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IUU FISHERY STUDIES OF UKRAINE IN THE BLACK SEA

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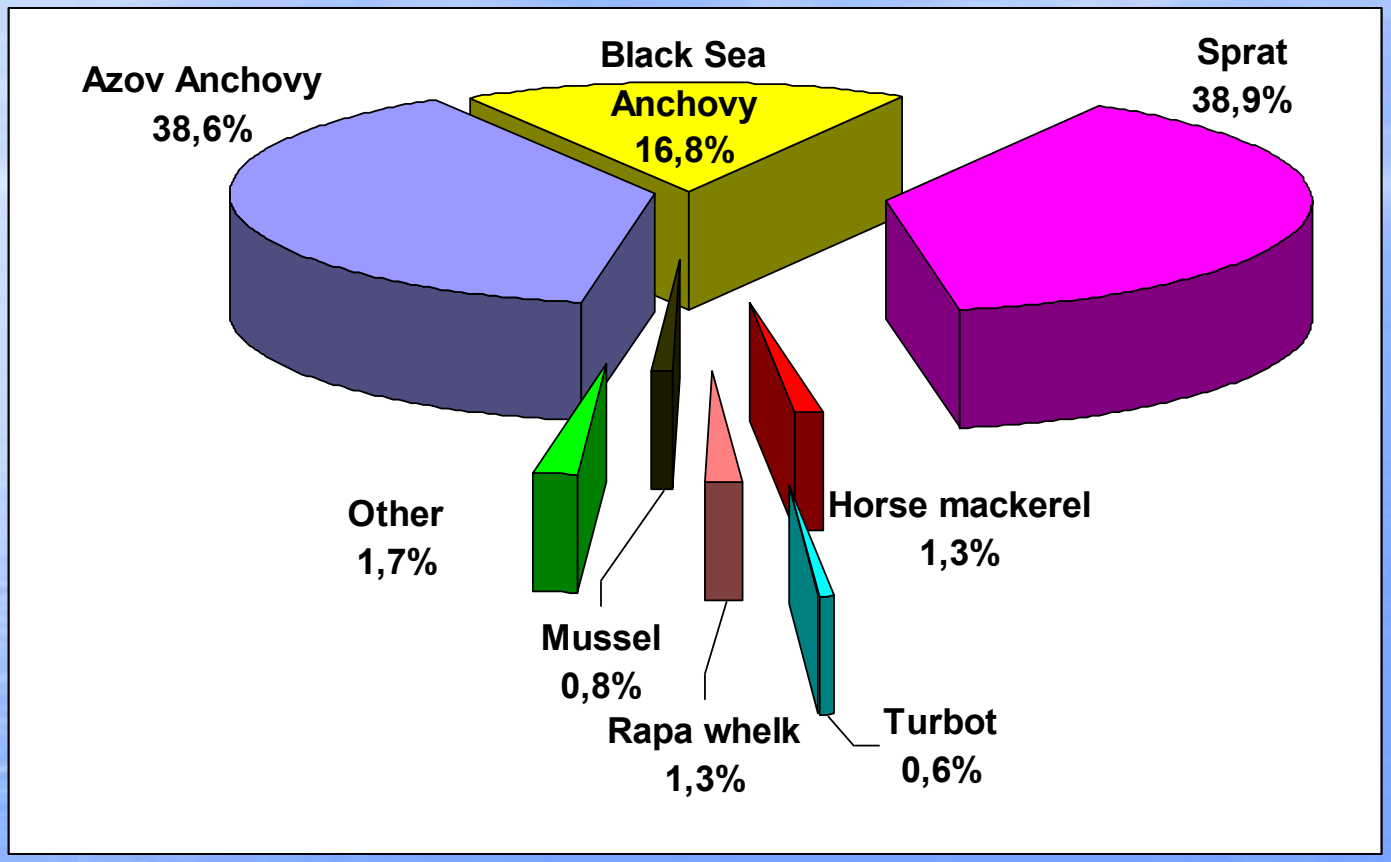
The structure of the Ukrainian Black Sea landings in 2012



