IMPROVING NATIONAL DATA COLLECTION AND STATISTICAL SYSTEM OF UKRAINIAN INLAND FISHERY AND AQUACULTURE SUBSECTOR[1] (PROJECT)

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Acknowledgement

1. INTRODUCTION

1.1 Objectives and scope of this report

In the frame of FAO project GCP/UKR/001/NOR a comprehensive review of the fisheries and aquaculture sector of Ukraine was elaborated in 2016. This document titled "***Fisheries and aquaculture sector study of Ukraine***", the first in its category since independence, presented and discussed all important components and aspects of the sector.

One of the conclusions of the review was that the obviously great potentials Ukraine has in fisheries and fish production could much better be utilized on condition that reliable information and data, essential for realistic planning and accurate evaluation of sector's results would be available. This is because the currently prepared study highlighted some areas of data collection for statistics which need to be strengthened and further developed. These areas are:

- Recreational fishery because at present there is no statistical data collection and evaluation.
- The system of collection and submission of inland fisheries statistical reports on catches needs improved enforcement.
- Low quality of reported data fish production and fish products.
- Lack of statistical information on marketed aquaculture products.
- Employment related issues of the sector are entirely missing from statistics.
- Reporting process and the content of the reports also needs improvement.

Box 1: Micro data in statistics

"Microdata are the units of data that aggregate statistics are compiled from. Microdata consist of sets of records containing information on individual respondents or business entities. To protect the anonymity of respondents (persons, organisations), the access to microdata is restricted" (EC 2017).

Out of the above listed shortcomings low quality (i.e. often less or unreliable) data reported by fishing companies, STRHs, fish farms and fishers directed the attention to the need for improving microdata collection on inland fisheries and aquaculture (see Box 1). It is because these are the foundation of all further statistics in which these confidentially handled sourced data are aggregated, processed, analyzed and published. Consequently this report focuses on this first, but obviously one of the most important phase of the inland fisheries and aquaculture statistics and recommends solutions such as introducing either new or perfected questionnaires or feasible measurements for improving discipline at filling in and submission them.

Additional importance and actuality of elaborating this present report is though inland surface waters occupy 4% of the country (a total of 2 422 000 ha), yet today only 37% (a total of about 897 500 ha) of inland waters are officially listed in which fisheries and aquaculture is practiced. In addition, there are other inland waters a total of 536 695 ha such as ponds and smaller agricultural water reservoirs and a total of 8 783 ha water reservoirs on smaller rivers. But their fish production results do not or only partly appear in the national fisheries and aquaculture statistics.

At present the national water cadaster of inland waters is being upgraded. For this reason only partial information could be received on improved lists of water bodies. However this ongoing efforts of State Water Resources Agency of Ukraine could be made more sector friendly if a set of additional information on the dimensions and use of these waters would also be available.

For reasons summarized above this report, titled "***Improving national data collection and statistical system of Ukrainian inland fishery and aquaculture subsector***" was elaborated.

1.2 Why inland fisheries and aquaculture data collection and statistical system to be focused on

There are considerable areas of inland waters which including and their fish production do not appear in national statistics. This fact itself justifies the desk review and consolidation of official lists of inland waters, as well as the review how to improve both the national data collection and statistical system in inland fisheries and aquaculture.

Still there is another reason why this report is restricted to the inland fisheries and aquaculture subsector and did not included marine fisheries. It is that this is a well-definable and separable subsector (i.e. marine fisheries) which is so structured in Europe that in case of need for improving its microdata data collection, a wide range of good and best examples and practices could be found and adopt to improve further the data collection and statistics marine fisheries in Ukraine.

1.3 International practices of collecting and processing statistical data on inland fisheries and aquaculture

In most European countries most of the inland waters belong to the state or local government. But in case of state ownership only a few large or strategically important waters are managed by itself. The rest, actually the majority of waters are managed by companies, associations of anglers or local governments. Getting management rights from the owner i.e. from the state is usually done either by bidding or by allocation (see Box 2). Here not necessarily the financial gains dominate. Often aspects such as environment, ecological and social gains i.e. inland waters managed on a professional and sustainable way for the satisfaction of the population on which anglers' voice and influence is constantly increasing. This is one of the main reasons why inland fisheries has a changing role in Europe (see Table 1). The once important commercial fisheries in European inland waters are disappearing where recreational fisheries are taking over for becoming dominant or even the only way of fishing.

Box 2: Management rights of inland waters owned by the state

Management rights of state owned inland waters are given against a complex ecologically, physically, financially and socially correct and feasible management plan. A management plan, which must include both inputs/efforts and outputs/benefits should also give guaranties that the outlined plan will be observed and followed and in case of failure management rights will be revoked.

In case of closed water bodies such as lakes and water reservoir and smaller river systems the management rights are given to one single entity or organization, while rivers are divided for sections and the management of these sections are bided or allocated to an organization. This practice is changing at larger rivers where because of river system management approach the management rights are given on single organization which ensures proper management in all aspects.

Table 1: Role of fisheries and aquaculture subsectors in EU Member States

Subsectors		Inland waters	Marine waters
Fisheries	**Commercial**	Increasingly losing importance in many Member States of EU.	It is considerable GDP generating activity in EU Members States having considerable seas. This is regulated by the Common Fishery Policy (CFP).
	Recreational	In many EU countries it is the only allowed way of fishing in inland waters.	In some EU Member States the role and weight of this activity increasing.

Aquaculture	Role and contribution of these activities to the supply of fish and fish/fishery products is increasing.

Table 2: Legal determination of fisheries and aquaculture statistical data collection in EU Member State

Subsectors		Inland waters	Marine waters
Fisheries	**Commercial**	Inland fisheries by national legislation. The CFP has no competence over this. Statistics are not compulsory. Each member state do differently if do at all.	Compulsory and detailed as EU legislation for data collection/supply: • Regulation (EC) No. 1921/2006 – on landing fish • Regulation (EC) No. 1005/2008 – on IUU
	Recreational	No compulsory data supply to EU.	Not clear. In Iceland catches of anglers taken to the see by commercial fishing companies are deducted from the commercial quotas.
Aquaculture	Data supply of Member States to EU is compulsory which is done according to: • Regulation (EC) No. 762/2008[2]		

Box 3: Role of commercial inland fisheries within EU CFP

"Commercial inland fisheries are small-scale, labour intensive, traditional fisheries mostly using passive gear. They produce high value products of local importance. Inland fisheries will not be heavily influenced by the reform of the Common Fisheries Policy as they are mainly managed nationally. Diadromous species may benefit from the reforms as long as they are properly implemented. The new European Maritime and Fisheries Fund has greater potential to provide increased support to inland fisheries through the strengthening of community-led local development" (EC 2014).

Against marine fisheries which is managed by the Common Fishery Policy (CFP) there is no too much indication on inland fisheries (see Box 3). The CFP has no competence over inland fisheries and is managed by national legislation. Consequently in EU member states microdata supply on inland fisheries determined by national governments. Aggregated data compiled on inland fisheries are voluntarily supply to EU statistics. Only information diadromous species on their marine part should be reported (EC 2014).

Regarding aquaculture, there is a compulsory aggregated data supply from EU member states which is determined by a separate EC regulation.

Fisheries data collected in the different countries from all over the world are sent and further processed by FAO. For this reason FAO elaborated a well-established system which allows proper processing and analyses of data of marine and inland fisheries, as well as aquaculture.

At the review of presently used questionnaires it was checked whether collecting microdata of inland fisheries and aquaculture would provide the same range of information FAO expect from member countries. In addition those aspects were also considered which allow to conduct that type of national statistics on fisheries and aquaculture which provides also for feedback too fishers and fish culturists on the efficiency and prospects of their activities.

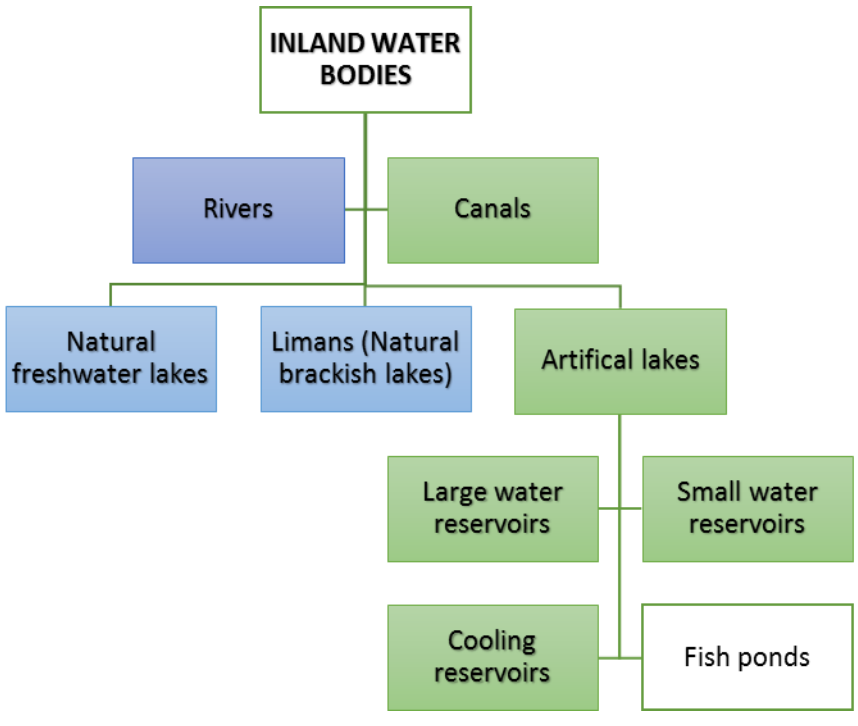
[2] Regulation (EC) No 762/2008 of the European Parliament and of the Council of 9 July 2008 on the submission by Member States of statistics on aquaculture and repealing Council Regulation (EC) No 788/96

2. PRECONDITIONS OF AN EFFICIENT NATIONAL DATA COLLECTION SYSTEM ON INLAND WATERS

The need for a consolidated inventory of inland waters is obvious which is being elaborated by State Water Resources Agency of Ukraine. An accurate and complete inventory (i.e. cadaster of inland water) is the precondition and first steps of a reliable statistical system on inland fisheries and aquaculture.

Range of data which should be available for fisheries and aquaculture statistics on inland water bodies are as follows:

- Ownership (state, local government, entity or private person ownership)
- Location (geographical, hydrological and administrative)
- Type water body (freshwater and brackish lakes, river, large water reservoir, cooling reservoirs, small water reservoirs and ponds) (see Figure 1)
- Dimensions (average length, average width, minimum, average and maximum water surface area, connecting flood plain area, average and maximum water depth, minimum, average and maximum water volume, minimum, average and maximum water carrying capacity)
- Use/utilization (hydropower, cooling, domestic, industrial or/and agricultural use of water, recreation, commercial or/and recreational fishing, protected area, etc.)



