

Self-imposed catch shares by French producers organizations



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EUROPEAN UNION TAC
Species-areas
1983 and onwards



NATIONAL QUOTAS
“Relative stability keys”



POs AND NON POs SUB-QUOTAS
2006: based on 2001-2003 vessels track records
POs Recognized by the EU since the end of 60's
↗ Delegation of powers from fisheries
administration (1997, 2010) Pooling, sanctions



VESSEL QUOTAS
Non transferable, may be different from track
records



To which extent catch share systems (i.e. vessels quotas) have been established by POs?

Explain vessel quota management practices by POs?

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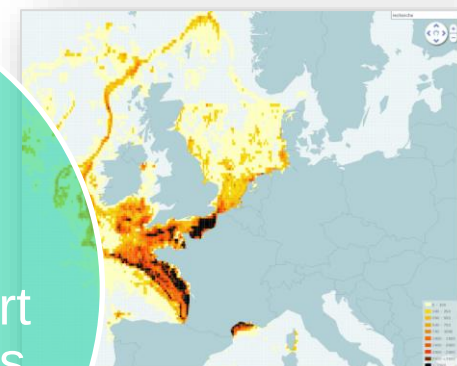
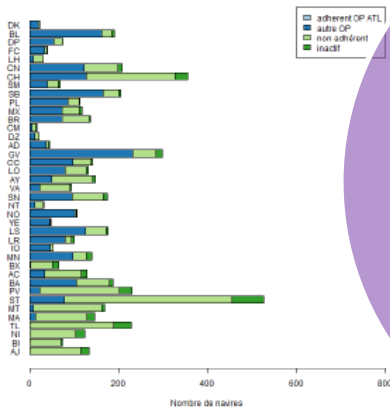
13 Atlantic POs



POs national survey

sub-quotas, vessels track records membership to POs

Fleets, vessels effort and landings



Vessel quotas in POs: Results for 2010

Fig 1. POs sub quotas (#468)

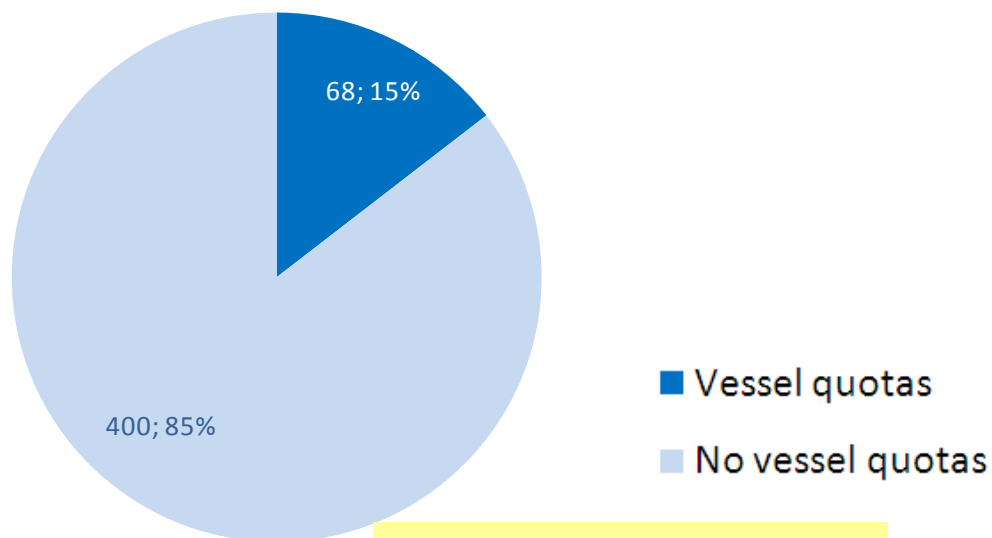


Fig 2. POs sub quotas (TAC Landings values)