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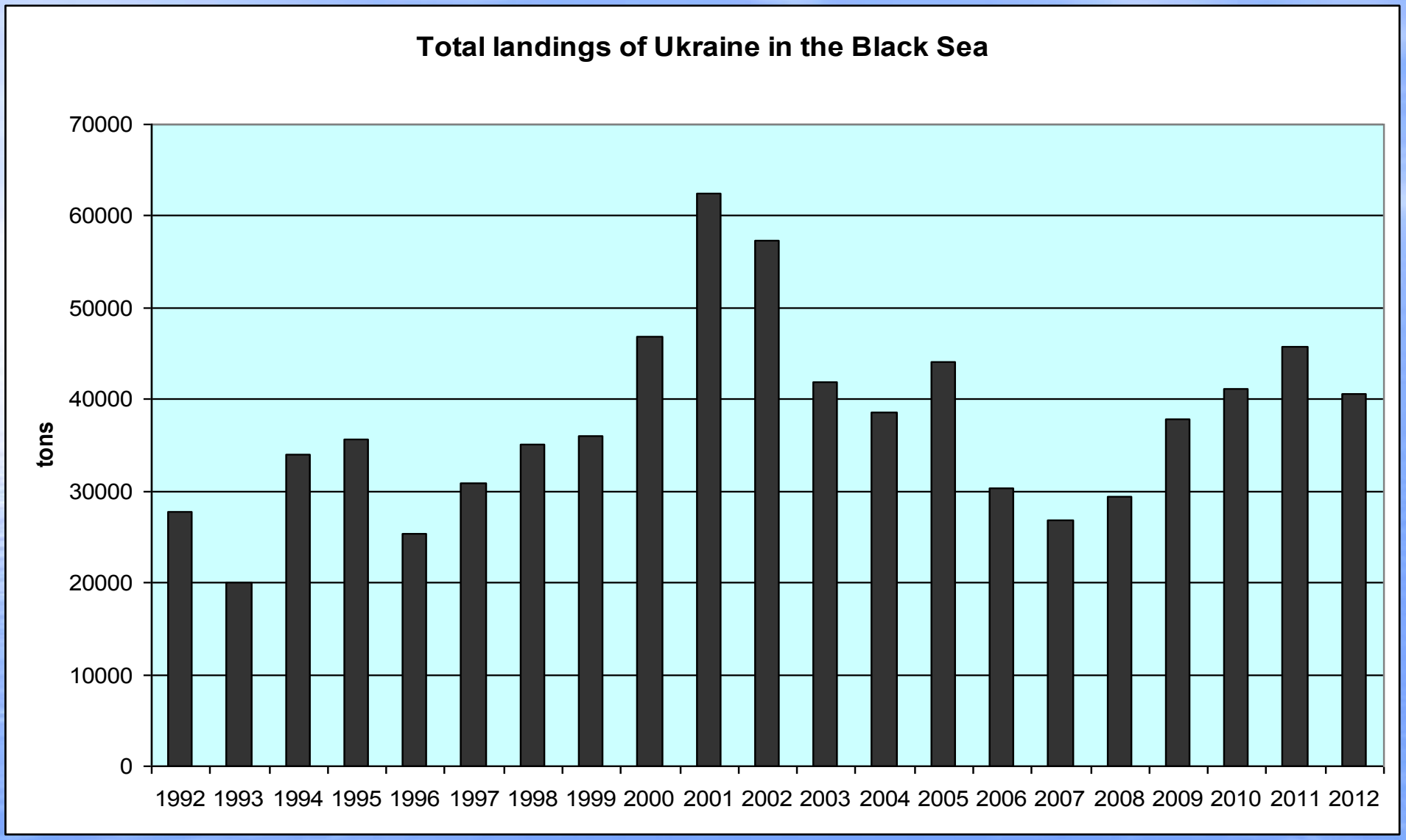
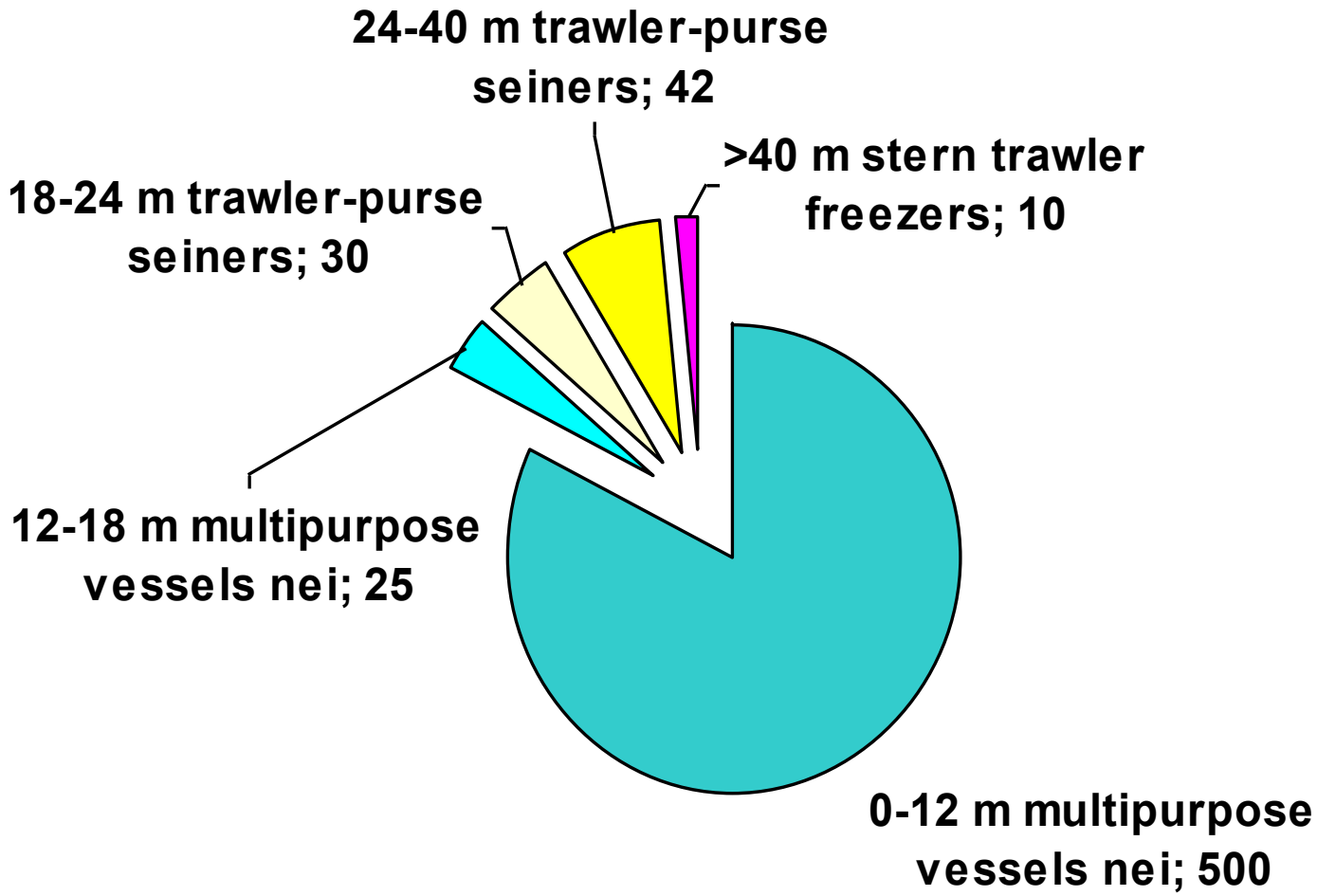


