Potential and Challenges for Investments in the Anchovy Fish Industry in Georgia

Internal Report for FAO SEU/REU, Budapest

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Abstract

As a follow up to the review of Fishery and aquaculture development potentials, the Fishery Officer and Investment Officer, SEU, went to Tbilisi and Poti in order to meet with representatives of the fishing industry and with representatives of commercial banks (BOG, TBC, ProCredit), of SEAF/GRDF (MCC funded), and of the Ministry of Energy and Natural Resources (which is now responsible for marine fishery). Further, fishery experts, retail traders and a former USAID consultant were met.

The purpose of the meetings was to analyze possible investment potential and associated risks in the marine fishery sector and to raise awareness about this sector among banks. Georgia has an extraordinary valuable resource of high quality Anchovy close to landings in Poti. However, the quota for anchovy catching is not yet fully used, partly due to the situation that the major part of the Georgian fishing fleet is not modernized. A significant part of the marine resource is caught by Turkish vessels hired by the Georgian companies holding licenses to fish anchovy. Most of the fresh anchovy and processed fish meal is then exported to Turkey, which has better marketing opportunities, in particular to the EU.

Main results of the mission are:

1. Awareness about possibilities for investment in fishery industry is raised among representatives of banks.

2. An update on the situation of anchovy fishing and processing has been made (see the Back to Office Report and this document).

3. An exchange on priorities of potential FAO support has taken place (e.g. potential support in the field of EU export certification, and potential training for fishing companies and loan officers of banks in the field of fishery.)

<u>Basic figures:</u>

Quota for Georgian anchovy fishing:	70-80,000- tons
Annual Catch (according to statistics):	25-40,000 tons
Sale anchovy to Georgian market:	~3-5,000 tons
Export fish and fish products (incl. anchovy and others)	~6-20,000 tons (of which ~5-19,000 tons to Turkey)
Import fish and fish products	~15-40,000 tons

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ARD	Agriculture and Rural Development
CEEC	Central and Eastern European Countries
e.g.	for example
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EU	European Union
EUR	Euro
FAO	Food and Agricultural Organization of the United Nations
GEL	Georgian Lari
GRDF	Georgian Rural Development Fund
IFAD	International Fund for Agricultural Development
Incl.	including
Intern.	International
JICA	Japan International Cooperation Agency
KfW	Kreditanstalt fuer Wiederaufbau (today KfW Bankengruppe)
kg	Kilogram
MCC	Millennium Challenge Corporation
MDB	Multilateral Development Banks
MT	Metric ton
N.B.	Nota Bene
NGO	Non-governmental organization
REU	Regional Office for Europe and Central Asia
SEAF	Small Enterprise Assistance Fund
SEU	Subregional Office for Central and Eastern Europe
SMEs	Small and Medium Enterprises
TA	Technical Assistance
TCP	Technical Cooperation Program
UN	United Nations
UNDP	United Nations Development Program
USA	United States of America
USD	United States Dollars
WB	World Bank

1 Introduction

1.1 Background on the mission

In an FAO report "Review of Fisheries and Aquaculture Development Potentials in Georgia" (2010), the issue was raised that investments in the fish industry should be supported. Based on this, a joint mission by the fishery officer and investment officer of SEU has been carried out (a) to update the information on the current situation, (b) to analyze current potential and obstacles at banks and other funding organizations with regard to investments in the fishery sector, and (c) to raise awareness about the marine fishery potential.

Upon arrival of the new investment officer of FAO Subregional Office for Central and Eastern Europe (SEU) in summer 2011, representatives of development banks (EBRD, KfW)[1] and commercial banks in Georgia have been contacted in order to assess what may be the potential and challenges regarding lending to the fish industry. During the first exchange with representatives of commercial banks it became clear that there is not a general resistance to lend to the fish industry. There is rather a lack of information on this subsector. Further, SEAF (managing the Georgia Rural Development Project (GRDF) of the Millennium Challenge Corporation (MCC)) was contacted, as SEAF had provided loan and equity finance to one of the license holders for Black Sea fishing to co-finance investments in three modern vessels.

Based on the preliminary information, a joint mission of the SEU fishery expert and the SEU investment officer was carried out in order to assess the situation in more detail. Both representatives of the fish industry and representatives of commercial banks have been interviewed during a mission to Georgia from 12-16 September 2011.

1.2 Previous FAO activities

Previous activities by FAO in the fisheries sector have been:

1. From Nov 2003 - Oct 2005, FAO implemented the TCP project TCP/GEO/2904 "Strengthening the Capacity of the Department of Fisheries to Support Fisheries Sector Rehabilitation". The project resulted in a comprehensive report (FAO Fisheries Circular No. 1007) including:

   (1) Review of current status of Fisheries Resources and Utilization in Georgia,

   (2) Master Plan for Fishery Sector development in Georgia (2005-2020) and

   (3) Action Plan for Fishery Sector Management and Development in Georgia (2005-2008).

2. Follow-up mission by FAO in 2009, and training measures in various fields;
3. Elaboration of a report "Review of Fisheries and Aquaculture Development Potentials in Georgia" in 2010.

[1] There is an upcoming Georgian Agricultural Finance Facility (GAFF) of EBRD and of KfW which provides specific credit lines to local commercial banks for on-lending to the agricultural sector. Therefore, banks potentially cooperating with GAFF have specifically been contacted.

1.3 Background on Anchovy Fishing

Anchovy[2] are small herrings belonging to the pelagic species. Anchovy are usually smaller than 15 cm.

The main species of anchovy[3] are:

- Anchoveta (Engraulis ringens)
- **European Anchovy** (Engraulis encrasicolus)
- Japanese Anchovy (Engraulis Japonicus).
- Others: Argentinean Anchovy, South African Anchovy, Pacific Anchovy, Californian Anchovy

European anchovy is well appreciated in Southern Europe, in particular in Italy, Spain and France[4]. Further, anchovies consumption is important in Turkey.

The products for **human consumption** are: fresh anchovy (e.g. for tapas, antipasti), frozen anchovy, salted anchovy, semi-conserved, marinated or in form of a pasta (e.g. inside olives). Salted anchovy are also used to prepare semi-conserved anchovy.

The **animal feed products** are in form of meal or oil (fish meal, fish oil) or dried or semi-conserved (for cats and dogs). The world demand for fish meal and fish oil is increasing, as it is used as basis for fish feed production for aquaculture.

Most common types of **industrial scale vessels** are purse seiners, trawlers, hybrid trawler/seiners, and carrier vessels (according to DENIZ et al (2011)).

