supported by the French social security system for seafarers = ENIM.
- Can be considered as the prevention tool of this particular social security system.



- Staff about 10 ; 5 are occupational health and safety specialists.
- Missions cover the whole French coastline.
- In 2004, 48000 active seafarers, 26000 of them working as commercial fishermen.
- In France mainland in 2004, about 5400 commercial fishing vessels were exploited, 75 % less than 12 m (36 ft) long.



- A project arising from three statements :
 - « IMP experience shows that, on existing fishing vessels, improving working space is difficult and, on new fishing vessels, different rules may prevent from optimisation of space layout ».
 - « Analysis of occupational accidents show that some of them are related to a lack of working space ».
 - « Bad layout of the working space, combined with a lack of protections, contribute in most occupational accidents on board fishing vessels ».



Work in progress and evolutions (1/1)

- A project divided in four studies :
 - Demonstration of a statistical link between working space and occupational accidents.
 - Analysis of the various constraints existing during the design and building process of commercial fishing vessels.
 - Analysis of the number of fishing vessels built since the mid - 80s.
 - A comparison with the situations in three foreign countries.

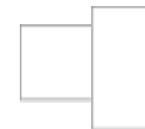


- Try to demonstrate a correlation between vessels length, considered as the main determinant of the working space, and occupational injuries.
- Two kinds of information are used (period 1996-2005) :
 - the reports by the IMP health and safety specialists following fishing trips on board fishing vessels (more than 50 exploitable reports out of 100 trips),
 - occupational injuries and their circumstances, as declared to IMP.



- The study is far from completion.
- A few results already available. For example : relationship between falls overboard and vessels' sizes.

Vessels' length	Share in falls overboard (%)	Share in overall occupational injuries (%)
< 12 m	47,4	28,9
12 – 16 m	23,7	17,8
16 – 25 m	22,2	33,3
25 – 38 m	2,2	6,4
> 38 m	3	11,7
Not communicated	1,5	1,9



- This part of the project most evolved, from the analysis of one particular constraint to the identification of a « constraints net ».
- Four directions for work :
 - identify the existing constraining rules,
 - study the constraints that are taken into account by the owners when building a new fishing vessel,
 - study the constraints that are taken into account by the shipyards,
 - Study the possible effects of cultural and social pressures.



- Existing regulations coming from the European Community (influence of TAC and quotas ?) or France.
- Several French regulations can generate threshold effects :
 - rules concerning the vessels' safety, with different requirements according to the size of the boats (< 12 m ; 12 – 24 m ; > 24 m),
 - social laws which, sometimes, are different according to the size of the boats (+/- 25 m),
 - rules concerning the calculation of vessels' tonnage, different under or above 15 m.



- Constrains taken into account by owners. A study based upon interviews. Three aims :
 - to understand and balance the weight of the various mandatory rules during the design and building process,
 - to find other constrains taken into account : economic aspects (cost of a new building, resell easiness of the boat...),
 - to question the owners about the way they integrate occupational health and safety during the conception and construction process of their future fishing vessel.



Evolution of the fishing vessels' buildings (1/4)