The structure of the fishing fleet of Ukraine (active vessels)



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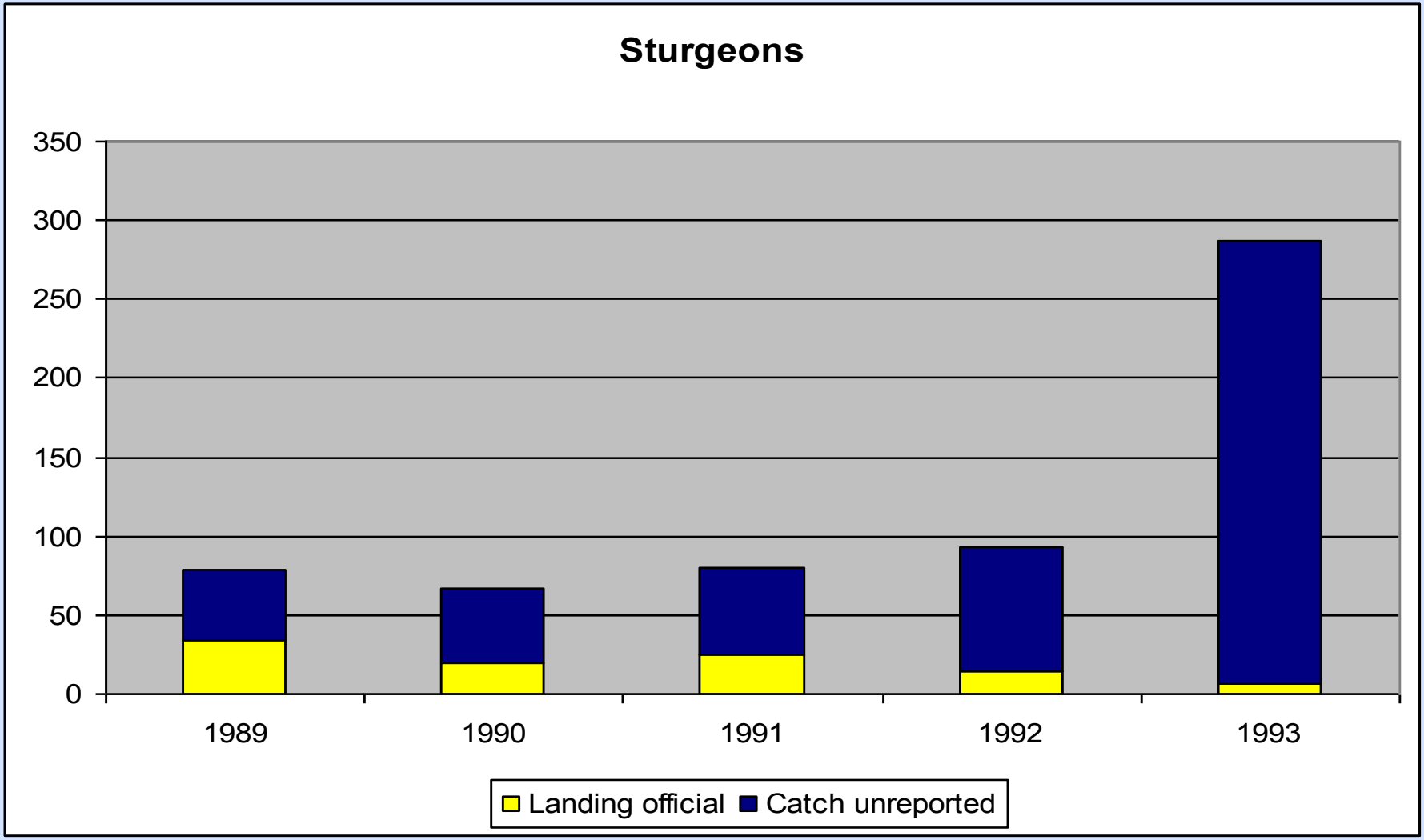

In 1989 the marine unreported catch of sturgeons was above their official landing in the waters of Ukraine, including landing in the rivers. After the collapse of the Soviet Union unreported catch saltatorily increased due to poaching trawlers and in 1993 it was estimated at 281 tons, that is 48 times higher than the official one.