2 Overview on worldwide and on Turkish anchovy production

2.1 World anchovy production

According to FAO/Globefish (2011), the world anchovy production amounts to about **10-15 million tons per year** (for the period 2001-2009). Largest producers are Peru and Chile, followed by Turkey and China[5].

Turkey has an annual anchovy production of approximately 0.5-1 million tons annually[6]. Compared to Turkey, Georgia is a small producer with about 20,000 to 55,000 tons per year.

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[2] Anchovis or "Sardellen" in German language.
[3] According to Ababouch et al (2009)
[4] According to Ababouch et al (2009)
[5] If one is only looking at European Anchovy, then Turkey is the principal producer (36% of the world capture of European anchovy), followed by Italy (16%), Mauritania, Ghana, Lithuania, Russian Federation, Spain and Greece. (DENIZ et al (2011)). Within Europe, Turkey is 3[rd] in fishery products production (according to 2008 data, source: DENIZ et al. (2011),).
[6] There are some inconsistencies in data from varying sources. According to Deniz et al (2011) the anchovy catch of Turkey is much smaller with about 200-400,000 tons annually (2006-2009).

Table 1: World Anchovy Production (in 1000 tons) incl. production in Turkey and Georgia

YEAR	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total	11,701	13,960	10,566	14,773	14,036	10,866	11,469	11,146	10,493
of which Turkey	1,076	998	1,107	935	883	827	807	659	522
of which Georgia	22	28	24	23	30	51	55	31	34

Source: Own compilation based on FAO/Globefish (2010)

World imports of anchovy (all species, except fish meal and fish oil) grew from about 20.5 thousand tons (USD 30 million) in 1976 to about 137.3 thousand tons (USD 400 million) in 2005, of which 29% as semi-conserved, 28% fresh or frozen, followed by salted anchovy.

According to the OECD-FAO Agricultural Outlook 2011-2020 (www.agri-outlook.org), fish prices (capture, aquaculture and trade) will increase over the medium term. With the growing price of fish meal and the high price of other feeds, the spread between the price of farmed and wild fish will grow over the medium term.

2.2 Anchovy fishing in Turkey

The main regional competitor of Georgia for anchovy fishing is Turkey. In Turkey, the fishing sector is relatively well developed.

More than 70% of Turkish sea fish production comes from the Black Sea (approximately 63% from the Eastern Black Sea Region and 10% from the Western Black Sea Region). 50-60% of Turkish marine fish productions comes from anchovies.

The number of fishing boats issued with license was about 17 thousand for marine fishing (2009)[7], of which about 6 thousand in the Black Sea. New Licenses have not been issued for the marine vessels since 2002 in order to reduce catch stress on stocks. 85% of the fisheries fleet is consisted of the vessels smaller than 10 meter.

Table 2: Distribution of fisheries fleet in Turkey according to vessel size (2009)

Length of vessel (m)	0.5-5.9	8-9.9	10-11.9	12-14.9	15-19.9	20-29.9	30-49.9	50+	TOTAL
Number of vessels	9,312	4,947	748	585	422	623	198	10	**16,845**

Source: TURKSTAT, in: DENIZ et al (2011)

As one can see in the table below, there are about 6 thousand Turkish vessels in the Black Sea, most of them being smaller than 20 meters.

Table 3: Number of Turkish vessels in the Black Sea (2009)

Length of vessel (m)	<8	8-12	12-20	20-30	30-50	50+	TOTAL
Number of vessels in the	3,557	1,678	369	251	110	8	**5,973**

[7] In 2009, there are 141,677 licenses issued to real persons for fishing in seas. In 2009, there are 141,677 licenses issued to real persons for fishing in seas. (DENIZ et al. (2011)).

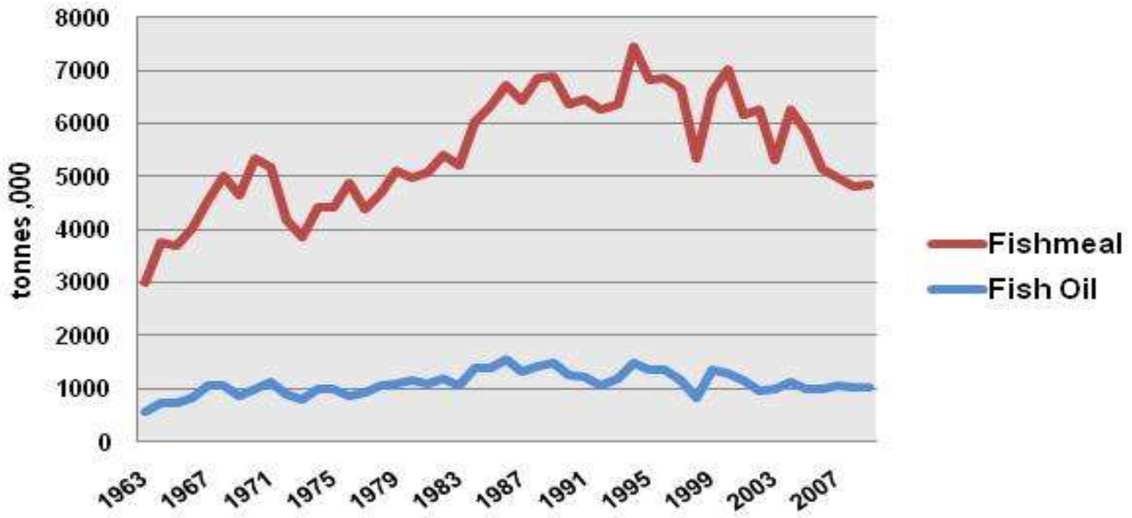
Black Sea							

Source: TURKSTAT, in: DENIZ et al (2011)

2.3 World Fishmeal and fish oil production

According to www.iffo.net (retrieved September 2011), worldwide annual fishmeal and fish oil production has remained fairly stable for the last 20 years reflecting the overall stability of global pelagic fish landings except during El Nino years.

Fig. 1. Global fishmeal and fish oil production 1963 – 2009 (in 1000 tons)



Source: www.iffo.net

In 2009, the industry's estimated global fishmeal production was 4.83 million tons and the global production of fish oil is estimated at about 1.01 million tons. Now, the **demand is expected to increase** according to IFFO.

Looking at fish meal prices (CIF prices of Peru Fish meal/pellets 65% protein, in USD;), they increased from about USD 500/ton (September 2001) to about USD 1300/ton (September 2006) and further to about USD 1600/ton (September 2010).[8]

[8] Source: www.indesmundi.com/commodities/?comodity=fish-meal&months=360. Retrieved September 2011

3 Marine Fishery in Georgia

3.1 Introduction

Since the last mission of the fishery expert in February 2009, the marine fishery sector has shown some dynamics and developments. One of the six major licence holders to catch anchovy has purchased 3 large Turkish purse-seiners with support from SEAF/GRDF in form of a USD 2.5 million loan and USD 0.5 million equity finance. Other companies have invested in fish meal processing. There are now three fish meal factories in operation, one in construction, and one in planning.