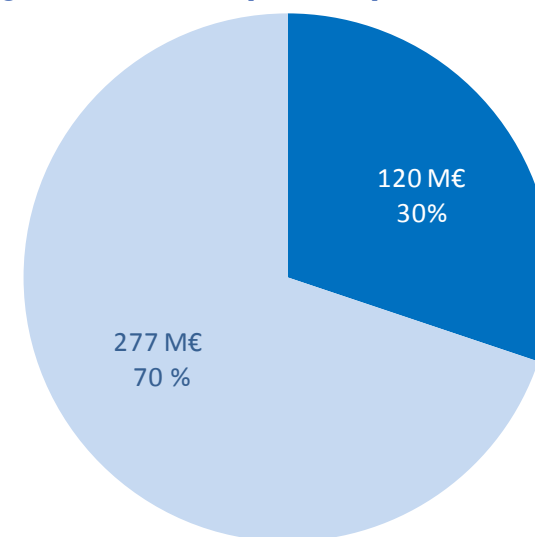
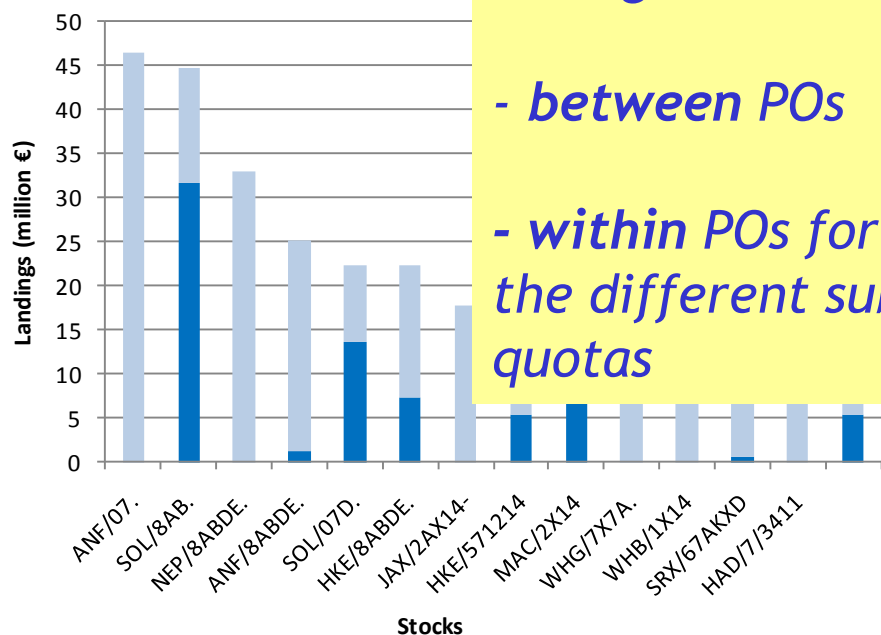


Fig 3. Landings value p

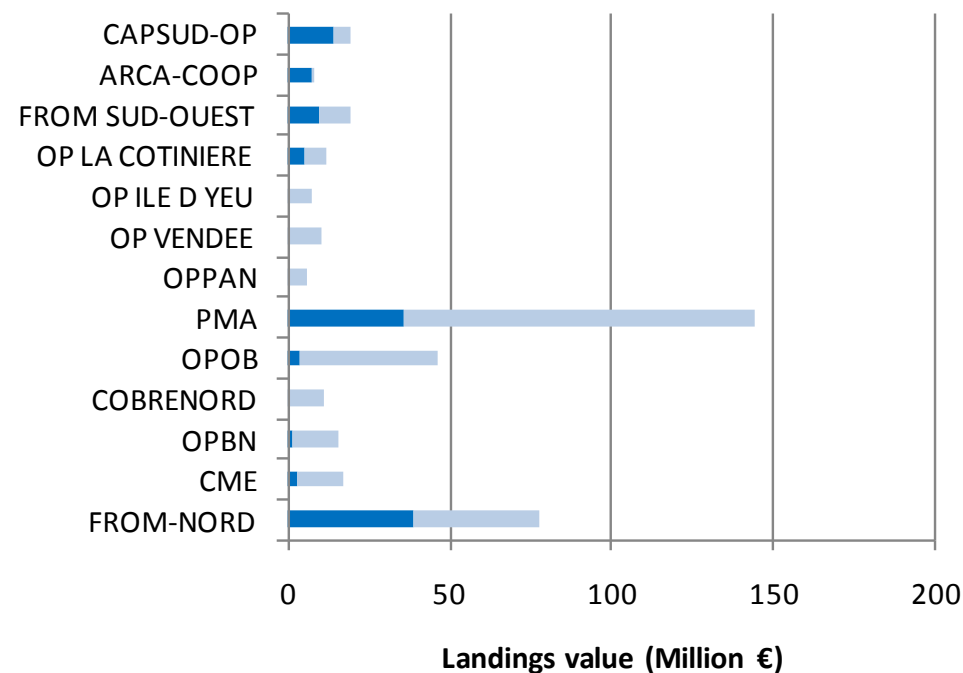


Vessel quotas management is not homogeneous

- between POs

- within POs for the different sub-quotas

Fig 4. Landings value per POs



Explain vessel quota management practices by POs?