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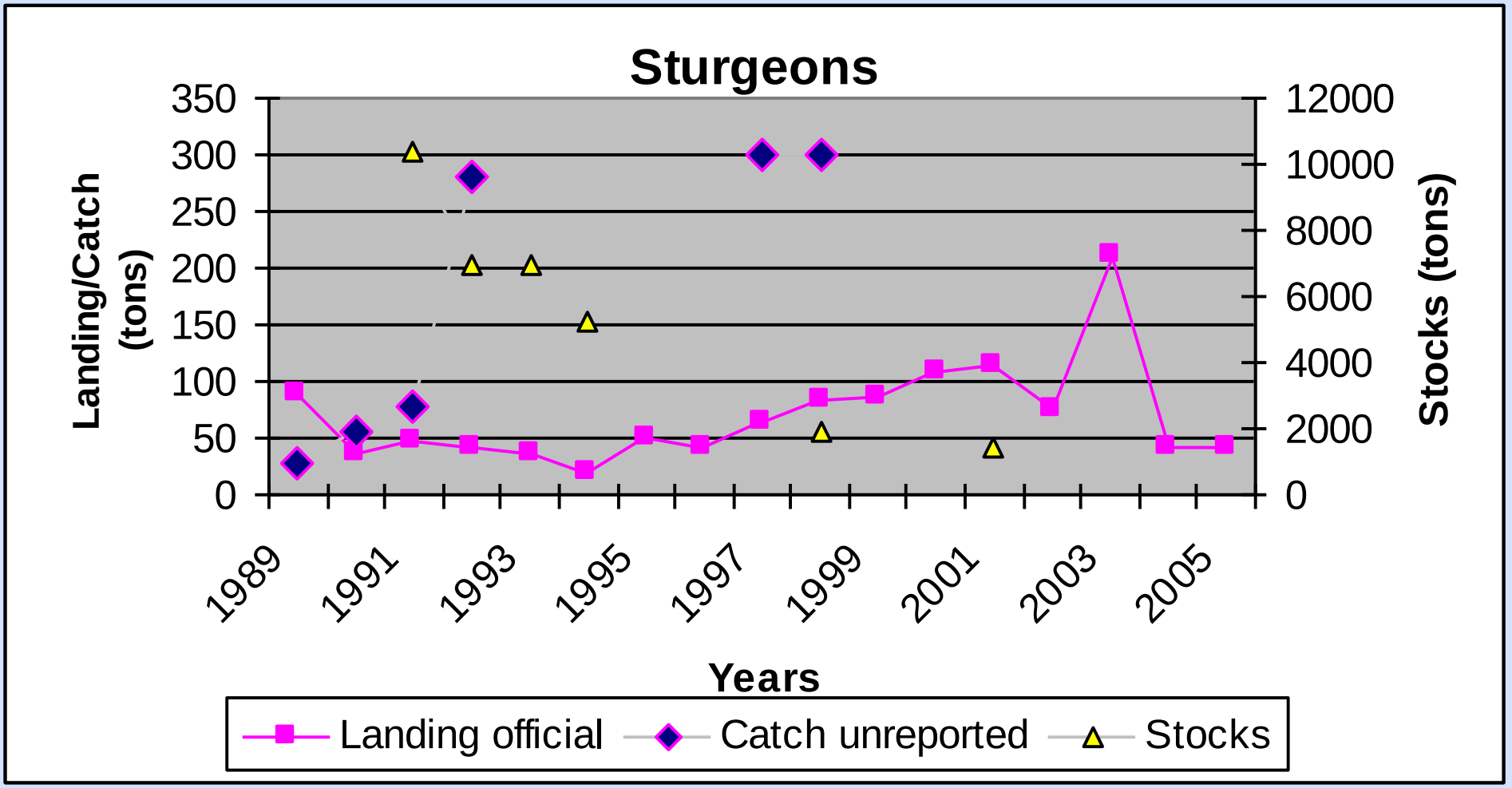

Navodaru et al (1999) obtained estimates of unreported landing of sturgeons in the Lower Danube for 1997-1998. They used RRA method, also based on an anonymous survey. Extrapolation of Prodanov and Navodaru estimates on the time bases for two years to meet each other makes possible to estimate unreported catch of anadromous sturgeons at the level of 600 tons in the first approaching for 1995, that is as more as 12 times than official catch of all the Black Sea countries.