Source: FAO 2016

Figure 1: Classification of surface inland waters in Ukraine

3. PRECONDITIONS OF AND RECOMMENDATIONS TO AN IMPROVED MICRODATA COLLECTION SYSTEM ON INLAND FISHERIES AND AQUACULTURE

3.1 Data collection and statistics of inland fisheries

At present reports on the amounts of harvested aquatic living resources (commercial fishery, STRH, research catches, melioration catches, etc.) should be submitted by fishing enterprises in paper or electronic form to territorial bodies of the State Fisheries Agency:

- Monthly before the 5th day of the month.
- Weekly – after harvesting more than 70% of the defined limit or prognosis of the allowed catch of a certain species.
- Daily – after harvesting more than 90% of the defined limit or prognosis of the allowed catch of a certain species.

The territorial bodies of the State Fisheries Agency process and summarize the data and report them monthly to the Department of Aquatic Bioresources Protection, Fisheries Regulation and Ichthyology of the State Fisheries Agency.

In fact Ukraine has a well-developed fisheries data collection system. The problem is that there is no enforcement of getting proper and timely declarations from fishing companies, fishers and STRHs. The majority of them tend not to report or under report the real data because of reasons:

- Reporting reduced numbers for quoted species is that in case the fishery enterprise is close to finish the quota for a certain species, it underreports, otherwise fishing should be stopped/closed.
- Reporting reduced numbers for the most valuable species (especially pikeperch, European catfish and pike) has the consequence that significant amounts of such fish are sold without reports for reducing declared income in order to avoid taxation. The same also concerns large catches of other abundant species. In such cases fishermen can receive more money than if they had deliver the fish the landing site. It depends on working conditions and relationships between fishermen and fishery enterprise. There is a variety of working conditions. Some fishermen receive 50% from the fish sold by the fishery enterprise and they use their own boats and fishing gears. In other cases, fishermen may receive only 25% but boats and fishing gears are provided by the enterprise. The less the fishermen get from the fishery enterprise, the higher is the chance that they do not deliver the fish caught to the landing facility.
- Some inland fishery enterprises can accept illegal fish from poachers and make it officially legal through issuing documents (invoices, etc.), as if the fish were caught by this enterprise.
- Undersized freshwater bream is often reported as silver bream. This is because a certain minimum by-catch of undersized fish is allowed by law, and if this minimum is exceeded, fish harvest can be closed in some areas.

- Over-reporting of a certain species occurs in some cases, when the quota for this species is far to be finished at the end of the year (especially if these species are highly underreported during the year). Otherwise, in case it is not done like this, the quota can be reduced in the subsequent year.

Thus, the main reasons of incorrect reporting seem to be quota and tax issues. The unregistered and unreported fish can be easily sold at local markets on cash basis without any receipts and it is difficult to trace the fish. Due to a relatively large number of commercial fishery enterprises and hence fish landing facilities at the Dnieper reservoirs it is difficult to control them all by fish protection inspection (Fish Patrol), which can often be tempted being corrupted to overlook rules and regulations.

If an inland fishery enterprise underreports some species, it can be seen from individual reports – e.g. some of the them contain very low amounts of the most expensive fish (pikeperch, pike, European catfish.). However, there are some cases when these fish are not abundant in some areas of reservoirs, where these enterprises operate. Relatively low catches per boat/fishermen values (e.g. compared to the average ones) can also indicate on underreporting but again it is difficult to prove.

Solutions for solving problem and getting reliable information on fishing should include measures as follows:

- To control fish landing and reporting, special groups of fish protection inspectors, coordinated and controlled directly by the central body of State Agency of Fisheries of Ukraine. should be created.
- Higher penalties should be implemented for incorrect reporting about fish landing.
- It is needed to develop and implement law/act providing traceability of landed water living resources and their products by establishing (1) electronic reporting system about landing and first sells, (2) documentation on origin for each party of products, (3) marking of fishery products in trade, establishing technical mechanisms of state control and responsibilities.
- To prefer using of water living resources within limit according to Olympic system (without establishing separate quotas for each subject of fisheries). This will help avoiding hiding of catches by some subject of fisheries, which nowadays can occur to save individual quotas.

3.1.1 Data collection and statistics of commercial inland fisheries

There is a special logbook for fisheries. It has several fields (columns):

1. Day, month, year, time of departure for fishing.
2. Name of the fisheries water object (its part), area of fish harvest (square, coordinates).
3. Type of fishing (commercial, experimental-development, monitoring, melioration, scientific-research, scientific-commercial, exploratory, etc.).
4. Type of fishing operation (trawling, casting, hauling of purse, ring, and beach seines, difons, setting of traps, gill nets, pound nets, Fyke nets, baited hooks and other fishing gears), date, time of the start and time of the finish of the harvesting operation (for vessels, which are subjected to the technical surveillance of the classification bodies).
5. Gears used for fish harvest.

5.1. Name of the fishing gear.
5.2. Parameters of the fishing gear.
5.3. Quantity of fishing gears.
6. Species name of harvested aquatic bioresources.
7. Weight of the species of aquatic bioresources delivered to the landing site.
8. Date, time and place of the delivery of the catch to the landing site.
9. Receipt number or number of the act of destroyed or discarded aquatic bioresources.
10. Full name and signature of the person responsible for fish harvest (capture).

This logbook is the same for marine and inland fishery. It should be onboard of the decked vessels during fishing trip, while in the case of undecked boats it can be left on shore.

Fishermen who keep this logbook on-board, are supposed to fill the names of species caught during the fishing trip. The weights of these species are filled after weighing them at the landing site and receiving a receipt. The logbooks have numbered pages and are sealed, bound and registered by the Territorial bodies of the State Agency of Fisheries.

Though this log-book seems very bureaucratized, especially for inland waters, there is no better practice to control IUU. On the other hand this is the source document from which the questionnaire presented in Annex 2 is filled in and submitted quarterly and yearly. This questionnaire is found good which serves satisfactorily the purpose. However as it was already mentioned the weak point is the improper use of the logbook because of the lack of enforcement and consequence.

3.1.2 Data collection and statistics of recreational fisheries

Recreational fishery is quite popular in Ukraine. At the present time it is completely free of charge. Though there are certain rules of recreational fisheries, but these are overregulated and complicated to observe and because of lacking enforcement these rules are widely ignored. In practice people do not pay too much attention for these.

By today fishing gear and fishing equipment have been improved scientifically (artificial lures, transparent lines, extremely sharp hooks, precision echo sounders with GPS navigation) and now fish stocks are under ever increasing pressure, especially common carp and predator species such as pike-perch and pike in waters around big cities.

Most of European countries established paid recreational fisheries. Some of them have very complicated and strictly regulated system among others Germany, Hungary and Poland. Some of them (where there are many water bodies and relatively low density of population) organized recreational fisheries are rather simple, for example in Lithuania, Cyprus, Norway and Finland. Many EU countries have simple fishing rules and two-level system of recreational fisheries. It means, for example, that fishing by a rod is free of charge but fishing by a rod with reel is paid (Finland) or fishing in the sea is free but fishing in inland waters is paid (Norway).

Establishing of paid recreational fisheries in Ukraine will give an opportunity to accumulate financial resources in a separated transparently managed account for one single exclusive purpose namely for restocking inland water. With this not only the presently missing restocking of waters especially around bug cities could be partly or even entirely solved, but also as entry point, the first statistical information on recreational fishers could be gathered.

Principles of establishing such paid recreation fisheries are:

- Permit sales should be arranged exclusively by the state (GOs) in a transparent but simple way. Involvement of NGOs (clubs, associations, etc.) should not be allowed.
- Permit sales should be widely spread at post offices, or shops (as in Montenegro), or in lotto offices or in an Internet system as it is in Lithuania which is maybe the best.
- Price of permit should be affordable (permits for one day, some selected days in a sequence, one week, one month and one year).
- All collected money should be spent only for restocking purpose of native species in the area where there is a high concentration of recreational fisheries (firstly around big cities). This permits would be issued to defined waters, consequently the fees paid would also be exclusively used for stocking that particular water body to which the ticket was issued.
- At the first stage of introducing such paid recreational fisheries, those recreational fishers should be involved who have and use boats and practice spearfishing (underwater hunting and crayfish collection).
- At the next stage independently from above described permit (called contribution ticket to restocking) a special license could be established for rare, high value, endangered species or at the places with high fish concentration or in the spring time in some places expecting that this will be an efficient way to support the establishment/growth of broodstock, propagation and restocking of these species (for example Danube salmon, grayling, brown trout, burbot, barbel, sturgeons etc.).
- At the last stage it is needed to introduce payment for all kinds of recreational fisheries.

Recreation fishery in the Black Sea and in the Sea of Azov including estuaries and limans first would need the assessment of the actual level of recreation fishery including number of anglers, their frequency and the range of species and quality and quantity of caught fish.
Recreation fishermen are in a focus of the state fish protection bodies only in aspect of compliance to fishing rules. As was already mentioned only rods and angling hooks are allowed for recreation and sport fishermen. Gillnets, beach seines, hook longlines, Fyke nets and other fishing gears used for commercial fishing are prohibited for them.
IFME, doing activities for assessment of IUU-fishing in the Black Sea basin and Azov Sea basin, in August, 2017, requested to regional subdivisions of the State Agency of Fisheries of Ukraine (fish protection bodies) for a data concerning recreation fishermen, but there are serious doubts that the institute will receive such data due to lack of special state monitoring of recreation fishery. For these above reason the followings should be recommended:

- To establish monitoring of recreational fishery by the state fish protection bodies, which have to provide: quantity of fishermen, quantity of fishing gear units, catch amounts assessment by species.
- To conduct scientific research especially to assess impact of recreational fishery to the fish stocks of in particular vulnerable species;
- To establish license system for recreation fishermen, which would be very important as a source of special public funds for fish restocking measures, as well as needed for information on a quantity of recreation fishermen, their vessels, gears and catches.

3.2.3 Data collection and statistics of STRH

In Ukraine STRH is a special national variation of CBF (culture based fisheries). Entities or private persons prepare a fishery management plan of for a selected water body or (for its part) which include a stocking plan as well as the amount off fish captured by them.

The difficulty of statistics the number and total area of STRH water bodies change almost every month because new ones appear while some older ones can lose their status due to the expiration of the regimes of their fisheries exploitation, which are valid for 10 years, or their regimes can be canceled by territorial bodies of the State Agency of Fisheries of Ukraine as a result of the violation of regime requirements.

