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## EVALUATION OF FISHING VESSEL BUYBACK PROGRAM IMPLEMENTED IN TURKEY DURING EU ACCESSION PROCESS

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**Received:** 11.08.2016**Accepted:** 01.12.2016**Published online:** 02.02.2017**Corresponding author:****M. Tunca OLGUNER**, Akdeniz University Faculty of Fisheries, Department of Fisheries Technology, Antalya, Turkey**E-mail:** [olguner@akdeniz.edu.tr](mailto:olguner@akdeniz.edu.tr)**Abstract:**

There have been important developments in the number of fishing vessels, size and engine power due to low-interest loans and customs exemptions provided by the state in the 1970s and fishing vessel numbers showed a rapid increase especially after 1980 in Turkey. However, marine fisheries production has been decreasing since 1985 despite the rapid development of the fishing fleet, leading to a decline in the real income of fishermen. In Turkish seas, there are 15.680 licensed fishing vessels actively operating with different depths in 2015. When the number of fishing vessels in Turkey is compared to those of the EU countries except Italy and Spain, vessels in these countries are found to be less than in Turkey. The situation is particularly damaging the ecosystem and the fish stocks by wrong fishing techniques. One of the most important ways to solve this issue is the repurchase "buyback" programs that are commonly encouraged by regulations of the state. In fact, most of the EU countries having advanced fishing industry decided that the reduction of fishing fleet is an effective solution and they have accepted to put it into practice.

**Keywords:** Fishing vessels, Buyback program, Common fisheries, EU accession**JOURNAL OF AQUACULTURE ENGINEERING AND FISHERIES RESEARCH**  
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## Introduction

As stated in the Turkey's National Five-Year Development Plan issued in 1963, the reported fisheries production was approximately 155 thousand tons between 1963 and 1967. The production rised to 676 thousand tons in 1988 by the increase in the number of fishing vessels. One of the reasons for such growth in the fishing industry is the easy loan opportunity upon acceptance of vessels and equipment by the Ziraat Bank based on decisions taken in the Five-Year Development Plan and the other is customs exemption (DPT, 1990-1994). However, it is observed that the fish consumption per capita was about 2 kg in 1963 and about 12.2 kg in 1988. This case demonstrates the rising awareness of the Turkish people on healthy nutrition and fish products are proved to be affordable and accessible to consumers.

There has been significant increase in the size and the engine power of fishing vessels, especially after 1980. However, marine fisheries production has been decreasing since 1989 despite the rapid development of the fishing fleet, leading to a decline in the real income of fishermen. This case has resulted from an unplanned increase in fishing due to free entry system to fisheries and resulted in overfishing and excessive fishing pressure on fish stocks (Atay et al., 1995).

After the problems of existing vessel buyback program in Turkey were introduced, suggestions were presented on "what can be done?" issues on the legal basis and restructuring of the fishing fleet in terms of EU harmonization. According to these results, as similar to those in the EU, it was concluded that we must have an appropriate fisheries management in Turkey.

## Materials and Methods

This research was based on literature and legislation analysis. The main material of the study consists of various research sources related to regulations and topics in the EU and Turkey fisheries. In this context, published articles, previous reports and statistic data were used. Recent developments, especially concerning the EU, were obtained from the EU study reports and web browsing. Besides, the information was collected through the mutual discussions and correspondence with relevant institutions in Turkey. In addition, this study is carried out by having face to face discussions with a number of fishermen who

participated or did not participate in the buyback program to find out their opinions on the program.

Within the scope of the Common Fisheries Policy (CFP), comparisons are made among the fisheries legislations that are being implemented in Turkey, for the establishment of administrative structures and implementation mechanisms associated with the legal basis in fisheries in the EU. Regulations of vessel buyback program, which were developed for the fisherman by considering the quality and standards regulating the implementation details covered in the CFP of EU, assistance and support mechanisms have been investigated. Several comparisons have been made between the vessel buyback programs in the EU and Turkey. Positive and negative aspects have been put forward.

In this context, publications, statistics and activity reports of the European Commission's Representation in Turkey, SPO (State Planning Organization), TSI (Turkish Statistical Institute), the subunits of Food, Agriculture and Livestock Ministry organizations including FIS (Fisheries Information System – SUBIS) and GDFA (General Directorate of Fisheries and Aquaculture - BSGM) were used.