468 POs sub-quotas observations (w)

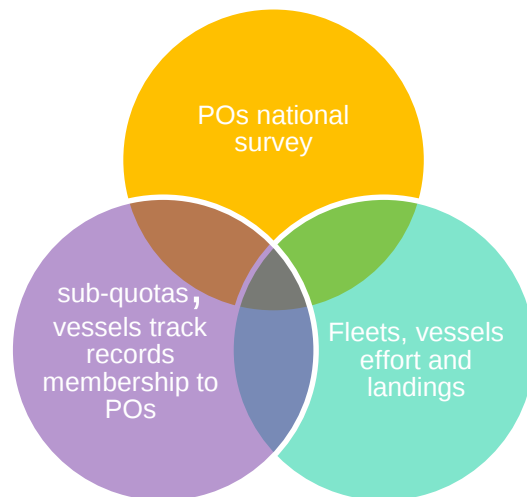
Logit model:

■ Vessel quotas

■ No vessel quotas

1
0

$$\ln \left[\frac{\pi(\omega)}{1 - \pi(\omega)} \right] = X(\omega) \cdot a$$



Explanatory variables from
litterature on self/co-
management by fisheries
cooperatives, management of
CPRs, social capital, economic
incentives ...

Explanatory variables

PRODUCERS ORGANIZATION

Human-financial resources

- *Permanent staff in PO*
- *for sub quotas management*
- *Education, skills, ...*

PO governance, design rules

- *Centralised, decentralized, other*

Monitoring & enforcement

- *Log-books-sales recording types*
- *Sanctions to PO members,*
- *Incentives not to exceed quotas*

Leadership

- *?*

PO Dependence on sub-quotas

- *% value landings, ...*

Groups size, members characteristics

- *vessels in each PO*
- *Vessels catching sub-quotas*
- *Fleets, districts, size (H indexes)*

Sub-quotas consumption rate

- *Uptake ratios recent or historic*

OTHER POs

PO characteristics

- *Nb of POs fishing same sub-quota,*
- *'market power' of each POs for sub-quotas*