Each fishing boat has a logbook, which is on the board of decked vessels (seiners) or at the fishery enterprise for undecked boats. Fishermen deliver the fish caught to landing facilities of their fishery enterprise (the numbers of fishery enterprises and respectively landing facilities are different on different reservoirs and can reach seventy in total (Kremenchuk reservoir).
At the landing facility, the delivered fish are weighed according to species and recorded in the "acceptance" logbook, which has columns for different species. The fisherman receives a receipt with the indication of species caught and their weight. These data are recorded in fishermen logbook (a copy of the receipt is left at the fishery enterprise.

As for decked vessels, fishermen record the fish species by name on the spot and actual weights are added later after weighing the delivered fish at a landing facility. After this receipts are given.
The added weights of caught fish by species from the "acceptance" logbook are reported by the responsible person of the fishery enterprise to territorial bodies of the State Agency of Fisheries by filling a special form.

Microdata are reported quarterly and yearly on the same questionnaire used for reporting both inland and marine commercial fisheries (see Annex 2). As for filling in and submission microdata by STRHs, the users often report the amounts of harvested fish, which are close to those indicated in the regimes of fisheries exploitation of their water bodies (i.e. in their original plans) in order not to violate the requirements of these regimes. Hence not the real figures are reported. Some private persons (registered as self-employed persons) can choose not to report their catches because there is a moratorium on the check of their activities introduced recently.

Though stocking is an integral part of STRH this is not only fishing can be recorded on the form in use (see Annex 2). This form also do not allow to report some important management conditions without which no real assessment can be completed. For example in case of an STRH which operates only in a certain section of a water results should be handled differently from those which operate on a water body which is not fished by others.

For the above reasons the introduction of a new questionnaire can be recommended, which together with the guidelines for filling is presented in Annex 3. In this questionnaire the range of species to be reported are the same but space is given to report the name, age group, number and total weight of stocked fishes.

3.2 Data collection and statistics of fish farms

Reports on aquaculture production should be submitted by aquaculture enterprises in paper or electronic form to the territorial bodies of the State Fisheries Agency once a year, which are then processed, summarized and sent to the Department of the Management of Fishery, Aquaculture and Scientific Support of the Sector of the State Fisheries Agency.

Because the presently used form to report aquaculture production is rather complicated it is recommended to introduce a new questionnaire which is not only shorter than the present one but also provides for more information both in quantity and quality.

At the elaboration of this questionnaire, similarly at the elaboration of that one for STRH, the basic principles were to ensure anonymity while microdata are processed and to focus reporting physical results in real terms. As aquaculture production is well predictable reporting of results (quantity and weight of produced i.e. sold fish by species and age group) can ensure a wide range of information summarized as follows:

- Location.
- Type of enterprise.
- Type of aquaculture and culture system.
- Types of production facilities both rearing and propagation.
- Type and use of water.
- Water area or/and volume as applicable.
- Labor employed.
- Number and weight of produced fish (by species and age group).
- Efficiency of utilizing water, feeds and labor.

This recommended new questionnaire and the guideline for how to fill in is presented in Annex 4.

4. EXAMINATION OF AND PROPOSAL FOR LEGISLATIVE SUPPORT DOCUMENTATION OF RECOMMENDED CHANGES

According to the Law of Ukraine «On State Statistics», state statistics is a centralized system of collecting, processing, analyzing, spreading, keeping, protection and use of statistical information.

The sources of statistical information may be as listed below which then serves as basis for evaluations and calculations these bellow data:

- Primary and statistical data concerning respondents liable to statistical observations.
- Administrative data of bodies of state power, bodies of local self-government, legal entities.
- Data of bank and financial statistics, balance of payment statistics.
- Statistical information of international organizations and statistical services of other states.

According to Ukrainian legislation there are two Reporting forms for fisheries and aquaculture № 1 – fish (ryba) and № 1A – fish (ryba) (annual). Reporting form № 1 – fish (ryba) is the state statistical documentation, which is collected by **the State Statistics Service of Ukraine.** As to Reporting form № 1A – fish (ryba) (annual) – this kind of submission is administrative data, which is collected by territorial bodies of State Agency of Fisheries of Ukraine. These differences also mean that approval of Reporting forms attributed to exclusive competence of different state bodies (№ 1 – fish (ryba) - **the State Statistics Service of Ukraine**, № 1A – fish (ryba) (annual) - **the Ministry of Agrarian Policy and Food of Ukraine**).

Legal entities, individuals - entrepreneurs, who are engaged in aquaculture, must submit reports about the total output to the territorial bodies of the State Agency of Fisheries of Ukraine annually. But now, due to the lack of legal responsibility for non-reporting, quantity of reports № 1A – fish (ryba) (annual) is very insignificant. Worsens this state of affairs lack of a mechanism for notification of territorial bodies of the State Agency of Fisheries of Ukraine by local authorities about signed water body lease agreements. So the State Agency of Fisheries deprived of the ability to estimate the number of missing reports. According to **the Water Code of Ukraine** water body lease agreements are signed by the local authorities, but approved by the territorial bodies of **the State Agency of Water Resources of Ukraine**.

To fill the gaps in normative acts, I propose following changes:

1. To introduce the legal responsibility for non-submitting with reporting form № 1A – fish (ryba) (annual) The Parliament of Ukraine needs to adopt a Law (an additional article to Administrative Violations Code of Ukraine), which should carry punishment for such kind of violation. Concurrently, authority to enforce this additional article should be added to the article 240 of Administrative Violations Code of Ukraine, as a competence of the State Agency of Fisheries of Ukraine.
2. For notification of territorial bodies of the State Agency of Fisheries of Ukraine about signed water body lease agreements need to be adopted following acts:
   2.1. By The Parliament of Ukraine:
      2.1.1. Changes to an Article 51 of **the Water Code of Ukraine - obligatory registration of the signed water body lease agreement** at territorial bodies of the State Agency of Fisheries of Ukraine by the local authorities.

2.1.2. Changes to an Article 9 of The Law of Ukraine «On fisheries, industrial fishery and the protection of aquatic bioresources» - needs to be added to the list of powers of the State Agency of Fisheries of Ukraine power of **registration of the signed water body lease agreement.**

2.2. By the Cabinet of Ministers of Ukraine:

2.2.1. Changes to Regulation 420 of May 29, 2013 **On approval of typical water body lease agreement** - needs to be added a field for **registration details.**

2.2.2. Changes to Regulation 895 of September 30, 2015 **On approval of Regulation on the State Agency of Fisheries of Ukraine -** needs to be added to the list of powers of the State Agency of Fisheries of Ukraine power of registration of the signed water body lease agreement.

3. Changes of Reporting form № 1A – fish (ryba) (annual) can be established by the Order of **the Ministry of Agrarian Policy and Food of Ukraine.**

5. PROCESS AND TIMING OF INTRODUCING IMPROVED SYSTEM MICRODATA COLLECTION AND STATISTICAL SYSTEM

The process of introducing such changes includes professional and social debates on which conclusions and final decision of concerned authorities are based.

Feasible timing of the introduction of recommended the recommended new questionnaires for improved national data collection and statistical system in inland fisheries and aquaculture, including technical and social debates and legislation could be as much as about two years.

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Annex 1
Tables of and notes to selected inland waters of Ukraine utilized by fisheries and aquaculture

Table A1- 1: Inland water bodies of Ukraine, where commercial inland fisheries is performed according to fishing quotas allocated by the State Agency of Fisheries in 2016 and 2017

Water body	Area (ha)	2016	2017
Kyiv reservoir	92 200	+	+
Kaniv reservoir	67 500	+	+
Kremenchuk reservoir	225 000	+	+
Dniprodzerzhynsk reservoir	56 700	+	+
Zaporizhzhia reservoir	41 000	+	+
Kakhovka reservoir	215 500	+	+
Dnieper-Bug estuary	120 000	+	+
Lower Danube River		+	+
Dniester reservoir	14 200	+	-
Lower Dniester River		+	+
Dniester Lagoon (liman)	36 000	+	+
Kuchurgan reservoir	2 730	+	+
South Bug River (Vinnitsa region)		+	-
Desna River (Chernigov region)		+	+
Dnieper River (Chernigov region)		+	+
Tiligul Estuary (liman)	13 500	+	+
Budaki Lagoon (liman)	3 100	+	+
Berezan Estuary (liman)	6 000	+	+
Tuzly Lagoons (limans)	20 600	+	+
Sasyk Lagoon	21 000	+	-
Khadzhibey Estuary (liman)	7 000	+	-
Chervonooskil reservoir (within Kharkiv region only)	13 000	+	+
Vilkhiv reservoir	100	+	-
Kuyalnik Estuary (liman)[3]	6 000	-	+
Total	**961 130**		

It is to note that not the entire areas of large reservoirs, especially Dnieper reservoirs are allowed for commercial fish harvest. Almost half of the area is not accessible for commercial fishermen due to closed zones, nature protection territories, etc.

In 2017 in Shatsky lakes within Shatsky National Natural Park "ameliorative" fish harvest is performed according to the allocated fishing quotas in 2017. "Ameliorative" fish harvest is a purposeful harvest of selected fish species and other aquatic living resources aimed at optimizing the quantitative, qualitative composition of their populations. This is often used for controlling/changes in predatory and non-predatory species ratio, elimination of stunted and coarse species,

Table A1-2: Natural lakes

Name	Area (ha)
Svitiaz	2 750
Pulemetske	1 630
Luki - Peremut	815
Velyke Chorne	64
Lyutsimer	430
Ostrov'yanske	250
Total	**5 939**

[3] Quota allocated for the harvest of *Artemia salina* only.

prevention of fish kills, biomelioration, etc.

Regarding Ukrainian estuaries and lagoons (limans) in the Black Sea basin and in the Azov Sea basin the following should be summarized.

Estuaries and lagoons (also named as limans which are coastal large and small lakes with salted water) in the Black Sea basin are important water bodies for Ukrainian fisheries. This importance is evident mostly for riparian regions, towns and villages, where people strongly depending on aquatic resources.

It is to note most big estuaries (lagoons) in the basin of the Black Sea belongs to Danube delta (Ukrainian part is about 70 600 ha), to Dnister estuary, including Kuchurgan estuary (38 730 ha), to Dnieper-Boh estuary (100 000 ha), to Black Sea liman group (Tilihul; 17 000 ha, Budaki; 3 100 ha, Berezan; 6 000 ha, Tuzla; 20 600 ha, Kuialnyk estuary 5 200 ha) and Khadzhybeiskyi liman (11 200 ha).