The quota for anchovy fishing has been increased from 60,000 tons/season (2009/10 season) to 70,000 (2010/11 season) and 80,000 (2011/12 season) respectively.

3.2 Quota and Licenses

There is a Law of Georgia on Licenses and Permission (2005) which includes arrangement of commercial fishing. Licenses for sea fish quota for a ten year period have been auctioned in 2006[9]. Six companies have acquired licenses (see next chapter). The quota had been increased from originally 60,000 tons anchovy to 70,000 tons (2010/11), and is further increased to 80,000 tons anchovy for the coming season (2011/12). Further, 10% of the quota has been provided to the Georgian (small-scale) fishery companies.

The licences were issued for 10 years in 2006, thus being valid until 2016. There is a chance that licences will be prolonged beyond 2016. The administration of marine fishery has been moved to the Ministry of Energy and Natural Resources. They are also responsible for the licenses.

Responsibilities within the government structure have changed. The current distribution of responsibilities regarding fisheries are:

- Ministry of Energy and Natural Resources(including Agency for Natural Resource Management): Marine Fishery (Quota, Licenses, Rule of fish catching, inspection);
- Ministry of Environment: Biodiversity, Data collection, Monitoring;
- Ministry of Agriculture: Aquaculture (theoretically/as they do not have aquaculture experts);
- Ministry of Economy: Landing sites for fishery within harbours.

In addition to the license fee paid in 2006, the license holders also have to pay two types of **taxes:** natural resource tax (25 GEL/ton of quota) and one other tax (14 GEL/ton quota, will be increased to 25 GEL/ton). The interviewed companies complained that the tax has to be paid on the full quota, not on the actual tax. Further, by increasing the quota and the tax rate,

[9] According to various persons interviewed, there are intensive anchovy catching activities ongoing now also in **Abkhazia** by Russian, Ukrainian and Turkish vessels. At the time of the provision of license, the license also included fishing at the coast line of Abkhazia, which is not anymore possible since 2008. According to Deloitte Consulting LPP (2011), the fishing area for Georgia has been reduced to less than 180 km after the war in 2008.

the tax burden of the companies is heavily increased (e.g. for a 10,000 ton quota and future tax rate of 50 GEL/ton, a total of 500,000 GEL have to be paid annually).

3.3 Production and Processing in Georgia (Marine Fishery)

Main part of the marine fishery in Georgia is anchovy fishing in the Black Sea with Poti being the most important harbor. The Georgian marine fishing industry experienced a strong decline after the break-up of the Soviet Union, and is only slowly recovering. According to statistics, the production is, however, much lower than the quota. As can be seen in the chapter 2.1, the total **Georgian catch of anchovy was varying between 20,000 and 55,000 tons during the period 2001-2009**, and continued at this level throughout the last two seasons.

Table 5: Sea fish catch in Georgia during the last two seasons (in tons).

Season	2009/2010	2010/2011
Total catch, sea fish (tons)	39,993	26,006
of which:		
(i) anchovy	**39,857**	**25,919**
Part of total seas fish (tons):		
(a) caught by license holders	38,977	25,356
(b) caught by 10% holders	1,017	650

Source: Own compilation based on data from Ministry of Energy and Natural Resources, Georgia (Sept 2011)

The season for anchovy fishing is from mid November until mid April. According to the fishermen, the catch varies in a way, that about every 4-5 years, there is a lower catch. According to the fishermen, the quality of Georgian anchovy seems to be good with high protein level (about 72%) and high oil level.

According to the interviewed representatives of the fish companies, **most of the Georgian anchovy is processed in fish meal factories** (85-90% of overall catch). 6.5 tons of fresh anchovy is usually needed in those factories to produce 1 ton of fish meal and 0.5 ton of fish oil (according to one of the fish companies). The fish meal and fish oil is then mostly sold to Turkey. At the moment, there are three fish meal factories operating and one under construction[10]. The capacities of the fish meal factories are 200-700 tons/day. Assuming an average capacity of 450 tons/factory x 4 factories, the capacity will soon be around 1,800 tons/day. Thus, there may be over-capacities in the near future.

There are also small quantities of sea fish which are **frozen, salted or marinated**. So far, there is no canning industry for anchovy in the country.

[10] According to one interviewed company, two of the four fish meal factories are owned by Georgians.

Poti Harbor, 2011

3.4 Consumption in Georgia

According to the FAO study in 2010, annual fish consumption per capita is only 3.8 kg in Georgia (compared to 19 kg before independence). The interviewed representatives of the fish industry all mentioned that the Georgian market for sea fish is very small. According to EI-LAT (2011), the total domestic is around a mere 3,000 tons of fish[11].

Most of the anchovy is therefore either sold fresh to Turkish companies, or is processed in fish meal factories, and then sold to Turkish companies.

3.5 Import and Export of Fish and Fish Products

Overview

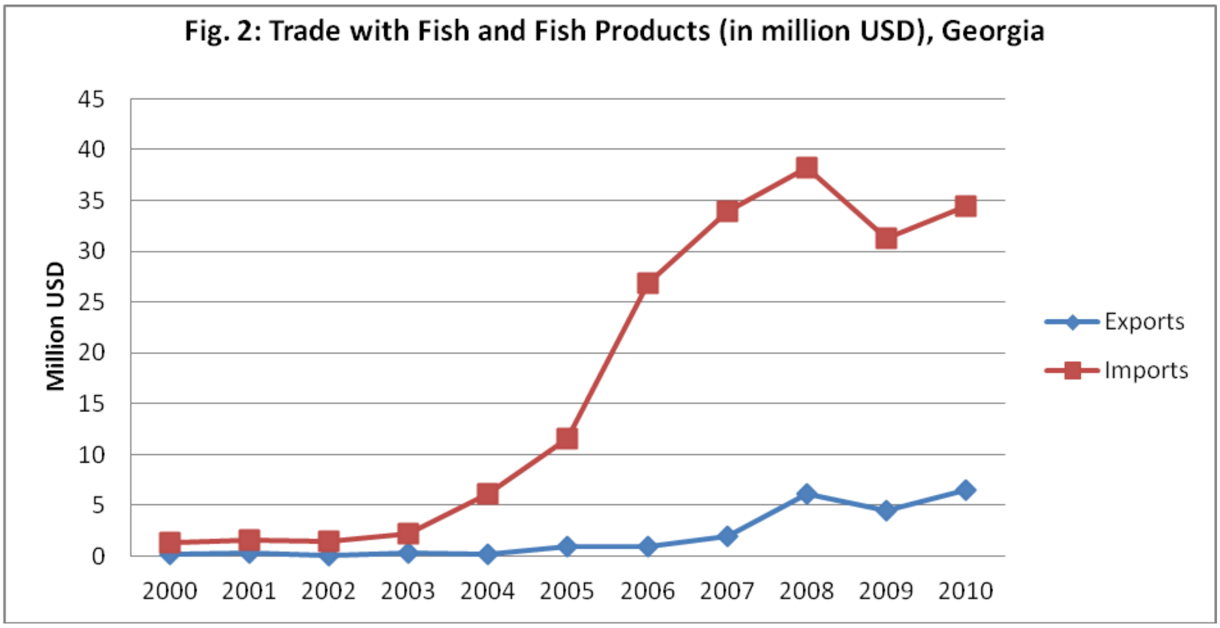
Data on export and import of fish and fish products are varying from source to source. According to Deloitte LPP (2011), Georgia regularly **imports 15-25,000 tons** of fish products each year. According to FAO (2010) Statistical Year book 2008, imports of fish and fish products amounted even to almost 40,000 tons in 2008.