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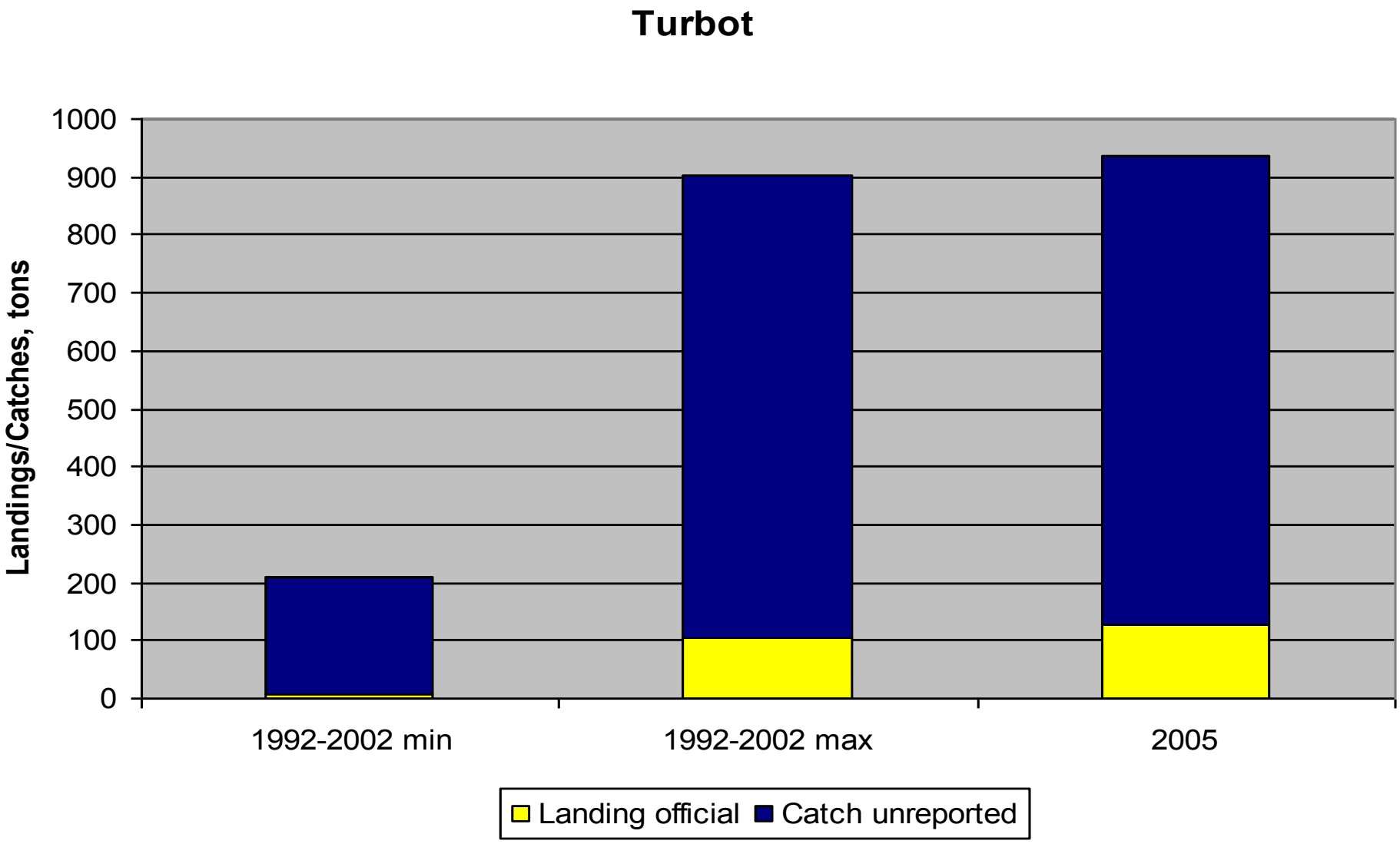

Our estimates show that unreported catch turbot in Ukrainian waters exceed the official catch in 8-22 times.

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In the publication Shlyakhov, 2010 demonstrated the possibility to determine the actual rate of the fishing mortality F for turbot by non-fishing data analysis. The actual value of the coefficient of total mortality (Z = F + M) Black Sea turbot can be estimated by Galland method (Gulland, 1969) according to the trawl surveys as the difference of the natural logarithms average catch per unit effort for the year classes in the adjacent years:

$$Z = \ln C_{i,j} - \ln C_{i+1,\, j+1}$$

Using data from turbot trawl surveys YugNIRO conducted in 2005 and 2006 for fully represented in the catches of fish at the age of 4-11 years, we estimate the actual average value of the coefficient of total mortality Z = 0,237, where F = 0,237 - 0,120 = 0,117. Such fishing mortality in 2005 corresponds to the annual catch of turbot in the amount of 938 tons. Actual catch appeared on 809 tonnes higher than the official and very close to the upper level of expert estimations unreported catches for 1992-2002 (800 tons).