The role of the Black Sea estuaries and lagoons in aspect of fisheries greatly increased because of depression of Ukrainian Black Sea fisheries after annexation of Crimea by Russian federation. Last years the total Ukrainian landing of water living resources of the Black Sea was only 4-5 thousand tons yearly (4 044.5 tons in 2015 and 4 619.7 tons in 2016). For comparison, the total Ukrainian landing of water living resources in the Black Sea estuaries and lagoons was: about 3 596.6 tons in 2015 and about 4 172.6 tons in 2016. Thus fish landing in Black Sea estuaries and lagoons was about 26% of the total fish landing in the Ukrainian inland water bodies in 2015, and about 24% of the total fish landing in the Ukrainian inland water bodies in 2016.

Commercial fishing in estuaries and lagoons of the Black Sea is conducted with gillnets, beach seines, Fyke nets, traps, pound nets, dragnets, while recreational fishing is practiced with using of hook gears which is traditionally important for local people.

Table A1-3: Ukrainian landing of harvested living resources in estuaries and limans of the Black Sea basin[4]

Year	Black Sea liman group	Danube delta	Dnister estuary	Dnieper-Boh estuary	Total landing from inland water bodies	Total landing (Ukraine)
2015	311.8	241.1	853.7	2,190.0	13,631.1	47,948.2
2016	95.5	477.1	1,544.8	2,055.3	17,295.1	58,155.6

Explanations to Table A1-3 are as follows below.

Ukrainian part of the Danube delta: Pontic shad is the most important for Ukraine fish species in this water area. Freshwater bream, Prussian carp, common carp, herbivores species (silver carp, bighead carp), pikeperch, vimba, Wels catfish, asp, Acipenseridae spp. (sterlet, beluga, starry sturgeon, Danube sturgeon) are abundant also. Sterlet is the most numerous species of Acipenseridae.

Dniester estuary, including Kuchurgan estuary: Today this area is a habitat of 60-70 fish species, which are representing both marine and freshwater fauna. Out of them about 20 species are

[4] In comparison with the Black Sea and the total landing of water living resources by Ukraine in the all water bodies of the national jurisdiction in 2015 and 2016 (tons)

commercially important. Most of catches are freshwater bream, Prussian carp, herbivores species (silver carp, bighead carp), Pontic shad, pike-perch, roach, white beam, European perch and Gobiidae spp. also are abundant. Freshwater bream is dominating in catches. Its value in the total landing is more than 30%. Dniester is area of Pontic shad spawning.

Dnieper-Boh estuary: It is the largest estuary in the Ukrainian part of the Black Sea basin, which provides for about 50% of the total Ukrainian landing annually in all estuaries and limans of the Black Sea basin. Here there are up to 70 fish species, which are representing both marine and freshwater ichthyofauna, as like as in the Dniester estuary. About 20 species are commercially important. Most of catches are Black and Caspian Sea sprat, freshwater bream, Prussian carp, herbivores species (silver carp, bighead carp), pikeperch, roach, white beam and common carp.

Dnieper-Boh estuary is very important for Acipenseridae spp. such as Russian sturgeon, starry sturgeon and sterlet. The dominating species in fish landing in the Dnieper-Boh estuary are Black and Caspian Sea sprat and Prussian carp.

Black Sea liman group (Tilihul, Budaki, Berezan, Tuzla, Kuialnyk estuary): These limans (lagoons) are more marine then freshwater area. Thus, there are presented mostly marine fish species, such as Black Sea mullets, haarder, Black Sea anchovy, Black Sea and Caspian Sea sprat.

Black Sea liman group plays relatively little role for Black Sea fishery. The total fish landing in this area is about 100 tons annually. Landing of water living resources in this area was presented mainly by Atherina, Gobius, Black Sea mullets and Palaemonidae spp. Many limans are periodically connected to the Black Sea therefore melioration work to keep open connecting canals is greatly needed.

Khadzhybeiskyi liman: This liman (lagoon) is very interesting and important as a good example of actual STRH, regulated by the Assotiation "Khadzhybeisky liman". STRH "Khadzhybeisky liman" was founded in 2003. Nine fishing companies with about about 200 fishermen have right to fish in this area. According to one of founders of the STRH, Grigoriy Gribov about 5-6 millions of fingerlings, mostly herbivores species and Prussian carp are released yearly by the association annually. As a result, the total fish landing in this water body is up to 1 000 tons annually (as it was so reported in 2016), which provides evidence of high efficiency fish stock management in this area. Also there are information about creation STRH on other smaller Black Sea lagoons (Sasyk, Tuzla liman group), but there are no detailed data about actual status of these STRH.

The situation in the Azov Sea basin is somewhat different, in comparison with the Black Sea basin. There are no big estuaries in the Ukrainian part of the Azov Sea basin, because the most large rivers (Don and Kuban), doing strong freshwater impact to the salinity of the Sea of Azov are on the territory of the Russian Federation. There are only lagoons (limans), which are strongly depending on the status of connection with the Sea of Azov. Unfortunately, there are no separate statistics data on fish landing in the lagoons of the Sea of Azov.

Syvash: This lagoon, created by the Arabat spit is unique water body; very long (110 km) and shallow. Its deepest place is about 3 meters, with most areas with a depth 0.5-1 meters. Its area is about 256 000 ha. Water salinity in Syvash is various in different places, varies from 10 $^{o}/_{oo}$ to 87 $^{o}/_{oo}$.

The Syvash area is a wetland of international importance. The shores are low, slightly sloping, swampy and salty. In summers the water level of Syvash decreases significantly, revealing barren solonets soils called "syvashes" by locals. The Syvash is sometimes divided into the Western Syvash and Eastern Syvash. These are connected to each other by the Chongar Strait.

The data base on consistence of ichthyofauna of Syvash is relatively poor. Different researchers noted about 18-50 fish species in Syvash (Vorobiov, 1940; Pavlov, 1960; Svetovidov, 1964; Boltachov, 2011).

Many years ago Syvash was important water body for fisheries, being traditional habitat for some marine fish species (European flounder, Gobiidae spp.) and temporary habitat for some migrating fish species, which entered to Syvash seasonally (mostly Black Sea mullets). With growing of the population of haarder Syvash became important spawning area for this species in the Azov Sea basin. Syvash is also a habitat area of the most numerous population of European flounder in the Azov Sea basin. Dynamics of stock and landing of European flounder is presented in the table below (on the ground of the data of IFME).

Table A1-4: Stock biomass and landing dynamics of European flounder in Syvash in 1991-2004

Years	1991-1995	1996-2000	2001-2003	2004
Stock biomass (tons)	276.2	190.5	80.2	70.0
Average landing (tons)	69.9	16.4	3.5	0.3

Source: IFME

The ecological situation in Syvash was significantly changed due inflowing of freshwater discharge from Northern Crimean Canal. The salinity of Syvash in its Eastern part (most important for reproduction of marine fish species) decreased from 35 ‰ to 10-12 ‰. This caused an increasing of a quantity of freshwater fish species in the last decades 1990's. If in the period before 1960 a value of freshwater species in Syvash assessed on the level 5-20 %, then nowadays a value of these fish species is 20-30%. Decreasing of water salinity in Syvash became critical environmental factor for reproduction of European flounder and haarder.

The impact of ecological transformation became a catastrophe for fisheries in Syvash. As example, if the total fish landing in Syvash was about 1 100 tons in 1986, then it equaled only 52 tons in 2006 (Kireeva, Potekha, 2012). Consequently today Syvash has only role as fisheries water body for local people, also as a recreational water body. Additionally it is needed to mention, that fisheries in Syvash, as well as scientific research, is more complicated now due conflict of Ukraine and Russian Federation caused of annexation of Crimea by Russian Federation.

Molochnyi liman: This lagoon with an aera of 22 460 ha is almost a saline lake, connected with the Sea of Azov through an artificial canal, which is closed periodically with mass of sand, coming and depositing from the sea. In the years when a connecting canal is functioning normally, the average water salinity in liman was between 18-30 ‰. Dynamics of water salinity in Molochnyi liman are given in the table below.

Table A1-5: Dynamics of water salinity in Molochnyi liman in 1955-2016 (Demchenko, 2017)

Years	1955	1960	1993	1996-2000	2000-2012	2013-2016
Salinity (‰)	13.3-18.2	11.6-14.9	14.7-24.9	17.9-25.1	30-86	24-104

Therefore, despite the fact that a name of liman is the same as a name of river Molochnaya, most impact to the salinity of the Molochnyi liman is inflowing of water from the Sea of Azov through connecting canal. Closing of the canal is causing quick salting of the liman water due intensive evaporation. Ecological transformation of liman ecosystem caused depletion of ichthyofauna biodiversity from 40 species (in the middle of XX century) to 10 species nowadays.

Utlukskyi liman: This water body has a total area of 40 000 ha. It is no typical lagoon because it does not exists separately from the Sea of Azov. Most likely it is large sea gulf, divided of the Sea by the sandy peninsula Biruchyi ostriv. Ichthyofauna of this liman in strongly depending on the Sea of Azov. Thus, it is possible to see in Utlukskyi liman about 70% of about 120 fish species of the Sea of Azov. Gobiidae spp. are most abundant in the Utlukskyi liman. It is to mention that in mid-1980s in Utlukskyi liman was placed spawning reef for gobies. It provided increasing of stock biomass of these fish species, but nowadays no melioration measures are realized here.

It can be concluded that Ukrainian estuaries and lagoons in the Black Sea basin are very important for both commercial fisheries and recreational fisheries, thus the actual status of the limans of the Sea of Azov signs their relatively little importance for Ukrainian commercial fisheries, in comparison with fisheries in the other Ukrainian inland water bodies, as well as in open waters of the Sea of Azov; at the same time the lagoons of the Azov Sea basin are traditionally important for local people.

Connection of many lagoons with the seas is not stable hence demands regular human efforts to keep this connection. Therefore it would be the best to find feasible systems of collaboration between the state and the local fishery associations to provide regularly needed works to protect fishery importance of the limans through digging, fish protection, artificial restocking of natural fish populations. The organization providing such activities should have the right to capture/use water living resources of the lagoons within set set conditions and limits.

Unique ecological situation on some lagoons provides a possibility to create on these lagoons specialized fish restocking state or private hatcheries. This would be very good way to utilize the entire potential productivity of these water bodies. The one of most perspective directions could be the installation of spawning grounds (reefs) in the lagoons especially for Gobiidae spp.