Some authorities of the mentioned institutions were interviewed face to face and information was gathered directly. In these interviews, views and expectations about the process are discussed, especially recommendations for the problems and solutions related to fisheries management in Turkey that is taking place with the EU.

## Results and Discussion

Due to overfishing, pollution and ecological changes originated from fishing, the marine fisheries production dropped to 342 thousand tons in 1990 (Table 1). Since then, export of seafood products in Turkey decreased while imports increased. Turkey received 80 million US dollars of 147 million US dollars of income from exported fisheries products from Europe in 1996. (Özdemir and Aras, 2005). In 1997, application of the European Union's non-tariff barriers to some seafood decreased the export revenue more and seafood production also decreased gradually after 1995. Due to all kinds of hygienic deficiencies in 1998, mussels, clams,

fresh fish and shellfish export were strictly prohibited from Turkey to EU countries.

**Table 1.** Capture production and number of marine fishery vessels between 2001 and 2014.

| Years | Capture Fisheries (ton) | Number of Vessels | Production per vessel (ton) |
|-------|-------------------------|-------------------|-----------------------------|
| 1970  | 170.905                 | 6.376             | 26,8                        |
| 1975  | 103.666                 | 4.520             | 22,9                        |
| 1980  | 397.321                 | 6.764             | 58,7                        |
| 1985  | 532.602                 | 8.604             | 61,9                        |
| 1990  | 342.017                 | 8.749             | 39,1                        |
| 1995  | 582.610                 | 9.710             | 60,0                        |
| 2000  | 460.521                 | 13.381            | 34,4                        |
| 2001  | 484.410                 | 12.989            | 37,3                        |
| 2002  | 522.744                 | 17.696            | 29,5                        |
| 2003  | 463.074                 | 18.542            | 25,0                        |
| 2004  | 504.897                 | 17.953            | 28,1                        |
| 2005  | 380.381                 | 18.396            | 20,7                        |
| 2006  | 488.966                 | 17.823            | 27,4                        |
| 2007  | 589.129                 | 17.681            | 33,3                        |
| 2008  | 453.113                 | 17.161            | 26,4                        |
| 2009  | 425.275                 | 16.845            | 25,2                        |
| 2010  | 445.680                 | 16.650            | 26,8                        |
| 2011  | 477.658                 | 14.300            | 33,4                        |
| 2012  | 432.442                 | 14.324            | 30,2                        |
| 2013  | 374.121                 | 13.727            | 27,3                        |
| 2014  | 302.212                 | 14.595            | 20,7                        |

Source: GTHB (2015a, b)

According to Table 1, decline and fluctuations in the production continued with the reduction of anchovy stock in 2005. The major reason for the case is that Turkey has the high fishing capacity with too many fishing vessels, causing a pressure on the fish stocks.

### Comparison of number of fishing vessels of EU and Turkey

Sustainable fisheries have started to attract more attention in the world. Because of a rapid decline in the fish stocks since the early 1980s, the concept of sustainable development is very important for the world and for the products (Çevirme, 2015). The basic principles of the CFP in the European Union is to record and monitor. The area where fishing vessels can perform fishing in territorial waters was restricted to 12 nautical miles and they must have license and permission to fish. Vessels exceeding 15m in length should be equipped with remote management systems and are required to keep a record of all fishing activities. In order to establish a fleet

registration at Community level, Member States are obliged to keep a record of fishing vessels flying their flag to the Commission. Community participation in the fleet and exits from the fleet are regulated by specific rules.

In Turkey, "logbooks and vessel monitoring system" issues have been discussed by the year 2000. Application of monitoring system started in the large tuna fishing vessels in 2007 and these systems are known to have been applied in fishing of bluefin tuna in 2010. Obligations on keeping logbook have also been brought into fishing vessels which are 12 meters and longer in 2008 and after this, significant progress has been made in controlling and monitoring fishing activities.

However, due to the absence of detailed information regarding the size of fish stocks in Turkish seas, the annual amount of fishing and the size of the fishing fleet cannot be fully estimated for optimum fishing from this stock. Common Fisheries Policy legislation of EU also aims to protect the main sources. The most important tools used to achieve this goal are the total allowable catches (fishing quotas). To avoid exceeding these quotas, catches must be emptied on their specific landing points. This application has also a great significance for the collection of statistical information regarding fishing activities. Thus, locations to be used as landing points and necessary buildings with equipment and personnel should be kept ready (Balta, 2009). In this sense, there are 34 landing points known in Turkey although uncontrolled landing points are also available. Therefore, it is unlikely exceed the sustainable production that can be taken from the fishing quotas for fishing control and supply. It is still an attempt to preserve the existing stock by banning and limiting the fishing (Atay et al., 2000).