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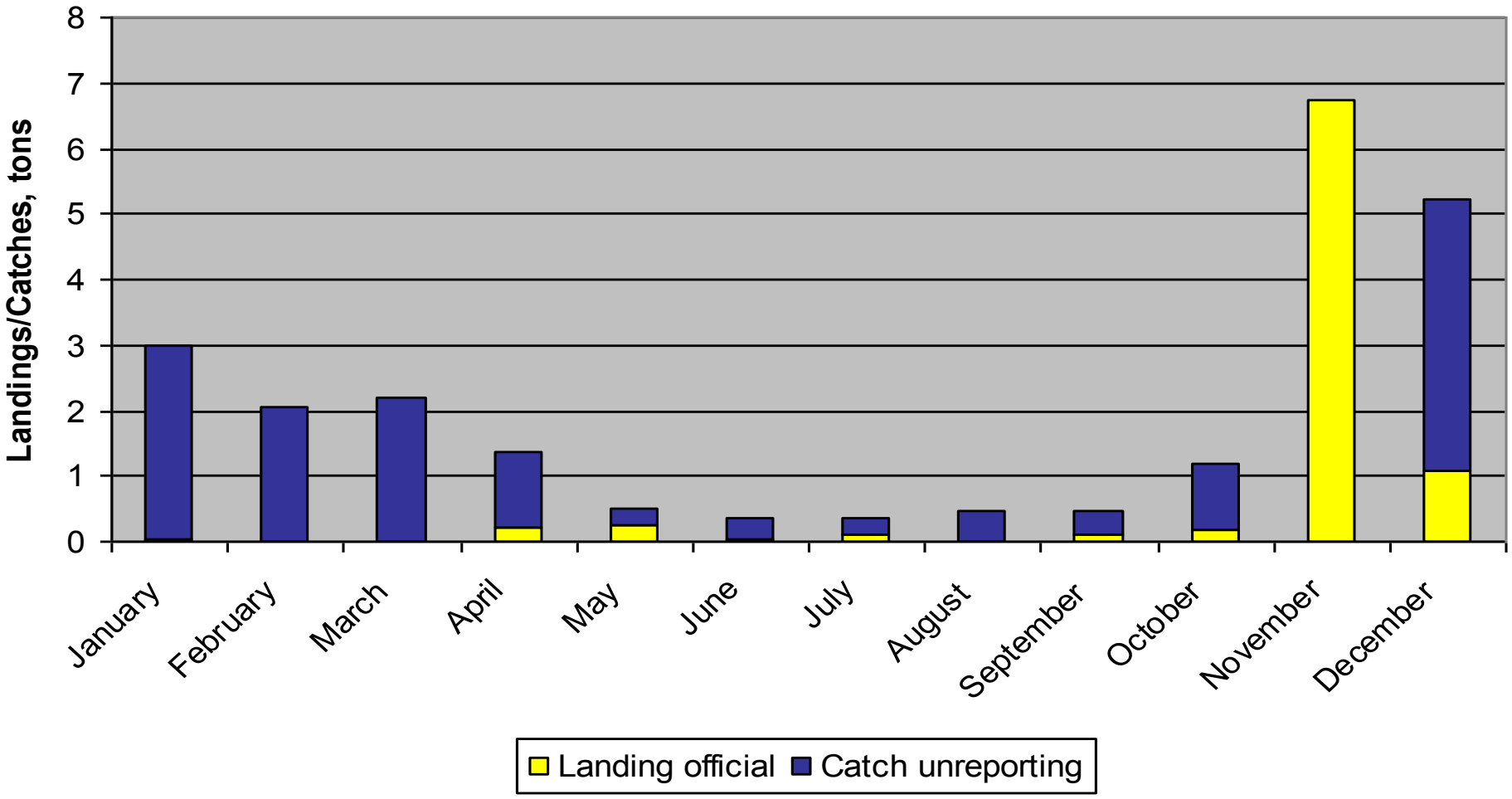

Our estimate of unreported catch of shad in the Kerch Strait and adjacent sea areas in 2011 almost twice above of the official landing, and it is far underestimated.