Table A1-6: Numbers and areas of water bodies in Ukraine used for STRH (as for December 2016)[5]

Region (Oblast)	>10 ha		<10 ha		Total	
	No.	ha	No.	ha	No.	ha
Vinnytsya	23	5 209.9	0	0.0	**23**	**5 209.9**
Volyn	8	239.4	9	36.7	**17**	**276.2**
Dnipropetrovsk	24	7 406.7	0	0.0	**24**	**7 406.7**
Donetsk	218	15 997.2	238	979.7	**456**	**16 976.9**
Zhytomyr	17	1 834.9	23	126.4	**40**	**1 961.3**
Transcarpathian	5	289.2	0	0.0	**5**	**289.2**
Zaporizhzhya	15	495.5	0	0.0	**15**	**495.5**
Western Black Sea (Odessa)	14	75 956.0	0	0.0	**14**	**75 956.0**
Ivano-Frankivsk	1	1 260.0	0	0.0	**1**	**1 260.0**
Kyiv	30	4 481.9	19	76.6	**49**	**4 558.5**
Kirovograd	5	2 367.0	0	0.0	**5**	**2 367.0**
Luhansk	27	2 007.6	0	0.0	**27**	**2 007.6**

[5] It is to note that the numbers and areas of STRH water bodies change almost every month because new ones appear while some older ones can lose their status due to the expiration of the regimes of their fisheries exploitation, which are valid for 10 years, or their regimes can be canceled by territorial bodies of the State Agency of Fisheries of Ukraine as a result of the violation of regime requirements.

Region (Oblast)	>10 ha		<10 ha		Total	
	No.	ha	No.	ha	No.	ha
Lviv	10	1 707.7	0	0.0	**10**	**1 707.7**
Mykolaiv	46	3 451.6	64	359.9	**110**	**3 811.5**
Poltava	20	968.4	0	0.0	**20**	**968.4**
Rivne	42	983.2	126	718.3	**168**	**1 701.5**
Sumy	0	0.0	0	0.0	**0**	**0.0**
Ternopil	0	0.0	0	0.0	**0**	**0.0**
Kharkiv	55	17 963.3	24	142.5	**79**	**18 105.8**
Kherson	10	908.9	0	0.0	**10**	**908.9**
Khmelnytskyi	8	3 567.6	7	35.6	**15**	**3 603.2**
Cherkasy	62	2 076.1	174	633.0	**236**	**2 709.1**
Chernivtsi	0	0.0	0	0.0	**0**	**0.0**
Chernigiv	12	399.4	4	22.3	**16**	**421.7**
Golovrybvod[6]	1	1 000.0	0	0.0	**1**	**1 000.0**
Total	**653**	**150 571.4**	**688**	**3 131.0**	**1341**	**153 702.4**

Table A1-7: Areas of ponds used for aquaculture in different regions of Ukraine in 2015 and 2016

Regions of Ukraine	Area in 2015 (ha)		Area in 2016 (ha)	
	Available at year end	Used during 2015	Available at year end	Used during 2016
Cherkasy	7 265.8	4 762.8	7 528.5	7 281.5
Chernigiv	1 465.5	943.8	1 419.0	974.2
Chernivtsi	2 728.0	2 728.0	2 525.4	2 525.4
Dnipropetrovsk	2 226.9	984.8	2 320.3	1 009.4
Donetsk[7]*	4 857.1	3 306.0	4 857.1	3 147.0
Ivano-Frankivsk	1 601.9	1 229.5	1 693.3	1 235.0
Kharkiv	1 714.5	1 718.5	1 363.0	496.4
Kherson	6 752.5	5 462.4	7 322.1	6 228.1
Khmelnytskyi	7 438.9	2 973.2	4 828.1	2 159.1
Kirovograd	4 794.4	2 780.0	5 794.5	3 980.0
Kyiv	3 413.8	1 926.1	3 996.8	3 244.1
Luhansk[8] **	1 441.1	301.5		
Lviv	5 190.7	4 472.9	5 102.9	3 344.3
Mykolaiv	3 086.4	3 076.4	2 351.9	2 211.9
Odesa	5 923.7	5 958.7	2 896.5	2 476.6
Poltava	7 758.6	2 793.7	7 627.6	2 793.7

[6] Golovrybvod - Main Department of the Aquatic Resources Protection in the city of Kyiv (their only STRH is currently in the process of cancellation).
[7] Data for Donetsk region are available only for one aquaculture enterprise.
[8] Data for Luhansk region are available for one enterprise for 2015 and not available for 2016

Regions of Ukraine	Area in 2015 (ha)		Area in 2016 (ha)	
	Available at year end	Used during 2015	Available at year end	Used during 2016
Rivne	1 439.8	1 439.8	1 615.7	1 615.7
Sumy	4 418.5	4 414.6	4 605.3	4 468.9
Ternopil	3 116.6	1 921.5	2 456.3	1 778.8
Transcarpathian	756.4	612.1	756.7	612.1
Vinnytsya	9 124.1	8 899.6	8 167.3	8 127.4
Volyn	1 541.9	1 541.9	1 462.5	1 462.5
Zaporizhzhya	2 479.7	1 832.0	2 825.0	2 077.9
Zhytomyr	3 105.1	2 877.5	2 621.5	2 419.8
Total	**93 783.7**	**69 099.2**	**86 137.3**	**65 669.7**
Rate of use (%)		**73.7**		**76.2**

Table A1-8: Area of waters used for aquaculture in 2016

Type of water body	Area at the beginning of year	Started operation in 2016	Finished operation in 2016	Area at the year end	Used during the year
Total of ponds (ha)	**88 024.9**	**2 401.9**	**4 289.5**	**86 137.4**	**65 669.8**
Used for brood stock (ha)	1 000.5	15.3	16.4	999.4	690.9
Used for spawning (ha)	222.2	13.2	15.7	219.7	161.5
Used for nursery (ha)	26 272.8	1 812.7	1 971.3	26 114.2	19 969.9
Used for rearing (ha)	53 321.5	479.0	2 156.6	51 643.9	38 634.1
Used for wintering (ha)	947.1	31.9	34.8	944.2	845.3
Used for quarantine (ha)	103.8	4.8	0.0	108.6	76.5
Other ponds[9] (ha)	2 877.7	45.0	94.7	2 828.0	2 043.0
Used for water supply (ha)	3 279.3	0.0	0.0	3 279.3	3 248.7
Other water objects[10] (ha)	8 177.6	0.0	0.0	8 177.6	8 166.4
Total of cages (m^2)	**32 004.2**	**6 735.0**	**364.0**	**38 375.2**	**30 623.2**
Used for nursery (m^2)	26 112.2	2 960.0	256.0	28 816.2	21 456.2
Used for rearing (m^2)	5 892.0	3 775.0	108.0	9 559.0	9 167.0
Total of tanks (m^2)	**59 267.4**	**4 998.0**	**1 820.0**	**62 445.4**	**50 954.4**
Used for nursery (m^2)	49 222.4	4 268.0	1 820.0	51 670.4	41 779.4
Used for rearing (m^2)	10 045.0	730.0	0.0	10 775.0	9 175.0

[9] Water delivery, selective breeding, water heating, fingerling, pre-spawning
[10] Reservoirs, lakes

Annex 2
Questionnaires used for macro-data collection from inland fisheries enterprises[11]

[11] **Observation**: Territorial bodies of the State Agency of Fisheries can modify the contents of this questionnaire as the actual needs fish fauna of their water body. E.g. the original form does not contain some species (such as ide, blue bream, chub, etc.) but it also contains sturgeons listed in the Red Book. Some species are divided into Black Sea and Azov Sea, while other are combined into one group (e.g. gobies).

APPROVED
Order of the Ministry of Agrarian Policy and Food of Ukraine
26.01.2016 № 17

REPORT

on the amounts of harvested aquatic living resources
for «____» _____ 20___

Name of the fisheries water body (its part):

Species of aquatic living resources	Quantities (kg)		
	Quota	Catch for reported months	Catch since the beginning of year
1	2	3	4
Catch of aquatic bioresources			
Finfish, total, including:			
Хамса азовська – Azov anchovy			
Хамса чорноморська – Black sea anchovy			
Шпрот (кілька) - *Sprattus sprattus*			
Мерланг - *Merlangius merlangus*			
Тюлька - *Clupeonella cultriventris*			
Оселедець – *Alosa pontica + A. maeotica*			
Пузанок – *Alosa tanaica*			
Кефаль чорноморська – Black sea mullets (*Mugil or Liza sp*.)			
Піленгас – *Mugil soiuy*			
Ставрида – *Trachurus sp.*			
Барабулька – *Mullus sp.*			
Калкан чорноморський – Black sea turbot			
Калкан азовський – Azov turbot			
Камбала глоса - *Platichthys flesus*			
Луфар - *Pomatomus saltatrix*			
Скумбрія – *Scomber sp.*			
Пеламіда - *Sarda sarda*			
Піщанка (атерина) – *Atherina sp.*			
Смарида (морський окунь) – *Spicara sp.*			
Сарган – *Belone belone*			
Акула катран - *Squalus acanthias*			
Осетер – *Acipenser guldenstadti*			
Севрюга - *Acipenser stellatus*			
Білуга – Huso huso			
Стерлядь – *Acipenser ruthenus*			

Species of aquatic living resources	Quantities (kg)		
Бестер – Bester			
Морська лисиця - *Raja clavata*			
Морський кіт – *Dasyatis pastinaca*			
Бичок – *Gobies*			
Лосось чорноморський – Black sea salmon			
Судак – *Sander lucioperca*			
Сом – *Silurus glanis*			
Лящ – *Arbamis brama*			
Тараня, плітка – *Rutilus rutilus + R. heckelii*			
Краснопірка - *Scardinius erythrophthalmus*			
Щука – *Esox lucius*			
Білизна – *Aspius aspius*			
Окунь прісноводний – *Perca fluviatilis*			
Рибець – *Vimba vimba*			
Чехоня – *Pelecus cultratus*			
Карась – *Carassius sp.*			
Шемая (селява) - *Alburnus chalcoides*			
Плоскирка – *Blicca bjoerkna*			
Сазан (короп) – *Cyprinus carpio*			
Товстолоб – *Hypophthalmichthys sp.*			
Білий амур - *Ctenopharyngodon idella*			
Форель – Trout			
Лин – *Tinca tinca*			
Інші види риб – other fish species			
Other aquatic living resources, including:			
Мідія - *Mytilus edulis*			
Рапана - *Rapana venosa*			
Філофора – *Phyllophora*			
Зостера – *Zostera*			
Річкові раки – Freshwater crayfish			
Креветки – Shrimps			
Інші безхребетні та водні рослини – other invertebrates and aquatic plants			

«_____» _____ 20____ р.