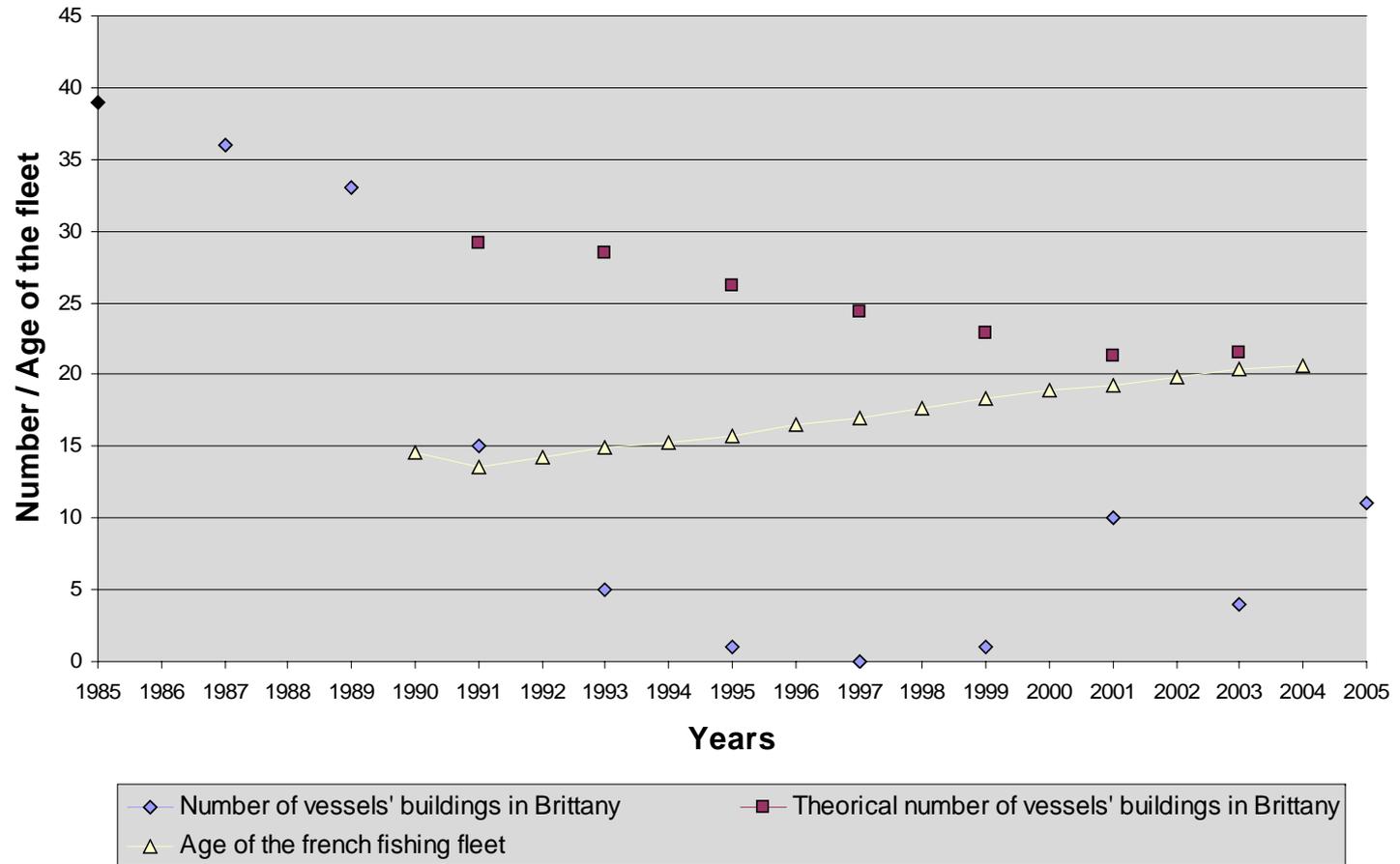
- A question which appeared later in the project.
- Before thinking about its main characteristics, a owner has first to be able to build a new fishing vessel. What is the situation of fishing vessel building in France ? In the past years, were owners able to renew their working tools ?
- A study based upon information concerning :
 - the number of fishing vessels (>12 m) built in Brittany since 1985,
 - the evolution of the French and Britton fishing fleets since 1989,
 - the evolution of the fishing fleet's age since 1990.





Evolution of the fishing vessels' buildings (2/4)