NON POs VESSELS

Potential free riders

- *Number*
- *quota landing value, ...*

GOVERNMENT- FISHERIES ADMINISTRATION

Support, incentives, norms



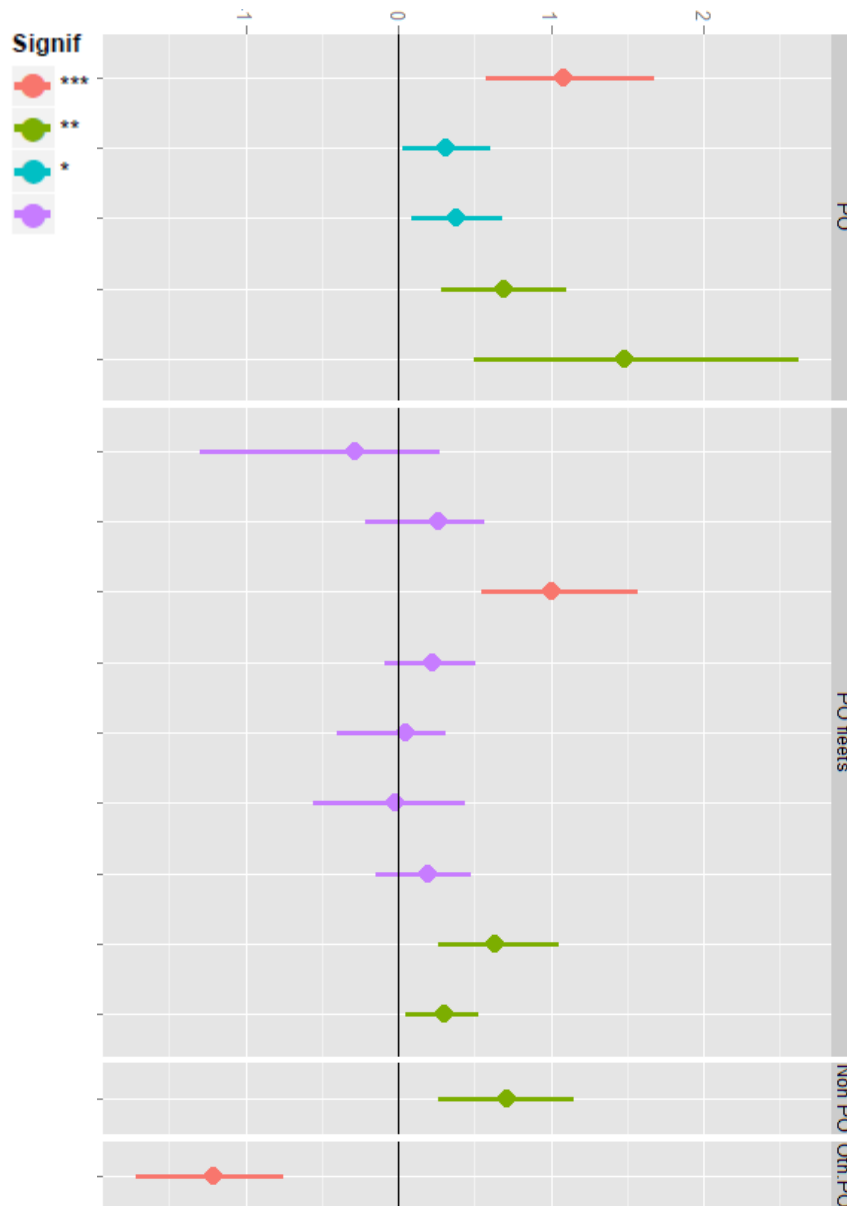
Explanatory variables

Quota overfishing : Deduction of quotas according to EC and French regulation applied to POs

Extent of overfishing relative to permitted landings	Multiplying factor
Up to 5%	Overfishing * 1.0
Over 5% up to 10%	Overfishing * 1.1
Over 10% up to 20%	Overfishing * 1.2
Over 20% up to 40%	Overfishing * 1.4
Over 40% up to 50%	Overfishing * 1.8
Any further overfishing greater than 50%	Overfishing * 2.0

Model results

Standardized normal distribution : coefficient = log (odds ratio)

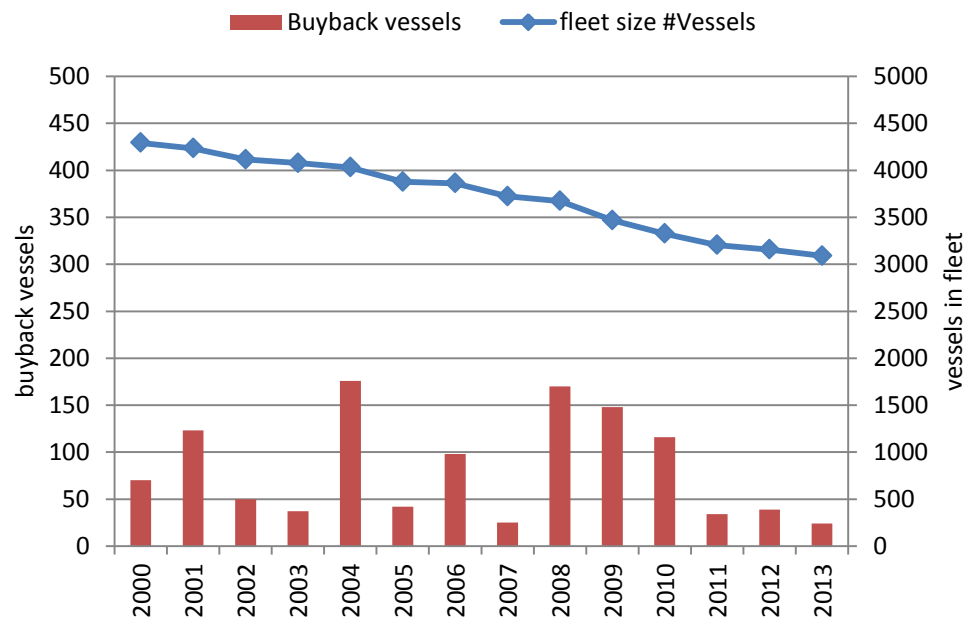


Variables	Change in the variables	Odds ratios
PO sub-quota uptake ratio (historic)	+1%	× 1.029
PO sub-quota dependence	+1%	× 1.038
PO vessels fishing sub-quota	+1	× 1.014
PO full-time equivalent employees / vessels	+1%	× 2.786
PO internal mode of governance	0 ⇒ 1	× 4.375
PO trawlers fishing sub-quota	+1%	× 1.024
PO netters fishing PO sub-quota	+ 1%	× 1.023
PO Purse seiners fishing PO sub-quota	+ 1 %	× 1.039
Non PO vessels fishing sub-quota	+1 vessel	× 1.059
Number of POs holding sub-quota	+1 PO	× 0.687