Nevertheless, the situation is particularly damaging the ecosystem and the fish stock with the wrong fishing techniques. One of the most important ways to prevent this situation is the repurchase "buyback" programs that are commonly encouraged by regulations of the state. In fact, most of the countries in the EU that have advanced fishing industry, decided that the reduction of fishing fleet is an effective solution and they have accepted to put it into practice.

Buyback programs that started in the 1970s in the world passed a variety of tests and have been implemented in different conditions. The first buyback program was introduced in the Canada salmon fishing in 1970 with the step-by-step application of four programs. Vessels and licenses were initially withdrawn, but 47% of fishermen got back to fishing again (Kurt and Muse, 1984). The reasons for evaluating repurchase of vessels by fishermen and getting back to salmon fishing in Canada are valid for Turkey. Studies have shown that 61% of fishermen participating in the buyback program in Turkey will return to fishing industry again. The reason for the high rate of interest in fishing is that, it is the only source of income for the majority of fishermen who have commonly low levels of education and are lacking other qualifications (Unal et al., 2014).

Especially in the 1970s, the amount of fishing vessel showed a rapid increase due to low-interest loans and customs exemptions provided by Turkish government. A total amount of fishing vessel was 8646 in 1991, and it has increased by 81% with 15680 fishing vessels today (GTHB, 2015a). Ministry of Food, Agriculture and Livestock in Turkey stopped the new licensing for fishing vessels since 1991. However, new vessels were added to the fleet after amnesty announcements in 1994, 1997 and

2001 and the licensing has been terminated for fishing vessels again since 2002.

When the number of Turkey's fishing vessels compared with EU countries, the closest country to the number of vessels in our fleet is Greece with 15 693 vessels. But all EU countries including Greece are successful in reducing the number of fleets (Table 3) (Eurostat, 2014).

Under the Common Fisheries Policy (CFP), reduction of fleet capacity is an essential tool for achieving a sustainable exploitation of fisheries resources. The EU's fishing fleet capacity has declined steadily since the early 1990s, in terms of both tonnage (an indicator of fish-holding capacity) and engine power (an indicator of the power available for fishing gear). The size of the EU-28 fishing fleet dropped to about 85 800 vessels in 2014 compared to 95 300 vessels for the EU-15 in 2000, although it increased by 7.2 % between 2012 and 2013 following the Croatia's EU accession (Eurostat, 2014).

The size of the fishing fleet in Turkey is a problematic issue in the EU negotiations. However, there has been some progress in sources and fleet management, inspection and control and international agreements according to 2015 progress report of Turkey. Indeed, programs supporting the removal of fishing vessels have achieved a remarkable progress in the fleet management.

**Table 2.** Fleet structure in the capture fisheries in Turkey (GTHB 2015b).

| Fishing Type                 | Fishing Method        | Number and Ratio (%) | Production (%) |
|------------------------------|-----------------------|----------------------|----------------|
| <b>Commercial Fisheries</b>  | Purse seiner          | 485 (2,8)            | 80             |
|                              | Trawler               | 669 (3,9)            | 10             |
|                              | Purse seiner- Trawler | 337 (1,9)            |                |
|                              | Total                 | 1491 (8,6)           | 90             |
| <b>Shore Fishermen</b>       | Traditional Method    | 15.674 (91,4)        | 10             |
| <b>Marine Fishing Vessel</b> |                       | 17.165               | 92             |
| <b>Inland Fishing Vessel</b> |                       | 3.124                | 8              |
| <b>Total</b>                 |                       | <b>20.289</b>        | <b>100</b>     |