_____
(Name and phone number of the responsible person)

Annex 3
Questionnaire recommended for macro-data collection from STRH enterprises

Code given by State Statistical Office :	2	0	1	7	-			-				-			Page:	1

QUESTIONNAIRE FOR DATA COLLECTION OF STRH

1st Section: References to relevant laws and regulations and deadlines

2nd Section: Administrative and personal particulars of STRH

2.1 EDRPOU Identification Code:								

2.2 STRH

2.2.1 Name of water body:	
2.2.2 Location:	

2.3 Responsible leader

2.3.1 Name:	
2.3.2 Physical address:	
2.3.3 Mailing address:	
2.3.4 Pone:	
2.3.6 Fax:	
2.3.7 Email:	

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3rd Section: Particulars of enterprise

3.1 Type of enterprise

3.1.1 Limited Liability Company	*3.1.2 Open Joint Stock Company*	*3.1.3 Closed Joint Stock Company*	*3.1.4 General Partnership*	*3.1.5 Limited Partnership*	*3.1.6 Family enterprise*	*3.1.7 Individual entrepreneur*
3.1.8 Angling association	*3.1.9 Angling club*	*3.1.10 Local government enterprise*	*3.1.11 (specify):*			

4th Section: Particulars of water body

4.1 Type of water body

4.1.1 Freshwater lake	*4.1.2 Lagoon or estuaries*	*4.1.3 Brook or stream*	*4.1.4 River*	*4.1.5 Large water reservoir*	*4.1.6 Water reservoir(as defined by law)*	*4.1.7 Pond (as defined by law)*	*4.1.8 Canal*

4.2 Command area

4.2.1 Command area for the entire water body:	*Yes*	*No*	*4.2.2 Percent of total of water area:*	*%*	*4.2.3 Total command area:*	*ha*

4.3 Legally allowed activities on the water body where STRH is active

4.3.1 Irrigation	*4.3.2 Drinking animals*	*4.3.3 Recreation - batching*	*4.3.4 Recreation - sailing*	*4.3.4 Generating electricity*	*4.3.5 Cooling water supply for power station*	*4.3.6 Mining pebble or send*

4.4 Other fisheries activities on the water body under command area

4.4.1 Commercial fishing	*4.4.2 Free of charge angling*	*4.4.3 Fee angling*	*4.4.4 Free of charge harpoon fishing*	*4.4.5 Fee fishing with harpoon*	*4.5.6 Pouching*

4.5 Other fisheries activities on the water body beyond command area

4.5.1 Commercial fishing	*4.5.2 Free of charge angling*	*4.5.3Fee angling*	*4.5.4 Free of charge harpoon fishing*	*4.5.5 Fee fishing with harpoon*	*4.5.6 Pouching*

5th Section: Labor employed

5.1 Full time employed		**5.2 Part time employed**		**5.3 Seasonally employed**		**5.4 Casually employed**	
5.1.1 Male	*5.1.2 Female*	*5.2.1 Male*	*5.2.2 Female*	*5.3.1 Male*	*5.3.2 Female*	*5.4.1 Male*	*5.4.2 Female*

6th Section: Stocking and fishing

Code given by State Statistical Office : | 2 | 0 | 1 | 7 | - | | | - | | | | - | | | **Pages:** 3-5

6.1 Finfishes		Stocked fish							Captured fish	
FAO code	Species	Advanced fry	Fingerling (one summer and one year old fish)		Grower (two summer and two year old fish or elder)		Brood fish (sexually matured fish ready to spawn)			
		In 1'000	In 1'000	kg	In 1'000	kg	No.	kg	Average size (gr)	kg
ANE	Azov anchovy									
	Black sea anchovy									
SPR	*Sprattus sprattus*									
WHG	*Merlangius merlangus*									
CLA	*Clupeonella cultriventris*									
SHZ	*Sheds NEI*									
	Alosa tanaica									
MUL	*Mugil or Liza sp.*									
MYZ	*Mugil soiuy*									
JAX	*Trachurus sp.*									
MUX	*Mullus sp.*									
	Black sea turbot									

6.1 Finfishes		Stocked fish							Captured fish	
FAO code	Species	Advanced fry	Fingerling (one summer and one year old fish)		Grower (two summer and two year old fish or elder)		Brood fish (sexually matured fish ready to spawn)			
		In 1'000	In 1'000	kg	In 1'000	kg	No.	kg	Average size (gr)	kg
	Azov turbot									
FLE	*Platichthys flesus*									
BLU	*Pomatomus saltatrix*									
MAZ	*Scomber spp.*									
BON	*Sarda sarda*									
AVX	*Atherina sp.*									
PIC	*Spicara sp.*									
GAR	*Belone belone*									
DGS	*Squalus acanthias*									
APG	*Acipenser guldenstadti*									
APE	*Acipenser stellatus*									
HUH	Huso huso									
APR	*Acipenser ruthenus*									
	Bester									
RJC	*Raja clavata*									

6.1 Finfishes		**Stocked fish**							**Captured fish**	
FAO code	**Species**	**Advanced fry**	**Fingerling (one summer and one year old fish)**		**Grower (two summer and two year old fish or elder)**		**Brood fish (sexually matured fish ready to spawn)**			
		In 1'000	**In 1'000**	**kg**	**In 1'000**	**kg**	**No.**	**kg**	**Average size (gr)**	**kg**
JDP	*Dasyatis pastinaca*									
FGX	*Gobies*									
	Black sea salmon									
FPP	*Sander lucioperca*									
SOM	*Silurus glanis*									
FBM	*Arbamis brama*									
FRO-FRX	*Commoon roach*									
SRE	*Coommon rudd*									
EPI	*Esox lucius*									
ASU	*Aspius aspius*									
FPE	*Perca fluviatilis*									
VIV	*Vimba vimba*									
FSC	*Pelecus cultratus*									
WDX	*Carassius sp.*									

6.1 Finfishes		Stocked fish							Captured fish	
FAO code	Species	Advanced fry	Fingerling (one summer and one year old fish)		Grower (two summer and two year old fish or elder)		Brood fish (sexually matured fish ready to spawn)			
		In 1'000	In 1'000	kg	In 1'000	kg	No.	kg	Average size (gr)	kg
	Alburnus chalcoides									
ABK	*Blicca bjoerkna*									
FCP	*Common carp*									
HXP	*Hypophthalmichthys sp.*									
FCG	*Grass carp*									
TRO	Trouts NEI									
FTE	*Tench*									
Total										

6.1 Crayfishes, shrimps, mussels, molluscs and plants

MUS	**Blue mussel**	kg	**RPV**	**Rapana venosa**	kg	**EWA**	**Crayfishes NEI**	kg	**CZX**	**Shrimps NEI**	kg
INV	**Other invertebrates**	kg	**YFQ**	**Phillophora**	kg	**ZOM**	**Zoastera**	kg	**APL**	**Aquatic plants**	kg

Guidelines for filling in the "QUESTIONNAIRE FOR DATA COLLECTION OF STRH"

The questionnaire has five pages. On each pages there is room to fill in the identification code of the submitted questionnaire. This will be done by the statistical office. This code will allow to separate the 1st confidential page from the rest of the pages on which technical information and data are recorded. The same code which should contain **year** and the codes of **region** (two digits), **district** (three digits) and **number** of STRH (two digits) will allow easy archive and evaluation of submitted data.

Code given by State Statistical Office:	2	0	1	7	-			-				-			Page:	1-#

1st Section: References to relevant laws and regulations and deadlines

This section which contains links to relevant laws and regulations also shows deadlines to submission but should also clearly declare that data submitted on this questionnaire will be exclusively used for aggregated statistical purposes with confidentiality. Hence this document at handle and processing will consequently not allow to trace back and identify the submitter by third person/organization.

2nd Section: Administrative and personal particulars of STRH

In this section filling in data is self-explanatory, hence do not need additional explanation how to do this.

3rd Section: Particulars of enterprise

3.1 Type of enterprise

It the section the type of enterprise or association or club practicing STRH should be selected. This is done by underlining the matching choice in the relevant box.

3.1.1 Limited Liability Company	*3.1.2 Open Joint Stock Company*	*3.1.3 Closed Joint Stock Company*	*3.1.4 General Partnership*	*3.1.5 Limited Partnership*	*3.1.6 Family enterprise*	*3.1.7 Individual entrepreneur*
3.1.8 Angling association	*3.1.9 Angling club*	*3.1.10 Local government enterprise*	*3.1.11 (specify):*			

4th Section: Particulars of water body

4.1 Type of water body

In this section the type of water body on which STRH practiced should be underlined.

4.1.1 Freshwater lake	*4.1.2 Lagoon or estuaries*	*4.1.3 Brook or stream*	*4.1.4 River*	*4.1.5 Large water reservoir*	*4.1.6 Water reservoir (as defined by law)*	*4.1.7 Pond (as defined by law)*	*4.1.8 Canal*

4.2 Command area

In this section should be noted whether the authorization for STRH is given for the entire water body or only for its part. Accordingly under point 4.2.1 should be underline the answer (Yes or No). At 4.2.2 the percent of the total area of water body should be written for which STRH activities are authorized, while at point 4.2.3 the total area of command area which was authorized for practicing STRH.

4.2.1 Command area for the entire water body:	*Yes*	*No*	*4.2.2 Percent of total of water area:*	**100** %	*4.2.3 Total command area:*	**1 250** *ha*

4.3 Legally allowed and socially accepted activities on the water body

Here at this section those activities should be selected and underlined which are legally allowed and socially accepted. Here as much activity should be underline which are actually performed.

4.3.1 Irrigation	4.3.2 Drinking animals	4.3.3 Recreation - batching	4.3.4 Recreation - sailing	4.3.4 Generating electricity	4.3.5 Cooling water supply for power station	4.3.6 Mining pebble or send

4.4 Other fisheries users of the water body under command area

In this section that or those fisheries activities should be underlined which are actually practiced including pouching under command area.

4.4.1 Commercial fishing	4.4.2 Free of charge angling	4.4.3 Fee angling	4.4.4 Free of charge harpoon fishing	4.4.5 Fee fishing with harpoon	4.4.6 Pouching

4.5 Other fisheries users of the water body beyond command area

This applicable for STRH which not exclusively uses the entire water body only its part. Consequently here at this section those fisheries activities should be underlined which are practiced in the same water body but beyond the command area of the STRH.

4.5.1 Commercial fishing	4.5.2 Free of charge angling	4.5.3Fee angling	4.5.4 Free of charge harpoon fishing	4.5.5 Fee fishing with harpoon	4.5.6 Pouching

5th Section: Labor employed

This section is to record the total number of male and female persons employed (for example fish guards) by STRH full time (5.1), part time (5.2), seasonally (5.3) or/and casually/occasionally (5.4).