Additional drivers

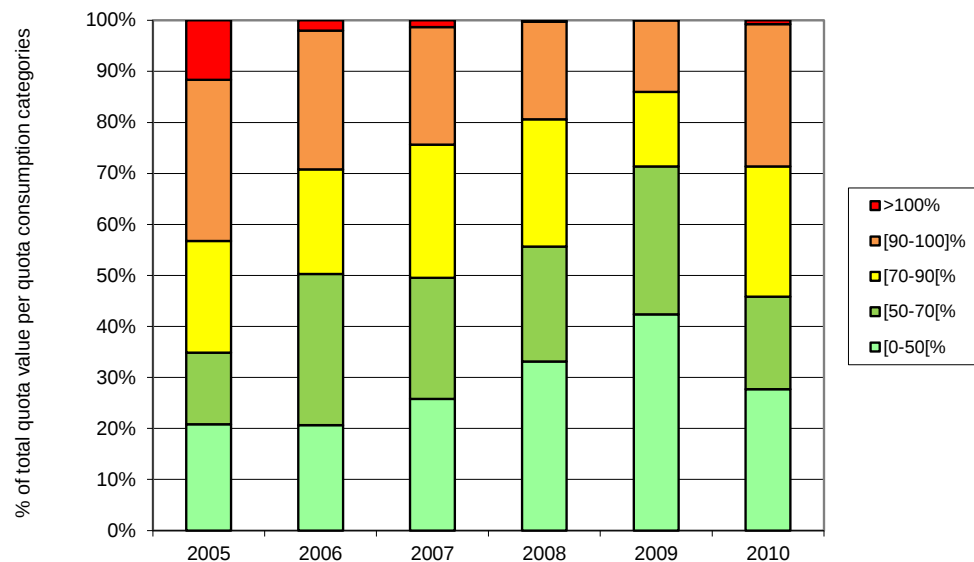
More efficient buyback schemes

Fleet and buyback vessels in the Atlantic Area



-28% in vessels number

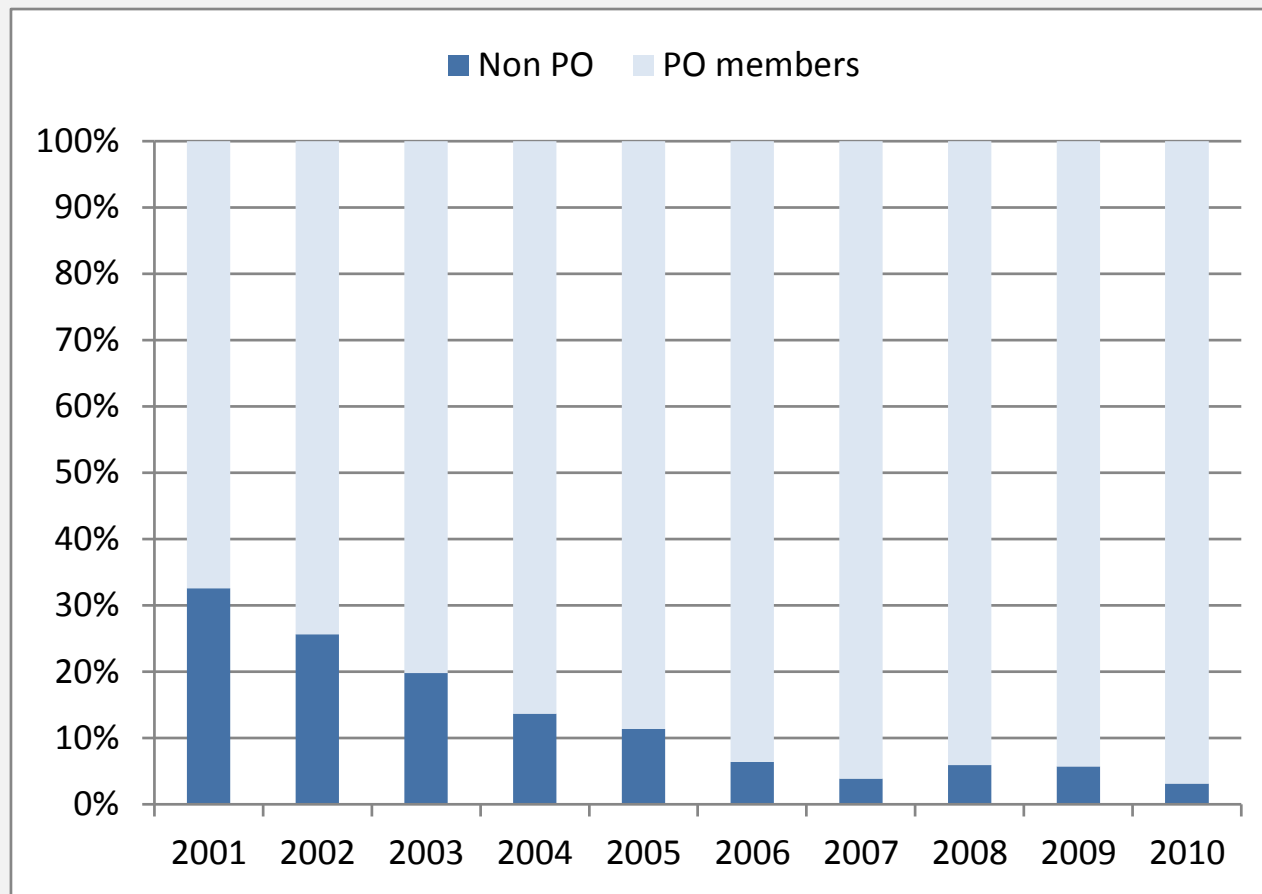
Sub-quotas uptake ratios



Reduced pressure on POs sub-quotas

Increasing membership to POs

Example: Common sole fishery (ICES area VIIIab)