For **exports of fish and fish products,** data are more consistent. Exports of fish and fish products amount to **6-20,000 tons/year**. Most of the exports of fish and fishery products are to Turkey.

[11] One of the interviewed fish companies mentioned that the maximum Georgian market for fresh and salted anchovies amounts to 5,000 tons.

The value of **fish imports**[12] has increased considerably in Georgia from about USD 1-2.5 million annually (2000-2003) to nowadays **USD 30-40 million**.

Exports have also increased in value from less than USD 0.5 million annually (2000-2004) to nowadays **USD 4-7 million**. Even if data are varying according to sources[13], the general trend is obvious. As imports have increased more substantially in value than exports, the negative trade balance for fish and fishery products has widened.



Source: Geostat (2011)

Export to Turkey

According to EI-LAT (2011), **Turkey has replaced Russia as Georgia's main trading partner.** Until 2005, the Russian Federation was traditionally Georgia's principal trading partner, but the Russian embargo in October 2006 fostered the need to revise trade and economic priorities. A Free Trade Agreement (FTA) was signed with Turkey in November 2007. It came into effect in November 2008, right after the war with Russia.

Fish is quite a substantial portion of the Georgian export structure to the Turkish market. Exports of fish and fish products are of a value of approximately USD 1.5-4 million annually (according to EI-LAT 2011).[14] Of the exported fish and fish products to Turkey, an increasing part was derived from export of anchovies.

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[12] Fish imports and exports = fresh and sea fish.

[13] There are differences to the data from FAO Statistical Yearbook. This may come from a different selection of products summarized as fish and fishery products.

[14] Comparing the data of overall value of Georgian export of fish and fish products of about USD 5 million (2008-2010) per year with the data of value of Georgian export of fish and fish products of about USD 2-4 million (2008-2010), there may be some inconsistencies. According to the interviewed experts and fishermen, most of the export is going to Turkey.

Table 6: Fish and Fish Product(s) Exports from Georgia to Turkey in 2007-2009

		Exports from Georgia to Turkey			
	UNIT	2007	2008	2009	2010
total	**tons**	**5,928**	**11,743**	**19,010**	
	1000 USD	**1,412**	**2,930**	**2,382**	**4,114**
Anchovies	tons	3,883	9,351	18,360	n/a
	1000 USD	568	1,118	1,992	n/a
Flours, meals and pellets	tons	808	1,571	337	n/a
	1000 USD	662	1,181	331	n/a
Others	tons	1,237	821	313	n/a
	1000 USD	182	631	59	n/a

Source: Own compilation based on data from EI-LTA (2011), Annex 5 and Annex 4

According to EI-LAT (2011), customs duties are very high on frozen fish in Turkey, at around USD 350 per ton, which is a heavy tax burden for Georgian exporters. The FTA provisions a 60% tariff reduction quota provided on frozen anchovies. However, according to EI-Lat (2011), this had not been known to some interviewed fish companies. In comparison to frozen fish, the export of chilled fish seems to be easier due to lower customs duties and not requirements on certificate of origin and quality.

3.6 Prices

Wholesale: As mentioned above, most anchovy (fresh and processed) are sold to the Turkish market at wholesale prices. Below are some wholesale prices during the last season.

Table 7: Wholesale prices for fresh and processed anchovies (2010/2011 season)

	USD/ton	GEL /ton
Anchovy, fresh (min. size 10 cm), sale to Turkey	250	
Anchovy, fresh, sale by small-scale fisherman to fish meal factory Poti	80	
Anchovy, frozen	600	
Fish meal, sale to Turkey	1000	
Fish oil (per 1000 litres), sale to Turkey	1200-2000	
Anchovy, fresh, sale in Poti (at boat)		200-1200
Anchovy, fresh, sale in Tbilisi		2000

Source: Own compilation based on interviews with representatives of the fish industry in Poti.

Retail: Retail prices are at approximately 2 GEL/kg (i.e. about 1.2 USD/kg) for fresh anchovy (lower prices during November/December) and about 3-4 GEL/kg (i.e. about 1.8-2.4 USD/kg) for smoked anchovy. **Compared to other fish and also compared to meat[15], anchovy is relatively cheap.**

Table 8: Retail prices fish (Tbilisi), September 2011

	GEL/kg
SEA FISH	
Anchovy, fresh or frozen/1	2
Anchovy, smoked	3-4
Mullet	9-10
Sturgeon	50
Crustacean	2
FRESH WATER FISH	
Trout (small sized Georgian trout, <200 g)	10
Silver carp	6-7
Grass carp	5-6
Common Carp	7-10 (8)
FROZEN FISH/2	5

Source: Own compilation based on interviews in Georgia in September 2011;
/1 Poti prices: according to fish traders, the retail prices for anchovies are about 1-3 Lari/kg.
/2 according to Geostat (2010)

Fish section of the retail market, Poti (Sept. 2011)

[15] Based on information from interviewed persons, meat prices are comparatively high with about 9 GEL/kg for porc meat and 17 GEL/kg for calf meat.

4 Companies, business risks and investment plans

4.1 License holders

According to Geostat (2011c), there are a total of 182 entities with economic activities in the field of fishing and fish-breeding.

In 2006, 10-year licenses have been auctioned for fishing in the Black Sea. There are now six main license holders (see table below). In total, they are allowed to hire up to 19 Turkish vessels for anchovy fishing.