**Table 3.** Fishing fleet by country between 2000-2014

|                       | 2000   | 2005   | 2010   | 2011   | 2012   | 2013   | 2014   |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|
| <b>EU (*)</b>         | 95 285 | 88 947 | 83 534 | 81 987 | 80 643 | 86 479 | 85 768 |
| <b>Belgium</b>        | 129    | 120    | 89     | 86     | 83     | 80     | 79     |
| <b>Bulgaria</b>       |        |        | 2 340  | 2 336  | 2 366  | 2 043  | 1 951  |
| <b>Czech Republic</b> | -      | -      | -      | -      | -      | -      | -      |
| <b>Denmark</b>        | 4 138  | 3 264  | 2 819  | 2 784  | 2 743  | 2 663  | 2 449  |
| <b>Germany</b>        | 2 315  | 2 116  | 1 673  | 1 582  | 1 550  | 1 533  | 1 492  |
| <b>Estonia</b>        |        | 1 044  | 934    | 923    | 1 360  | 1 445  | 1 515  |
| <b>Ireland</b>        | 1 621  | 1 860  | 2 144  | 2 187  | 2 247  | 2 197  | 2 157  |
| <b>Greece</b>         | 19 598 | 17 965 | 17 032 | 16 527 | 15 981 | 15 790 | 15 693 |
| <b>Spain</b>          | 16 685 | 13 705 | 10 851 | 10 505 | 10 116 | 9 872  | 9 632  |
| <b>France (**)</b>    | 8 229  | 8 239  | 7 219  | 7 207  | 7 142  | 7 125  | 7 069  |
| <b>Croatia</b>        |        |        |        |        |        | 7 039  | 7 313  |
| <b>Italy</b>          | 17 369 | 14 397 | 13 444 | 13 043 | 12 731 | 12 650 | 12 451 |
| <b>Cyprus</b>         |        | 882    | 1 003  | 1 078  | 1 074  | 894    | 949    |
| <b>Latvia</b>         |        | 928    | 786    | 731    | 715    | 703    | 700    |
| <b>Lithuania</b>      |        | 267    | 171    | 151    | 148    | 146    | 142    |
| <b>Luxembourg</b>     | -      | -      | -      | -      | -      | -      | -      |
| <b>Hungary</b>        | -      | -      | -      | -      | -      | -      | -      |
| <b>Malta</b>          |        | 1 411  | 1 091  | 1 054  | 1 043  | 1 032  | 1 020  |
| <b>Netherlands</b>    | 1 101  | 825    | 846    | 841    | 848    | 846    | 831    |
| <b>Austria</b>        | -      | -      | -      | -      | -      | -      | -      |
| <b>Poland</b>         |        | 974    | 793    | 790    | 798    | 838    | 873    |
| <b>Portugal</b>       | 10 677 | 9 113  | 8 440  | 8 346  | 8 269  | 8 216  | 8 172  |
| <b>Romania</b>        |        |        | 476    | 502    | 195    | 194    | 158    |
| <b>Slovenia</b>       |        | 175    | 182    | 182    | 174    | 170    | 169    |
| <b>Slovakia</b>       | -      | -      | -      | -      | -      | -      | -      |
| <b>Finland</b>        | 3 664  | 3 268  | 3 366  | 3 332  | 3 241  | 3 211  | 3 179  |
| <b>Sweden</b>         | 2 019  | 1 599  | 1 360  | 1 369  | 1 392  | 1 368  | 1 365  |
| <b>United Kingdom</b> | 7 740  | 6 788  | 6 475  | 6 431  | 6 427  | 6 424  | 6 409  |
| <b>Iceland</b>        | 1 997  | 1 756  | 1 628  | 1 658  | 1 691  | 1 692  |        |
| <b>Norway</b>         | 13 017 | 7 723  | 6 309  | 6 250  | 6 211  | 6 126  |        |

(Eurostat, 2014)

The Czech Republic, Luxembourg, Hungary, Austria and Slovakia are landlocked countries without a marine fishing fleet.

\* EU-15: 2000; EU-25: 2005; EU-27: 2010; EU-25: from 2013

\*\* French data include vessels registered in the French Overseas Department.

**Table 4.** Total support amount for buyback programs (GTHB 2015a, b).

| Buyback programs                       | Withdrawn vessels<br>(number) | Support amount<br>(TL) | Decrease in the fleet<br>(%) |      |
|--|-------------------------------|------------------------|------------------------------|------|
| <b>1<sup>st</sup>Program 2012-2013</b> | 12 m and above                | 364                    | 62 million                   | 19,5 |
| <b>2<sup>nd</sup>Program 2013-2014</b> | 10 m and above                | 446                    | 51 million                   | 19,4 |

**Table 5.** Support made for buyback programs since 2013 (GTHB 2015a, b).

| Year         | Mechanical and Chemical Industry<br>Corporation (number) | Handed over (number) | Total (number) | Support Amount<br>(TL) |
|--------------|--|----------------------|----------------|------------------------|
| <b>2013</b>  | 335  | 29                   | 364            | 62.083.850             |
| <b>2014</b>  | 446  | 10                   | 456            | 54.028.571             |
| <b>2015</b>  | 180  | 11                   | 191            | 22.515.942             |
| <b>Total</b> | 961  | 50                   | 1011           | 138.628.363            |