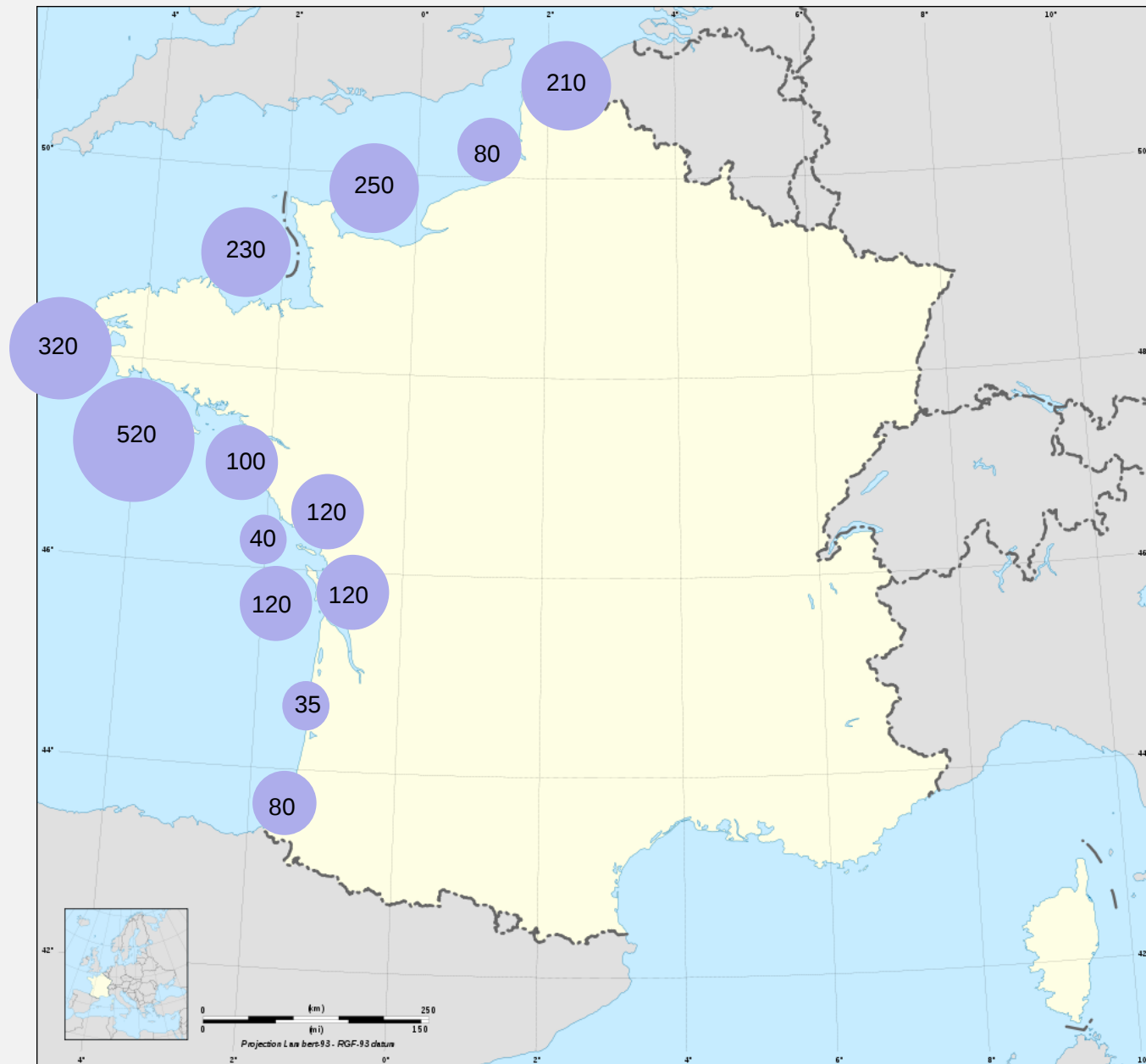


- Avoid quota closure for non-POs vessels,
- Benefit from quota-pooling by POs,
- Difficulties to enter POs without 'track records' over the recent period