Table 9: Overview on main license holders, 2011

Licence holder	% of total quota*	No. of Turkish vessels that can be hired**	No. of own vessels**	Fish meal factory**
Madai	**25**	4	3	1 (older one)
Iceberg (former Alianse 2006)	**20+7.3**	3		1
Geofish company	**19.2**	4		1 (new)
Paliastomi	**14.1**[16]	4	1[17]	In planning
Black Sea Products	**10**	2		
Lts Sea Products	**4.4**	2		1 in construction

Source: Own compilation based on information of the Ministry of Energy and Natural Resources* and information from one of the license holders**, Sept. 2011

Further, 10% of the quota was provided to existing Georgian small-scale fishing companies with boats. In 2006, those were 43 vessels (see annex 2). Nowadays, there are about 25-30 Georgian boats fishing in the Black Sea. [18]

Madai

Madai is one of the license holders for Black Sea Fishing. They have one fish meal factory, and received the right to hire up to 4 Turkish vessels for fishing. In 2008, Madai agreed with SEAF to receive loan and equity finance from the Georgian Rural Development Fund (GRDF) in order to purchase 3 modern vessels[19] In 2009, Madai purchased the vessels, and used them during the 2009/10 season for the first time.

Madai had originally a quota of 15,000 tons (25%*60,000), which has now been increased to 20,000 tons for the coming season. From last season catch of 12-13,000 tons, about 8,000 tons were captured with Madai's own vessels and mostly processed in Madai's own fish meal

[16] (was 21%, but Paliastomi sold part of their quota to Alliance)
[17] (+2 Georgian/transport vessels from Batumi)
[18] According to information from various fishing companies during interviews in September 2011.
[19] (www.seaf.ge and http://seaf.com/).

factory, the other 5,000 tons were captured with hired Turkish vessels, and sold fresh to Turkey.

Vessels of Madai/SEAF, 2011

Paliastomi 2004 Ltd

Paliastomi 2004 Ltd is another license holder. When participating in the auction for licenses, Paliastomi had already one own vessel (which they had bought in 2003). Further, the company is allowed to hire up to 4 Turkish vessels for anchovy fishing. Paliastomi has invested in the upgrading of its vessel, and further plans to invest into a fish meal factory and another (second-hand) vessel.

Palistomi has a quota of about 10-11,000 tons (season 2010/11: 9,800 tons, season 2011/12: 11,000 tons). However, according to the company representatives, the catch has been much lower than the quota.

As Paliastomi has no own fish meal factory, it is so far concentrating more on the fresh/chilled/salted market. Most of their anchovy fish is sold fresh iced (chilled) to Turkey, only few is sold to the local market.


Vessel of Paliastomi 2004 Ltd

Other license holders

Other license holders are Black Sea Products, Sea Products, Iceberg (former Alianse), and Geofish. Alianse (which now seem to belong to Iceberg) owns a fish factory, Geofish has a new fish factory (on the way out of Poti direction Tbilisi). Sea Products seem to have one fish meal factory in construction.

Aspects regarding profitability

Profit from fresh sale to Turkish owners of hired vessels, and sale to processors. Part of the license holders own fish meal factories, thus process the fish themselves and then sell the fish meal and fish oil to Turkey.

Investment needs of License holders

Investment needs of USD 0.5-3 million per company. Investment plans for purchasing vessels and nets[20], for investments in processing (fish meal) and/or aquaculture. One of the larger company reported that a bank rejected the loan application because of the high natural risk of low catch of anchovy during last season (even if the company has sufficient collateral).

Potential collaterals

Collateral in form of real estate, land, processing plants, vessels

Potential risks

- **Natural risk** (variations in catch),
- **Regulatory risk** (duration of license, changes in regulation of licenses / e.g. total quota, tax rate/ton, safety inspections on vessels and/or nets during season, landing dock for fishery not well defined and fees may vary; problems with customs processing),
- Price risk (dependency on Turkey as main market),
- Technical risks (damage to vessel or to net). However, technical risk is limited, as most vessels are hired from Turkey (who themselves have to take care about the technical risk).
- Financial risk (delayed payments by some of the Turkish partners)

4.2 Other (small-scale) fishing companies

There are about 25-30 small scale Georgian fishing companies. The right to fish 10% of the black sea fish was given to them. However, as their vessels are old and as they face difficulties to accumulation of own capital or receive loans to upgrade their vessels, their competitiveness vis-à-vis the Turkish vessels or the new vessels of Georgian license holders is very limited. Most of them own a trawler, which has a much smaller fishing capacity then purse seiners.

[20] A net can cost USD 150-300,000 tons.

Vessels of small-scale fishing companies, 2011

Aspects of profitability

Limited profitability, as 90% sale to processors (little negotiation power)

Investment needs small-scale fish companies

The interviewed fishermen mentioned that some of them would like to take loans of USD 150-200,000 in order to buy new nets (or the material for the nets) and to upgrade their vessels. However, the fishermen mentioned that interest rates for bank loans are too high, and a collateral is usually required.

Potential collaterals

No mayor collateral (old vessels)

Thomas MothPoulsen exchanging with representatives of small-scale fishing companies, 2011

Potential risks

- **Natural risk** (variations in catch),
- **Technical risks** (damage to vessel or to net),
- Price risk (dependency on local fish meal factories and local wholesalers as main market),
- Regulatory risk (inspections of vessels during season),
- Financial risks (delayed payments, and insufficient reserves/cash flow, as non-diversified income)

5 Financing Side

Representatives from SEAF (GRDF) and of three commercial banks (BOG, TBC, PROCREDIT) have been met during 15th September 2011. SEAF has been visited because of their investment activities into the Madai company, and the banks have been selected because of their potential involvement in the Georgian Agricultural Finance Facility (GAFF). There are more banks potentially involved in GAFF, but due to time constraints, not all of the banks could have been visited.

SEAF/GRDF

SEAF manages the Georgian Rural Development Fund (GRDF) which was established with financial means from the Millennium Challenge Corporation (MCC).

Overall, SEAF has provided USD 32 million to 13 companies. Part of the investment has been in agriculture (e.g. egg production, hazelnut growing and processing, animal feed production) and fishery (e.g. purchase of three vessels by Madai). Application forms of SEAF can be found on:

There is a plan to increase the Rural Development Fund with IFC and EBRD as shareholders, and with regional coverage for all Caucasus. That fund should start operation in February 2012.