Turkey has started a vessel repurchases support program based on the vessel lengths in 2012 under the Common Fisheries Chapter 13 in EU-Turkey negotiations. In 2013, 62.1 million Turkish Liras (TL) have been paid to support the withdrawal of 364 fishing vessels (19.5%) from the fleet (Olguner and Yılmaz, 2015). On the basis of decisions taken in 2012, scope of support has been progressively expanded to over 12-meters-long vessels in 2013 and to 10-meters-long vessels between 2014-2015 to remove from the fleet and the support payment of nearly 138,6 million TL has been made for 1011 fishing vessels (Table 5). Qualified fishing vessels removed from the fleet have been handed over to universities and research institutions for use in educational activities (18 fishing vessels), the Provincial Directorate of Agriculture for use in inspection purposes (12 fishing vessels) and Mechanical and Chemical Industry Corporation for the separation processes (335 fishing vessel) (GTHB 2015b).

**Table 6.** Support amounts for vessel length in first and second buyback programs (GTHB 2015b).

| Number | Vessel length (m) | Amount per meter (TL) |
|--------|-------------------|-----------------------|
| 1      | 12-20 (10-20)     | 10.000                |
| 2      | 21-30             | 15.000                |
| 3      | 31 and above      | 20.000                |

**Table 7.** Support amounts for vessel length in a third buyback program (GTHB 2015b).

| Number | Vessel length (m) | Amount per meter (TL) |
|--------|-------------------|-----------------------|
| 1      | 10-20             | 10.000                |
| 2      | 21-30             | 15.000                |
| 3      | 31-34             | 20.000                |
| 4      | 35-45             | 30.000                |
| 5      | 46 and above      | 35.000                |

The amount of support made to the owners to remove their vessel from the fishing in the 1<sup>st</sup> and 2<sup>nd</sup> Buyback (Repurchase) Program (Table 6); was 10 thousand TL (Turkish Liras) for 10-20 meters fishing vessel, 15 thousand TL for 21-30 meters fishing vessel, 20 thousand TL for 31 meters and longer fishing vessels. In the 3<sup>rd</sup> Buyback (Repurchase) Program (Table 7) by changing the amount to support longer vessels 20 thousand TL for 31-34 meters fishing vessels, 30 thousand TL for 35-45 meters fishing vessels and 35 thousand TL for 46 meters or more fishing vessels, payments made for support.

Turkey currently has no fishing laws in accordance with the EU acquis. Since the second five-year development plan (including the 1968-1972) "offshore fishing" goals have been mentioned until today. However, it is noted in the Eighth Development Plan that the lack of infrastructure results in not achieving this goal. The repurchase program initiated in 1970 in the world, however, it is mentioned in the report of 2012 in the section regarding management of resource and fleet. The competition among the fishermen in fleet in different types of fishing is the weakest spot in the fisheries sector thus it consists of the over-fishing of some fish stocks. Indeed, developed countries such as the EU have overcome these problems with scientific knowledge and the Common Fisheries Policy by assessing the developments in fishing with data. Continuously reported data of stocks is not available in Turkey and hence scientific fisheries management policy could not be established yet. Participation of fishermen into fishing vessel repurchase program is unsatisfactory in Turkey and even some of participants returned to fishing, and other fishermen disposed of their vessels. On the other hand, old licensed vessels can be sold to a new entrepreneur with a higher price with respect to the amount of support as the state has not provided any new licenses since 2002.

## Conclusion

According to discussions with fishermen, it can be concluded that 24 meters and longer ships may reduce the fishing pressure and 12 meters and shorter vessels are not effective. In fact, the share of fishing with 24 meters and longer vessels was found to be 80%. These vessels are usually purse seiners especially fishing for anchovies, sardine and sprat. Therefore, the vessel buyback program undertaken for several years has not achieved a significant reduction in the number of fleets. The fishermen believed that reducing the vessel size to 10-meter after two years hindered the program's success. Thus, it is observed that the buyback program in Turkey does not reach the desired level compared to the EU. For program's success, manufacturer's awareness should be encouraged to a certain level of social and economic development with a good fisheries management and with the marine protected areas. Because of these low levels, the fisheries sector is more problematic than any other sectors. In this context, training should be given along with support mechanisms for sustainability.

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