➤ Compliance

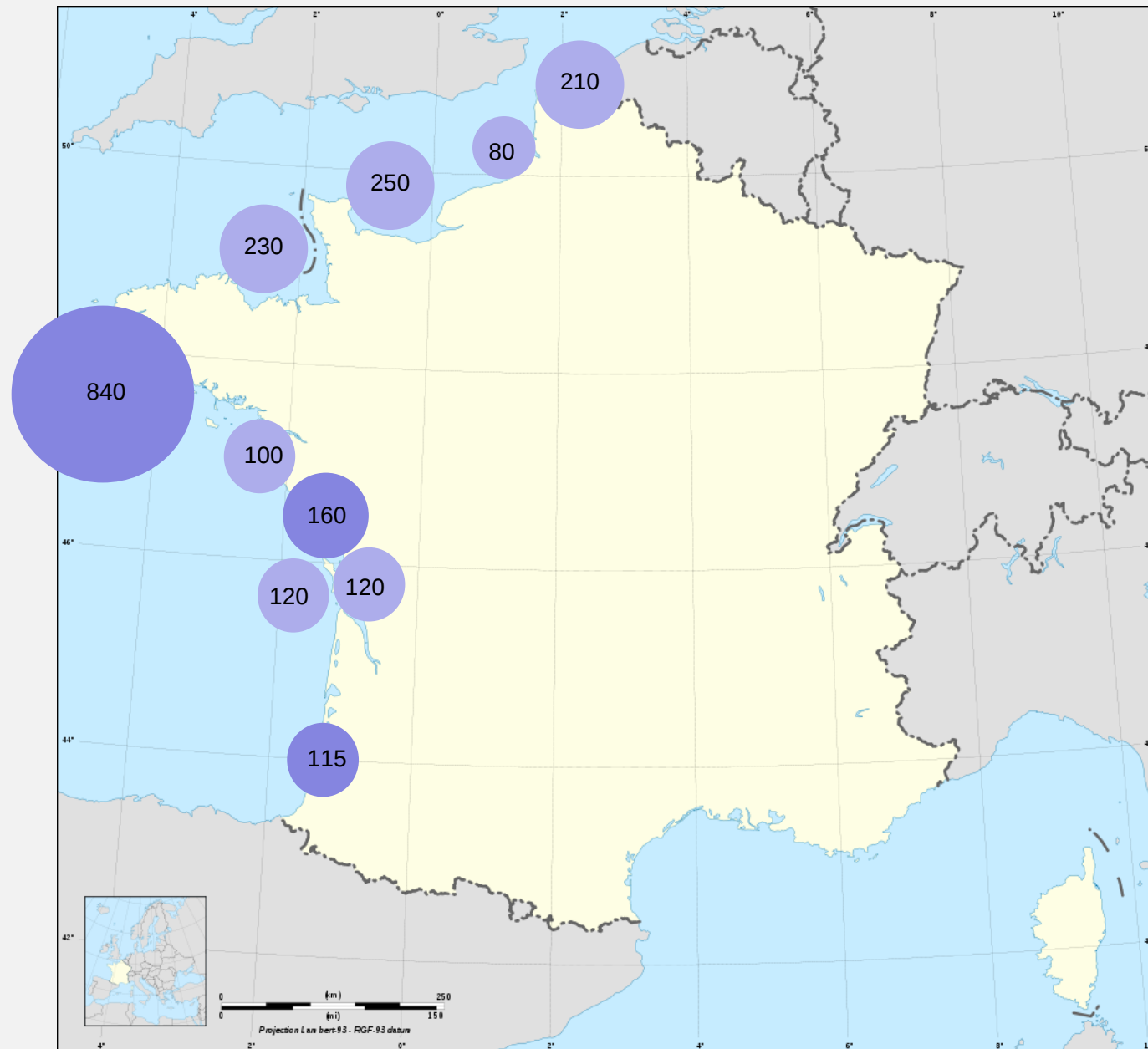
Merging of POs

Number of vessels per PO in 2010



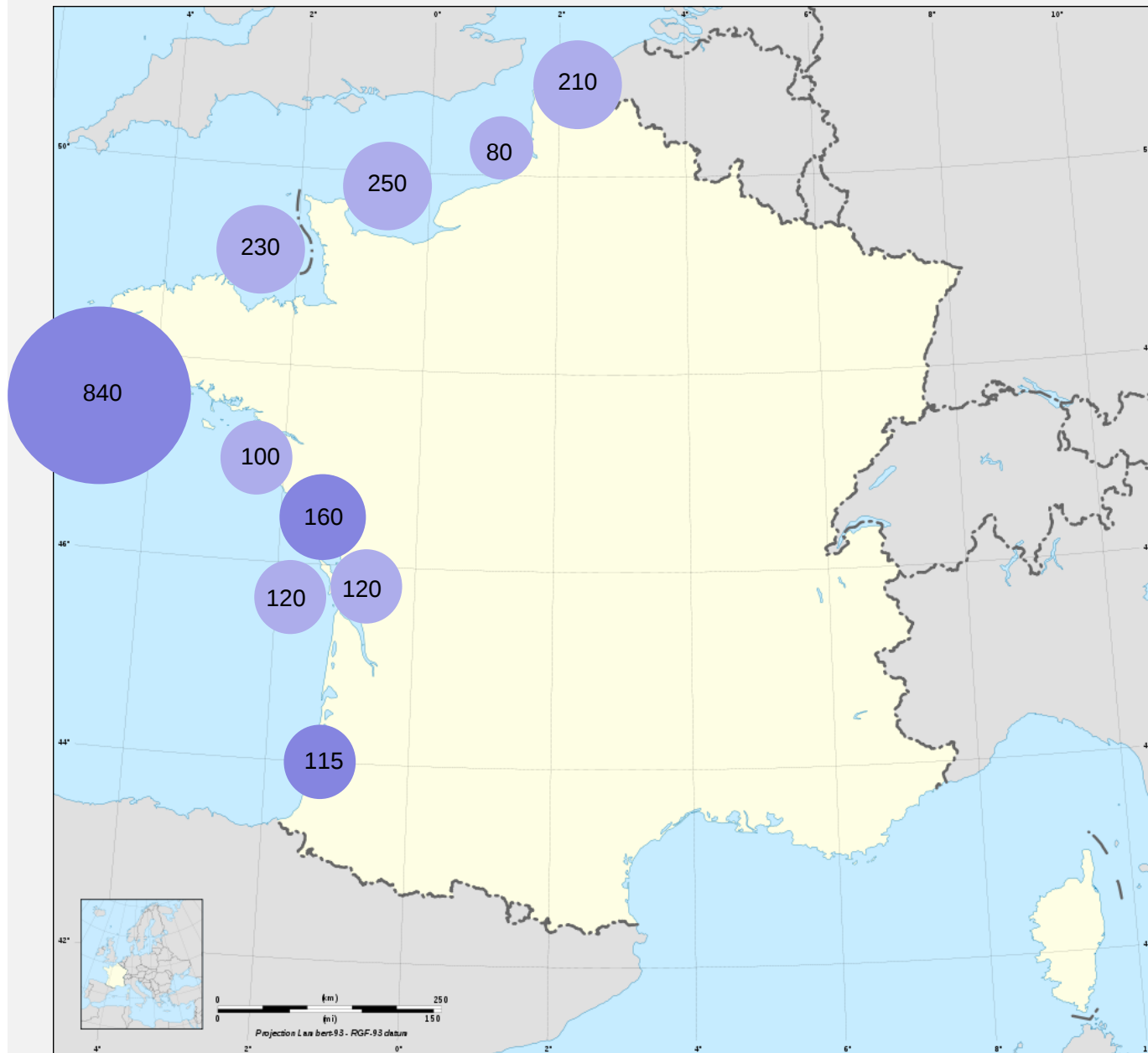
Merging of POs

Number of vessels per PO in 2014



Merging of POs

Number of vessels per PO in 2014



- Biggest PO in the EU
- Generate scale economies within POs (management team)
- Compensate the lack of transferability of 'track records' between vessels and POs

Catch shares still in development!

Positive but ambiguous system

(see Larabi, Guyader et al. 2013 OCM)

Research challenges

Merging of POs and of social capital ?

Thank you for your attention

With the support and funding
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