Client Group	Products SEAF	Experience with Fishery
SMEs	Loan/equity/mezzanine up to USD 3 million (in future: up to USD 7 million)	1 client (Madai)
Corporate Finance	Loan/equity/mezzanine up to USD 5 million (in future up to USD 14 million	

ProCredit Bank

ProCredit Bank is providing loans to the agricultural sector and also to SME clients with aquaculture. There overall portfolio in agriculture amounts to USD 20 million. ProCredit further plans to increase the agricultural portfolio. ProCredit Bank is also providing bullet payment loans for primary agriculture (i.e. repayment and interest payment after 6 months)

<table>
<tr><td>Client Group</td><td>Products ProCredit</td><td>Experience with Fishery</td></tr>
<tr><td>Micro-Enterprises</td><td>Loans up to USD 10,000, no collateral, interest rate 24-30%,
Loans up to USD 30,000 with collateral, including agro-loans</td><td rowspan="2">Some 150 clients in the field of aquaculture (e.g. trout production): total portfolio: USD 814,000;
Some small loans for fishery companies (not under category primary agriculture, but “business”) for renovation of vessels.</td></tr>
<tr><td>SMEs</td><td>Loans USD 30-150,000, with collateral (e.g. real estate), interest rates around 14% (sometimes 12%)</td></tr>
</table>

Bank of Georgia

The Bank of Georgia (BOG) has some portfolio in agriculture and agro-processing, including some financing of larger investments (corporate lending in the field of Fast Moving Consumer Goods, FCG)). However, the experiences with the marine fishery sector is still limited to one example.

Client Group	Products Bank of Georgia	Experience with Fishery
Micro-Enterprises	Loans up to USD 100,000	BOG once provided a loan for a planned investment in fish cannery, but factory operation did not start
SMEs	Loans USD 500,000	
Corporations	Loans of more than USD 500,000	

TBC Bank

TBC Bank has only a very small portfolio in agriculture, but they intend to increase this portfolio. TBC Bank is also distinguishing between corporate banking and retail banking

Other Banks

Besides the above-mentioned three banks, there are other banks who may be involved in the future GAFF and/or who may be already active in agriculture and/or fisheries. There are, for example, Crystal Banka, Finca Banka, Basis Bank, VTB Bank, and Bank Republic. Because of the time constraint, not all banks have been interviewed.

Problems mentioned by the banks regarding financing for marine fishery

The commercial banks which have been interviewed mentioned the following reasons for not yet having financed marine fishery companies:

- Insufficient knowledge of the bank about the profitability of marine fishery (e.g. sector and market knowledge, benchmarks),
- Insufficient knowledge of the bank about the risks of marine fishery,
- Seasonality of the business (grace period would be needed, which is an additional risk) and natural risks (varying catches from season to season).
- Market risks: Lack of export opportunities to the EU,
- Insufficient collateral of some of the companies (old vessels not suitable as collateral), lack of equity of the fishery companies
- Capacity of companies in accounting and auditing needs improvement,
- No insurance systems

6 Conclusion

Summary of basic figures:

Quota for Georgian anchovy fishing:	70-80,000- tons
Annual Catch (according to statistics):	25-40,000 tons
Sale anchovy to Georgian market:	~3-5,000 tons
Export fish and fish products (incl. anchovy and others)	~6-20,000 tons (of which ~5-19,000 tons to Turkey)
Import fish and fish products	~15-40,000 tons
No. of license holders	6
No. of Fish meal factories	3 (plus one in construction)
No. of small-scale fishing companies:	25-30

There is a strong potential for the marine fishery sector in Georgia, as there is still an unfulfilled quota, and as there is a stable to increasing demand for anchovy on the world market, in particular in Turkey and Southern Europe. Further, there is a world wide growing demand for fish feed made on the basis of fish meal and fish oil. **The economic potential will increase once Georgia is certified to export to the EU**.

The prospects are good for the license holders, as those are mostly large companies with own resources for investments which can be leveraged by financial resources from banks and investment funds.

The prospects are not as good for the smaller fishery companies, as they usually only own each one vessel with outdated technology. As most of the anchovies are sold to fish meal factories, whereas the local fresh market is limited, the small fishery companies do not have a lot of negotiation power. In order to support these small-scale fishery companies, an initial grant funding may be suitable, if the government also realises its interest in supporting the local fleet.

Table 10: SWOT Analysis (Marine Fishery Georgia)

Strengths: • Quota (80,000 tons) • Increasing investments in fish meal factories • Increasing investments by license holders in modern vessels • License holders are relative large-scale companies with different income sources	**Weaknesses:** • Most Georgian vessels are old and less efficient than modern vessels • Seasonal business (November until April 2011) • Georgia cannot export to the EU, as there is no system of export certification to the EU (e.g. no authorized laboratory) • Dependency on Turkey as main market, and dependency on Turkish vessels to be hired for fishing • Insufficient collateral for bank loans of the small-scale fish companies
Opportunities: • Demand for fresh and processed anchovy increasing > Opportunities for Georgia once Georgia can export to the EU • Strong worldwide demand for fish meal and fish oil • Demand in local market could be increased (awareness raising, promotion, development of logistics for frozen/chilled products, new product development) • Increasing awareness of the Government of Georgia about the importance of agriculture and fishery	**Threats:** • Competition from Turkish vessels • Competition by vessels fishing at the Abkhazian coast • Uncertainty about government regulations related to license fees, technical inspections, etc. • Uncertainty about prolongation of license after 2016 • Danger of over-fishing of anchovy in the Black Sea

During this mission, FAO assisted the marine fishery sector by **raising awareness** about this sector among commercial banks.

In future, FAO may consider to support the marine fishery sector by assisting Georgia to receive the **certification to export fish and fishery products to the EU**.

Other useful support measures by the government, by FAO and/or other donors can be to (a) provide **training to representatives of the fishery industry** (training on technical and on financial / investment planning topics), and (b) to provide **training to loan officers of commercial banks** (on market opportunities and risks in fishery, and on how to assess loan applications from the fishery sector).

Annex 1: Georgian Exports and Imports of Fish and Fishery Products

Table 1-1 and 2-2 show a comparison of export and import data from three different sources. Differences may derive from different commodity groups included in “fish and fishery” data, e.g. whether fish meal and fish oil is included or not. Table 4-3, 4-4, and 4-5 then present the detailed data.