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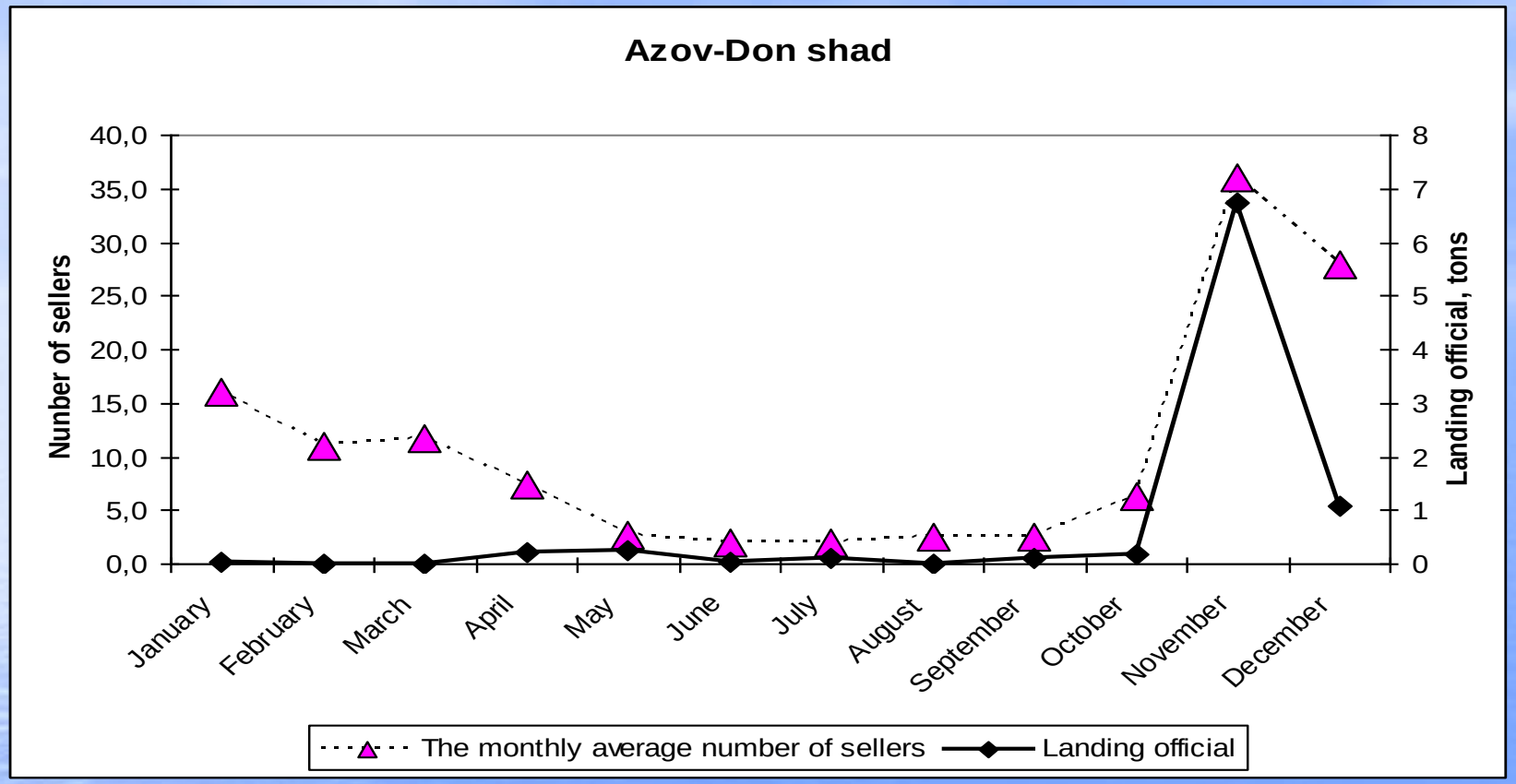

In January - March 2011 using of shad gill nets in Kerch Strait was banned. Most of the shad on the market was illegal. The diagram clearly shows that the synchronous change of the official landing and the number of sellers took place only from September to December. Was made two assumptions:

- in November, the official landing (Y_{Nov}) was equal to the real catch (Y'_{Nov});

- in other months the ratio between the actual catch and the average monthly amount of sellers was equal to the November (Y_{Nov} / N_{Nov}), which was the maximum.

Then, for each of the months of (i) can estimate the actual $Y'_i = N_i \bullet (Y_{Nov} / N_{Nov})$ and unreported ($Y'_i - Y_i$) catches of shad.

THANK for your attention!