5.1 Full time employed		5.2 Part time employed		5.3 Seasonally employed		5.4 Casually employed	
6				10			4
5.1.1 Male	5.1.2 Female	5.2.1 Male	5.2.2 Female	5.3.1 Male	5.3.2 Female	5.4.1 Male	5.4.2 Female
6				10			4

6th Section: Stocking and fishing

This is the section in which yearly stocked and captured fish and yearly captured/collected of crayfish, shrimp, mollusks and mussels and aquatic plants should be recorded.

6.1 Finfishes		Stocked fish							Captured fish	
FAO code	Species	Advanced fry	Fingerling (one summer and one year old fish)		Grower (two summer and two year old fish or elder)		Brood fish (sexually matured fish ready to spawn)			
		In 1'000	In 1'000	kg	In 1'000	kg	No.	kg	Average size (gr)	kg

There are two sub-sections; the first (6.1) gives room for recording stocking and capturing of finfishes. As the age group of stocked fish is very important there are options in the header (see above) such as "advanced fry" "fingerling or one summer/year old fish", grower or two summer/year old fish" and "brood fish". In the tables of the second section (6.2) selected invertebrates and aquatic plants should be recorder.

MUS	Blue mussel	kg	RPV	Rapana venosa	kg	EWA	Crayfishes NEI	kg	CZX	Shrimps NEI	kg
INV	Other invertebrates	kg	YFQ	Phillophora	kg	ZOM	Zoastera	kg	APL	Aquatic plants	kg

The list of species in Ukrainian and English/Latin, as well as their FAO code are presented in the below table.

FAO code	Ukrainian name	English or scientific name
6.1 Finfishes		
ANE	Хамса азовська	Azov anchovy
	Хамса чорноморська	Black sea anchovy
SPR	Шпрот (кілька)	*Sprattus sprattus*
WHG	Мерланг	*Merlangius merlangus*
CLA	Тюлька	*Clupeonella cultriventris*
SHC-SHS	Оселедець	*Alosa pontica + A. maeotica*
	Пузанок	*Alosa tanaica*
MUL	Кефаль чорноморська	*Mugil or Liza sp.*
MYZ	Піленгас	*Mugil soiuy*
JAX	Ставрида	*Trachurus sp.*
MUX	Барабулька	*Mullus sp.*
	Калкан чорноморський	Black sea turbot
	Калкан азовський	Azov turbot
FLE	Камбала глоса	*Platichthys flesus*
BLU	Луфар	*Pomatomus saltatrix*
MAZ	Скумбрія	*Scomber sp.*
BON	Пеламіда	*Sarda sarda*
AVX	Піщанка (атерина)	*Atherina sp.*
PIC	Смарида (морський окунь)	*Spicara sp.*
GAR	Сарган	*Belone belone*
DGS	Акула катран	*Squalus acanthias*
APG	Осетер	*Acipenser guldenstadti*
APE	Севрюга	*Acipenser stellatus*
HUH	Білуга	Huso huso
APR	Стерлядь	*Acipenser ruthenus*
	Бестер	Bester
RJC	Морська лисиця	*Raja clavata*
JDP	Морський кіт	*Dasyatis pastinaca*

FAO code	Ukrainian name	English or scientific name
FGX	Бичок	*Gobies*
	Лосось чорноморський	Black sea salmon
FPP	Судак	*Sander lucioperca*
SOM	Сом	*Silurus glanis*
FBM	Лящ	*Arbamis brama*
FRO-FRX	Тараня, плітка	*Rutilus rutilus + R. heckelii*
SRE	Краснопірка	*Scardinius erythrophthalmus*
EPI	Щука	*Esox lucius*
ASU	Білизна	*Aspius aspius*
FPE	Окунь прісноводний	*Perca fluviatilis*
VIV	Рибець	*Vimba vimba*
FSC	Чехоня	*Pelecus cultratus*
WDX	Карась	*Carassius sp.*
	Шемая (селява)	*Alburnus chalcoides*
ABK	Плоскирка	*Blicca bjoerkna*
FCP	Сазан (короп)	*Cyprinus carpio*
HXP	Товстолоб	*Hypophthalmichthys sp.*
FCG	Білий амур	*Ctenopharyngodon idella*
TRO	Форель	Trout
FTE	Лин	*Tinca tinca*
	Інші види риб	Other fish species
6.2 Aquatic invertebrates and plants		
MUS	Мідія	*Mytilus edulis*
RPV	Рапана	*Rapana venosa*
YFQ	Філофора	*Phyllophora*
ZOM	Зостера	*Zostera*
	Річкові раки	Freshwater crayfish
	Креветки	Shrimps
INV	Інші безхребетні	Other invertebrates
APL	водні рослини	Aquatic plants

Annex 4
Questionnaire recommended for macro-data collection from aquaculture enterprises

Code given by State Statistical Office :	2	0	1	7	-			-				-			Page:	1

QUESTIONNAIRE FOR DATA COLLECTION OF FISH FARMS

1st Section: References to relevant laws and regulations and deadlines

2nd Section: Administrative and personal particulars of the fish farm

2.1 EDRPOU Identification Code:								

2.2 Fish farm

2.2.1 Name:	
2.2.2 Physical address:	
2.2.3 Mailing address:	
2.2.4 Pone:	
2.2.6 Fax:	
2.2.7 Email:	

2.3 Responsible leader

2.3.1 Name:	
2.3.2 Physical address:	
2.3.3 Mailing address:	
2.3.4 Pone:	
2.3.6 Fax:	
2.3.7 Email:	

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3rd Section: Type of enterprise, fish farm, culture and rate of water reuse

3.1 Type of enterprise

3.1.1 Limited Liability Company	*3.1.2 Open Joint Stock Company*	*3.1.3 Closed Joint Stock Company*	*3.1.4 General Partnership*	*3.1.5 Limited Partnership*	*3.1.6 Family Farm*	*3.1.7 Individual entrepreneur*

3.2 Type of fish farm	*3.2.1 Pond farm*	*3.2.2 Tank farm*	*3.2.3 Cage farm*	**3.3 Hatchery**	*Yes*	*No*

3.4 Type of culture as used water	*3.4.1 Freshwater culture*	*3.4.2 Brackish water culture*	*3.4.3 Mariculture*	**3.5 Water reused**	%

4th Section: Water area or/and volume

4.1 Fish ponds	**Used ponds**		**Not used ponds**		**Rehabilitated ponds**		**New ponds**	
	No.	**ha**	**No.**	**ha**	**No.**	**ha**	**No.**	**ha**
4.1.1 Production p.:								
4.1.2 Wintering p.:								
4.1.3 Total ponds:								

4.2 Tanks	**No.**	**m^2**	**m^3**
4.2.1 Concrete tanks:			
4.2.2 Fiberglass:			
4.2.3 Lined earth t.:			
4.2.4 Earth tanks:			
4.2.5 Tarpaulin t.:			
4.2.6 Total:			

4.3 Cages	**No.**	**m^2**	**m^3**
4.3.1 In lake:			
4.3.2 In river:			
4.3.3 In reservoir:			
4.3.4 In canal:			
4.3.5 In pond:			
4.3.6 Total:			

5th Section: Feeds used

5.1 Energy feeds (kg)	**5.2 By products (kg)**	**5.3 Root feeds (kg)**	**5.4 Animal protein feeds (kg)**	**5.5 Plant protein feeds (kg)**	**5.6 Industrial fish feeds (kg)**	**5.7 Other indust. feeds (kg)**

6th Section: Labor employed

6.1 Full time employed		**6.2 Part time employed**		**6.3 Seasonally employed**		**6.4 Casually employed**	
6.1.1 Male	*6.1.2 Female*	*6.2.1 Male*	*6.2.2 Female*	*6.3.1 Male*	*6.3.2 Female*	*6.4.1 Male*	*6.4.2 Female*

7th Section: Fish production sold

Code given by State Statistical Office : | 2 | 0 | 1 | 7 | - | | | - | | | | - | | | **Pages:** 3-5

7.1 Cyprinids		Production sold fish								
FAO code	Fish species	Advanced fry	One summer and one year old fish		Two summer and two year old fish		Table fish		Brood fish	
		In 1'000	In 1'000	kg	In 1'000	kg	In 1'000	kg	No.	kg
FCP	Common carp									
SVC	Silver carp									
BIC	Bighead carp									
HXP	Silver/bighead hybrids									
FCG	Grass carp									
BKC	Black carp									
FTE	Tench									
FCC	Crucian carp (C. carassius)									
WDX	Carassius NEI									
FBR	Breams NEI									
FCY	Cyprinids NEI									

7.2 Predators		Production sold fish								
FAO code	Fish species	Advanced fry	One summer and one year old fish		Two summer and two year old fish		Table fish		Brood fish	
		In 1'000	In 1'000	kg	In 1'000	kg	In 1'000	kg	No.	kg
FPI	Pike									
FPP	Pike-perch									
COM	European catfish									
MPS	Black bass									

7.2 Predators		Production sold fish								
FAO code	Fish species	Advanced fry	One summer and one year old fish		Two summer and two year old fish		Table fish		Brood fish	
		In 1'000	In 1'000	kg	In 1'000	kg	In 1'000	kg	No.	kg
BUF	Buffalo fish									
ITP	Channel catfish									
CLZ	African catfish									
BSS	Sea bream									
SBG	Sea bass									
Total of other not specified predator species										

7.3 Salmonids		Production sold fish								
FAO code	Fish species	Advanced fry	Fingerling		Grower		Table fish		Brood fish	
		In 1'000	In 1'000	kg	In 1'000	kg	In 1'000	kg	No.	kg
WHF	White fishes									
TRR	Rainbow trout									
TRO	Trout NEI									
HUC	Huchen									
SVF	Brook trout									
CHR	Chars NEI									

7.4 Acipenseriformes		Production sold fish								
FAO code	Fish species	Adv. fry	Fingerling		Grower		Table fish		Brood fish	
		In 1'000	In 1'000	kg	In 1'000	kg	In 1'000	kg	No.	kg

7.4 Acipenseriformes		Production sold fish								
FAO code	Fish species	Adv. fry	Fingerling		Grower		Table fish		Brood fish	
		In 1'000	In 1'000	kg	In 1'000	kg	In 1'000	kg	No.	kg
APB	Siberian sturgeon									
APG	Danube sturgeon									
APE	Starry sturgeon									
HUH	Beluga									
STU	Sturgeons nei									
	Hybrid of sturgeons									
PAM	Mississippi paddlefish									