A1-1: Annual Exports and Imports of fish and fish products (in tons), Georgia

YEAR	2005	2006	2007	2008	2009	2010
Imports (tons)/1	n/a	15,525	17,665	22,648	18,804	
Imports (tons)/2	15,718	19,394	22,113	38,830	n/a	
Exports (tons)/1	n/a	6,234	7,034	14,709	20,587	
Exports (tons)/2	17,379	6,235	7,770	14,973	n/a	
Exports to Turkey (tons)/3	n/a	n/a	5,928	11,743	19,010	

Source: /1 Geostat (2011) and Invest in Georgian Agriculture, in: Deloitte Consulting LPP (2011);
2/ Own compilation based on FAO (2010) Statistical Yearbook 2008;
/3 Own compilation based on The European Initiative Liberal Academy Tbilisi (EI-LAT) (2011)

A1-2: Annual Exports and Imports of fish and fish products (in 1000 USD), Georgia

YEAR	2005	2006	2007	2008	2009	2010
Imports (1000 USD)/1	11,558	26,869	33,870	38,231	31,220	34,419
Imports (1000 USD)/2	11,914	27,293	34,746	46,051	n/a	n/a
Exports (1000 USD)/1	1,004	905	1,949	6,094	4,526	6,547
Exports (1000 USD)/2	1,420	903	2,529	6,717	n/a	n/a
Exports to Turkey (1000 USD)/3	n/a	n/a	1,412	2,930	2,382	4,114

Source: /1 Geostat (2011)
2/ Own compilation based on FAO (2010) Statistical Yearbook 2008;
/3 Own compilation based on The European Initiative Liberal Academy Tbilisi (EI-LAT) (2011)

A-1-3 Georgian Exports and Imports by Commodity Position

(in 1000 USD)

Code	EXPORT, Name of Positions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
0301	Live fish	-	-	-	-	-	0.6	4.1	1.4	-	29.3	76.8
0302	Fish, fresh or chilled and other fish meat	25.7	206.9	6.8	214.2	99.7	713.8	558.7	774.8	1,163.7	2,050.9	4,113.6
0303	Fish, frozen	60.8	64.9	25.1	64.2	94.4	257.1	338.5	504.5	2,288.7	1,326.6	1,922.9
0304	Fish fillets and other fish meat, fresh, chilled or frozen	-	-	-	-	0.8	-	-	0.2	696.9	739.5	205.8
0305	Fish, dried, salted or in brine; smoked fish, fish meal fit for human consumption	20.9	1.5	9.3	6.5	10.9	20.8	2.8	667.6	1,863.4	336.5	228.4
0306	Crustaceans, whether in shell or not, live, fresh, chilled, frozen or dried	-	-	-	-	-	-	0.2	-	-	1.1	-
0307	Molluscs and other aquatic invertebrates	28.2	69.4	73.8	64.0	8.1	-	-	-	68.3	0.3	-
1604	Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs	-	13.2	9.0	14.3	38.7	11.2	0.2	-	13.1	42.0	-
1605	Crustaceans, molluscs and other aquatic invertebrates, prepared or preserved	-	-	-	-	-	0.4	-	-	-	0.1	-
	Exports Fish and Fish Products	**135.5**	**355.9**	**124.0**	**363.2**	**252.6**	**1,003.9**	**904.6**	**1,948.5**	**6,094.1**	**4,526.3**	**6,547.3**
Code	IMPORT Name of Positions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
0301	Live fish	2.1	1.8	1.7	-	18.1	7.7	24.7	24.9	60.5	72.9	94.9
0302	Fish, fresh or chilled and other fish meat	64.0	6.6	22.1	-	27.2	35.4	367.1	12.6	21.9	22.6	15.3
0303	Fish, frozen	1,161.7	980.4	1,264.2	1,930.7	4,012.0	7,645.6	20,338.5	26,306.0	26,599.1	22,504.8	25,810.1
0304	Fish fillets and other fish meat, fresh, chilled or frozen	11.8	6.5	2.0	2.3	58.5	137.3	279.9	700.3	2,732.3	2,260.0	2,716.3
0305	Fish, dried, salted or in brine; smoked fish, fish meal fit for human consumption	35.3	71.6	45.6	68.1	142.5	237.4	531.0	690.4	1,296.8	757.3	832.9
0306	Crustaceans, whether in shell or not, live, fresh, chilled, frozen or dried	3.8	14.1	1.7	8.5	56.8	25.0	96.3	171.6	245.2	195.3	209.4
0307	Molluscs and other aquatic invertebrates	1.9	4.3	0.8	4.5	10.4	21.0	48.4	78.9	73.4	75.1	85.5
1604	Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs	104.0	540.9	95.2	147.0	1,776.5	3,366.2	5,101.3	5,772.0	7,066.1	5,277.6	4,577.8
1605	Crustaceans, molluscs and other aquatic invertebrates, prepared or preserved	3.4	7.2	2.9	0.5	87.6	82.7	82.0	113.4	136.3	54.3	76.7
	Imports fish and fish products	**1,388.0**	**1,633.3**	**1,436.3**	**2,161.7**	**6,189.7**	**11,558.3**	**26,869.2**	**33,870.2**	**38,231.8**	**31,220.0**	**34,418.9**
	Balance (1000 USD)	-1,252.5	-1,277.5	-1,312.3	-1,798.5	-5,937.1	-10,554.4	-25,964.6	-31,921.7	-32,137.7	-26,693.7	-27,871.6

Source: Own compilation based on data from the Statistical Office of Georgia (www.geostat.ge); Retrieved 6 September 2011

A1-4: Georgian Import and Export of seven fishery commodity groups (in 1000 USD), Georgia

		Imports					Exports			
	UNIT	2005	2006	2007	2008		2005	2006	2007	2008
total (7 fishery commodity groups)	**1000 USD**	**11,914**	**27,293**	**34,746**	**46,051**		**1,420**	**903**	**2,529**	**6,717**
Fish, fresh, chilled or frozen	tons	11,818	15,171	17,430	30,773		16,144	6,220	6,206	11,747
	1000 USD	7,826	20,998	27,038	33,561		973	901	1,280	4,148
Fish, dried, salted or smoked	tons	257	338	214	2,757		126	15	829	2,296
	1000 USD	236	532	691	3,158		21	2	667	1,863
Crustaceans and mulluscs	tons	13	13	25	41					
	1000 USD	45	139	249	312					
Fish, canned	tons	2,692	3,116	3,174	2,977		70			11
	1000 USD	3,367	5,101	5,769	7,080		11			13
Crustaceans and mulluscs, canned	tons	73	52	40	61					
	1000 USD	81	82	111	135					
Oils	tons			1	766		383		439	671
	1000 USD			4	514		153		300	470
Meals	tons	865	704	1,229	1,455		656		296	248
	1000 USD	359	441	884	1,291		262		282	223

Source: FAO (2010) Statistical Yearbook 2008.