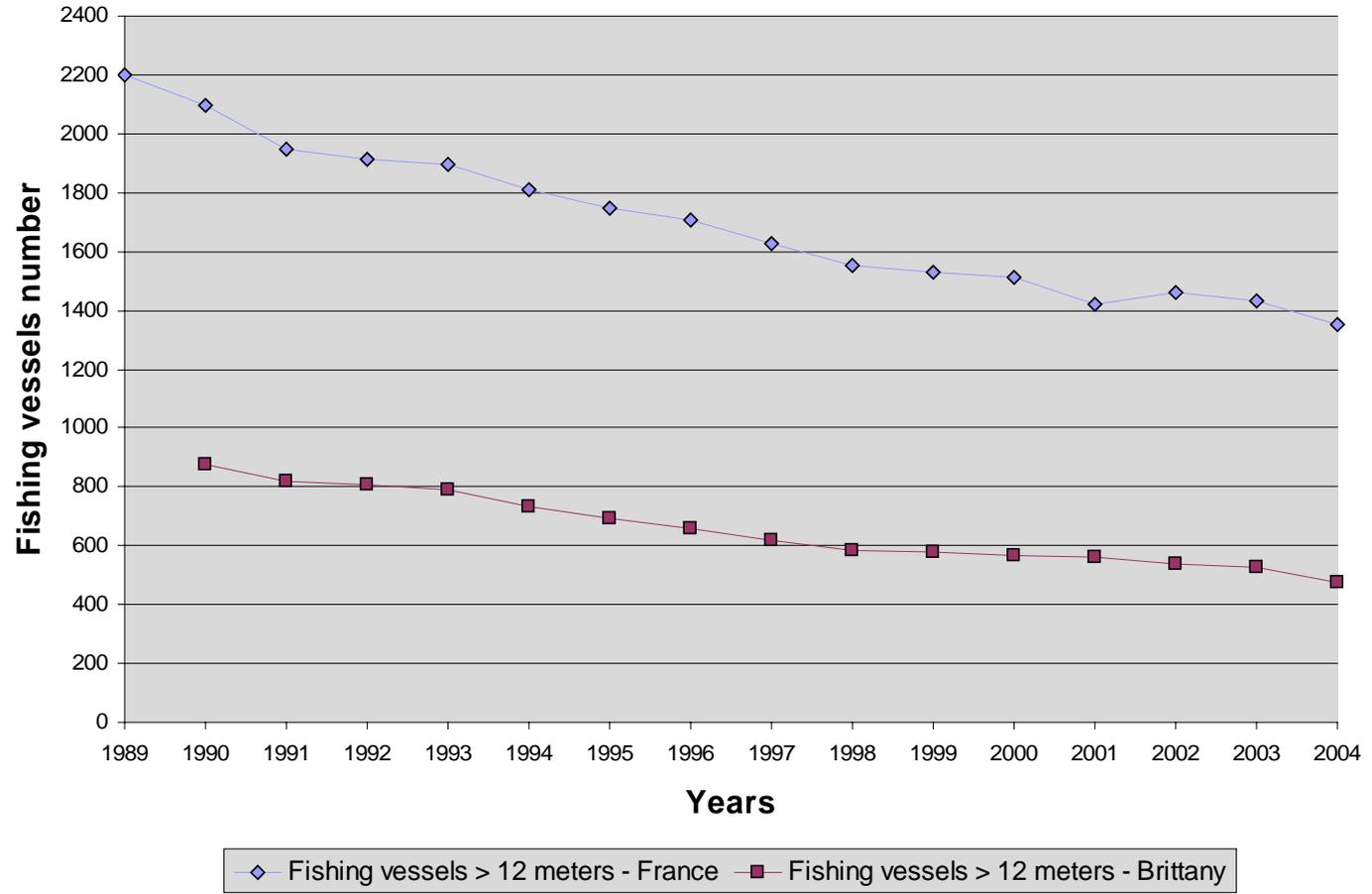
- Evolution of the number of buildings and of the age of the fleet (vessels > 12 m).





Evolution of the fishing vessels' buildings (3/4)

- Evolution of the fleet in France and in Brittany (vessels > 12 m).



- To conclude about this part :
 - a lack of vessels' buildings in the 90's and early 2000's,
 - situation in relation with the measures taken in application of European Community requirements (POP),
 - 2 consequences for occupational accident prevention :
 - ✓ less opportunities for owners to try to improve health and safety through new buildings,
 - ✓ possible increase in older vessels modernisation or transformation projects, which are generally less efficient for health and safety improvements.

Conclusion

- First findings coming from comparative investigations in two foreign countries : Denmark and Alaska.
- Two countries where sea resource management is partly based on Individual Fishing Quotas (IFQ) and where the following consequences can be observed :
 - « rationalization » of the fleet : sharp decrease in the numbers of fishing vessels and commercial fishermen,
 - a very small number of new fishing vessels' buildings due to the « rationalization » and to the run for quotas,
 - A positive impact on occupational health and safety, mainly in comparison with « derby » style fishing.