A1-5: Fish and Fish Product(s) Exports from Georgia to Turkey in 2007-2009

		Exports from Georgia to Turkey			
	UNIT	2007	2008	2009	2010
total	**tons**	**5,928**	**11,743**	**19,010**	
	1000 USD	**1,412**	**2,930**	**2,382**	**4,114**
Anchovies	tons	3,883	9,351	18,360	n/a
	1000 USD	568	1,118	1,992	n/a
Flours, meals and pellets	tons	808	1,571	337	n/a
	1000 USD	662	1,181	331	n/a
Others	tons	1,237	821	313	n/a
	1000 USD	182	631	59	n/a

Source: Own compilation based on data from EI-LTA (2011), Annex 5 and Annex 4

Annex 2: Quota, license holders and other fishermen in Georgia

A2-1: Sea fish quota, Georgia (2011/2012)

Fish species	Tons/season
Engraulis encrasicholus (Anchovy)	**80,000**
Sprattus sprattus phalericus	840
Merlangius merlangus euxinus	780
Trachururs mediterraneaus ponticus	700
Mullus barbatus ponticus et Mullus surmuletus	680
Mugil so-iuy, Liza aurata et Mugil cephalus	100
Squalus acanthias	80
Uranoscopus scaber	56
Sarda sarda	38
Neogobius melanostomus et Mesogobius batrachocephalus	36
Psetta maxima maetica	32
Alosa kessleri pontica, et Alosa caspia paleostomi	28
Spricara (Maena) smaris	24
Pomatomus saltatrix	12
Belone belone euxini	12
Dasytatis pastinace	12
Mullusca	
Rapana venosa (Rapha thomasiana)	1,000

Source: Own compilation based on hard copy provided by one fish company

A2-2 Overview on license holders and their share in the Georgian quota for Black Sea Fishing (2011)

#	Species	Tons	Madai	Alliance 2006 (now: Iceberg)	Geofish Company	Paliastomi 2004	Black Sea Products	Iceberg	Lts "Sea Products"
	%		**25.0**	**20.0**	**19.2**	**14.1**	**10.0**	**7.3**	**4.4**
1	Anchovy	**70,000**	**17,500**	**14,000**	**13,422**	**9,839**	**7,000**	**5,132**	**3,108**
2	Whiting	1,000	250	200	192	141	100	73	44
3	Horse Mackerel	3,000	750	600	575	422	300	220	133
4	Red Mullet	1,000	250	200	192	141	100	73	44
5	Grey Mullet	800	200	160	153	112	80	59	36
Total		**75,800**	**18,950**	**15,160**	**14,534**	**10,654**	**7,580**	**5,557**	**3,366**

Source: Ministry of Energy and Natural Resources, September 2011

A2-3 Other companies / Black Sea Fishing (The List of Fishing Vessels, 2006)[21]

N	Name of Fishing Vessel	Total Capacity of Vessel (in tons)	Owner of Vessel
1	"Pitsunda"	109	Cooperative Enterprise "Gagra"
2	"Orbi"	187	Cooperative Enterprise "Gagra"
3	"Ilori"	104	Sokhumi Fish Collective
4	"Dnestr-3"	104	Ltd. "Sopmari"
5	"Eduard"	104	Eduard Kashelava
6	"Samegrelo"	104	Sergo Bukia
7	"Maltakva"	104	Sergo Bukia
8	"Dnestr"	1361,43[22]	Sofi Alania
9	"Dnestr-2"	119	Ltd. "Sopmari"
10	"Beshumi"	170	Ltd. "Adjartevzi"
11	"Vinipukh"	5	Ltd. "Also"
12	"Piatachok"	1.2	M. Bejhanidze
13	"Albatros"	17.8	Ltd. "Eldorado" G.Chichinadze
14	"Seestar"	12.37	K. Gegechkori
15	"SMB-40 Akaki"	12	A. Intskirveli
16	"SMB-40"	12	A. Intskirveli
17	"PMB – 40 Poti"	27,34	M. Tugushi
18	"G. Nikuradze"	72	G. Lataria
19	"Ritsa"	92	Cooperative Enterprise "Sokhumi"
20	"Poti"	79	M. Bagateli
21	"Argo"	98,84	Ltd "INB" Director I. Intskirveli
22	"West"	35	Ltd. "West"Director V. Qavtaradze
23	"Mirian"	79	Ltd. "Bego" J. Jamburia
24	"Iazon"	79	G. Lataria
25	"Mimino"	29	N. Getia
26	"Vladimer"	35	E. Gujabidze
27	"”Shota"	11	D. Dzidziguri
28	"Vega"	35	T. Lomadze
29	"SMB-40-Likmari"	12	I. Bikov
30	"Basko"	80,29	D.Babilua
31	"Alfa+"	58,82	N.Nakalaia
32	"Kortokhi"	16,7	"Ltd. Bagrationi"
33	"SCHS-1296"	72,0	"Cooperative Mebaduri"
34	"SCHS-79"	79,0	"Cooperative Mebaduri"
35	"SCHS-189"	79,0	"Cooperative Mebaduri"
36	"MK-7573"	14,5	"Cooperative Mebaduri"
37	"Meduza"	12,4	"Ltd. Eldorado"
38	"Golden Fish"	92,0	"Ltd. Eldorado"
39	"Kargo"	77,0	"Ltd. Eldorado"
40	"SCHS Lanchkhuti"	104	S. Tsitsilashvili
41	"SCHS -1151"	79	I.Khurtsilava
42	"SCHS Fazisi"	92,49	V. Duduchava
43	"Gantiadi"	104	Cooperative Enterprise "Gagra"

Source: List of Ministry of Environment and Natural Resources, 2006, received from Ministry of Energy and Environment, 2011

[21] List from 2006 (Ministry of Environment and Natural Resources). In 2011, there are less vessels active (around 25-30 according to interviewed fishermen).
[22] The figure 1361,43 is from the official document. However, it can be assumed that there is typing mistake here (it may be 136,1 tons capacity, for example). Further, there were figures in minus value in the original list, which probably also is a typing or formatting issue.

Annex 3 Schedule of the mission 12-16 September 2011

Date	Schedule
12.09.2011	Arrival Tbilisi
	Meeting with fishery experts and FAO Assistant Representative to Georgia
13.09.2011	Travel to Poti
	Meeting Paliastomi 2004 Ltd. (license holder)
	Meeting Madai (license holder)
14.09.2011	Visit of fish stands at local market, Poti and Interviews with fish traders
	Meeting Paliastomi 2004 Ltd.
	Meeting with small fishery companies at the harbour
	Travel to Tbilisi
15.09.2011	Meeting SEAF
	Meeting Deputy Head of Natural Resource Department, Ministry of Energy and Natural Resources
	Meeting ProCredit Bank
	Meeting Bank of Georgia
	Meeting TBC Bank
	Meeting former consultant USAID
16.09.2011	Departure to Budapest

Annex 4: Sources of Information

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