7.5 Other fish species		Production sold fish								
FAO code	Fish species	Advanced fry	Fingerling		Grower		Table fish		Brood fish	
		In 1'000	In 1'000	kg	In 1'000	kg	In 1'000	kg	No.	kg
FLX	Flatfishes nei									
MUL	Mullets NEI									
SCF	Turbots nei									
TLP	Tilapias nei									
TLV	Grayling									
ELX	Eels NEI									

7.6 Crayfishes, shrimps, mussels and molluscs

EWA	Crayfishes NEI	kg	CZX	Caridina shrimps NEI	kg	MSR	River plata mussel	kg	MOL	Marine molluscs NEI	kg

8th Section: Fish hatchery

Code given by State Statistical Office : | 2 | 0 | 1 | 7 | - | | | - | | | | - | | | **Pages:** 6

8.1 Hatchery area and devices	No.	Total area (m^2)
8.1.1 Hatchery area(covered):		
8.1.2 Hatchery area (open):		
8.1.3 Hatchery trays:		
8.1.4 Hatchery troughs:		

	No.	Total volume (m^3)
8.1.5 Zuger jars 8 – 10 l:		
8.1.6 Larvae jar 50 – 100 l:		
8.1.7 Jars above 100 l:		
8.1.8 Jars above 200 l :		

	No.	Total volume (m^3)
8.1.9 Tanks below 0.25 m^3:		
8.1.10 Tanks 0.25 – 0.5 m^3:		
8.1.11 Tanks 0.5 – 1 m^3:		
8.1.12Tanks larger than 1 m^3:		

8.2 Brood stock propagated and number of produced fertilized eggs and feeding fish larvae

FAO code	Fish species	Production sold (in 1'000)		FAO code	Fish species	Production sold (in 1'000)		FAO code	Fish species	Production sold (in 1'000)	
		Eggs	Feeding larvae			Eggs	Feeding larvae			Eggs	Feeding larvae
FCP	Common carp			COM	European catfish			APB	Siberian sturgeon		
SVC	Silver carp			MPS	Black bass			APG	Danube sturgeon		
BIC	Bighead carp			BUF	Buffalo fish			APE	Starry sturgeon		
HXP	Silver/bighead hybrids			ITP	Channel catfish			HUH	Beluga		
FCG	Grass carp			CLZ	African catfish			STU	Sturgeons nei		
BKC	Black carp			BSS	Sea bream			PAM	Mississippi paddlefish		
FTE	Tench			SBG	Sea bass			CHR	Chars NEI		
FCY	Cyprinids NEI							TRR	Rainbow trout		
FPI	Pike							TRO	Trout NEI		
FPP	Pike-perch							WHF	White fishes		

Guidelines for filling in the "QUESTIONNAIRE FOR DATA COLLECTION OF FISH FARMS"

The questionnaire has six pages. On each pages there is room to fill in the identification code of the submitted questionnaire. This will be done by the statistical office. This code will allow to separate the 1st confidential page from the rest of pages on which technical information and data are recorded. The same code which should contain **year** and the codes of **region** (two digits), **district** (three digits) and **number** of farm (two digits) will allow easy archive and evaluation of submitted data.

Code given by State Statistical Office:	2	0	1	7	-			-				-			Page:	1-#

1st Section: References to relevant laws and regulations and deadlines

This section which contains links to relevant laws and regulations also shows deadlines to submission but should also clearly declare that data submitted on this questionnaire will be exclusively used for aggregated statistical purposes with confidentiality. Hence this document at handle and processing will consequently not allow to trace back and identify the submitter by third person/organization.

2nd Section: Administrative and personal particulars of the fish farm

In this section filling in data is self-explanatory, hence do not need additional explanation how to do this.

3rd Section: Type of enterprise, fish farm, culture and rate of water reuse

3.1 Type of enterprise

3.1.1 Limited Liability Company	*3.1.2 Open Joint Stock Company*	*3.1.3 Closed Joint Stock Company*	*3.1.4 General Partnership*	*3.1.5 Limited Partnership*	*3.1.6 Family Farm*	*3.1.7 Individual entrepreneur*

It the section the type of enterprise should be selected. This is done by underlining the matching choice in the relevant box.

3.2 Type of fish farm and **3.3 Hatchery**

In section 3.2 the type of fish farms should be selected out of the main option. This is done by underlining the matching choice in the relevant box. Here under point 3.3 the existence of fish hatchery should be recorded by underlining the matching choice.

3.2.1 Pond farm	*3.2.2 Tank farm*	*3.2.3 Cage farm*	**3.3 Hatchery:**	*Yes*	*No*

In section 3.3 existence of a fish hatchery should be recorded. In case there is a hatchery unit, its parameters should be recorded in the **8th Section** on page 6.

3.4 Type of culture as used water and **3.5 Water reused**

3.4 Type of culture as used water	*3.4.1 Freshwater culture*	*3.4.2 Brackish water culture*	*3.4.3 Mariculture*	**3.5 Water reused**	*40 - 60 %*

Aquaculture farms should also be grouped according whether it is a freshwater, brackish or marine culture. As fish ponds, tanks

and caged equally can be any of the three main types listed under section 3.4 ((see below example). Accordingly the matching one should be underlined. There are both tanks and increasingly fish ponds/farms which reuse water. Therefore the estimated rate of water reused expressed in % should be indicated at Section 3.5 (see above example).

4th Section: Water area or/and volume

In this section that or those blank tables of net water surfaces and volumes should be filled in which are applicable to the fish farm.

At **4.1 Fish ponds** (pond culture system) the number and area of both production ponds and wintering ponds should be recorded. There are four main columns out of which in the first two column number and total area of the used or useable ponds should be written. In the second two column the number and total area of unused/ not useable ponds should be written, while in the third and fourth two columns the number and total area of old but rehabilitated and newly constructed ponds in the year should be written.

4.1 Fish ponds	Used ponds		Not used ponds		Rehabilitated ponds		New ponds	
	No.	ha	No.	ha	No.	ha	No.	ha
4.1.1 Production p.:	5	42.5					1	5.3
4.1.2 Wintering p.:	4	0.16						
4.1.3 Total ponds:	9	42.61					1	5.3

4.2 Tanks	No.	m^2	m^3
4.2.1 Concrete tanks:	15	225	270
4.2.2 Fiberglass:	6	60	60
4.2.3 Lined earth t.:			
4.2.4 Earth tanks:			
4.2.5 Tarpaulin t.:	8	24	12
4.2.6 Total:	28	309	342

At table "**4.2 Tanks**" (intensive tank culture system) the number, total surface and total volume of the five main possible options of tanks can be recorded.

"***4.2.1 Concrete tanks***", "***4.2.2 Fiberglass tanks***" and "***4.2.5 Tarpaulin tanks***" are the most widely used rearing devices, but use of "***4.2.3 Earth tanks***" (called also Danish ponds) and "***4.2.4 Lined earth tanks***" can also be used therefore there is also room for recoding them in case the fish farm use such constructions.

At table "**4.3 Cages**" (intensive cage culture system) the number, total water surface and total volume of cages should be recorded according to the water body they are placed. Consequently the differentiation and recording is done whether cages are placed; "***4.3.1 In lake***", "***4.3.2 In river***", "***4.3.3 In reservoir***", "***4.4.3 In canal***" or "***4.3.5 In pond***".

4.3 Cages	No.	m^2	m^3
4.3.1 In lake:			
4.3.2 In river:			
4.3.3 In reservoir:	6	60	360
4.3.4 In canal:			
4.3.5 In pond:			
4.3.6 Total:	6	60	360

5th Section: Feeds used

This section is to record the total quantity of feeds used during the reported year. In the relevant table there are five different groups of feeds which should be recorded.

To group "**5.1 Energy feeds**" barley, maize,

5.1 Energy feeds (kg)	5.2 By products (kg)	5.3 Root feeds (kg)	5.4 Animal protein feeds (kg)	5.5 Plant protein feeds (kg)	5.6 Industrial fish feeds (kg)	5.7 Industrial other feeds (kg)
2 450	1 700	250		640		880

millet, oat, rice, rye, sorghum, triticale, wheat flour and grain belong. To the group "**5.2 By products**" mill by-products (barley polished, barley bran, barley fodder flour, oat bran, oat fodder flour, pea fodder flour, rice bran, rice fodder flour, rye bran, rye fodder flour, wheat bran, wheat bran, wheat fodder flour, wheat germ), brewery by-products (apple marc, beer marc, beer marc, DDGS – corn, maize starch, maize gluten, malt germ, potato starch, yeast) and miscellanea (casein, milk powder, molasses etc.) belong. Group "**5.3 Root feeds**" includes fodder beet, potato, potato and sugar-beet slides etc. while to group "**5.4 Animal protein feeds**" minced trash fish, blood meal, feather meal, fishmeal, mixed animal protein meal, sea crustacean meal and shrimp meal belong. "**5.5 Plant protein feeds**" are cotton meal extracted, horse bean, linseed, linseed meal, lupine, maize germ meal, pea, peanut meal, rape cake, rape meal, rapeseed, soya, sunflower meal, etc. "**5.6 Industrial fish feeds**" are those which are compounded pelleted feeds produced for intensive rearing of fish. To group "**5.7 Other industrial feeds**" those feeds belong such as industrial poultry feeds for layers and broilers, pelleted pig feeds, etc.

6th Section: Labor employed

This section is to record the total number of male and female persons employed by the fish farm full time (6.1), part time (6.2), seasonally (6.3) or/and casually/occasionally (6.4).

6.1 Full time employed		6.2 Part time employed		6.3 Seasonally employed		6.4 Casually employed	
6.1.1 Male	*6.1.2 Female*	*6.2.1 Male*	*6.2.2 Female*	*6.3.1 Male*	*6.3.2 Female*	*6.3.1 Male*	*6.3.2 Female*
4	2	1	2	10	0		

7th Section: Fish produced and sold

This is the section in which produced and sold fish and aquaculture products are recorded. In five subsections the different groups of fish species are listed while in the last sixth sub-section (7.6) the total quantity of produced crayfishes, shrimps, mollusks and mussels can be recoded.
Please note that there are two different types of headers in this section, which are shown below.

		Production sold fish								
FAO code	Fish species	Advanced fry	One summer and one year old fish		Two summer and two year old fish		Table fish		Brood fish	
		In 1'000	In 1'000	kg	In 1'000	kg	In 1'000	kg	No.	kg

The above type of header reflects the steps (1st year and 2nd year) of most widely followed fish production technology while the below one shows two options; either "Fingerling" or "Grower", which two categories fit well to those fish species listed below this header.

		Production sold fish								
FAO code	Fish species	Advanced fry	Fingerling		Grower		Table fish		Brood fish	
		In 1'000	In 1'000	kg	In 1'000	kg	In 1'000	kg	No.	kg

7.1 Cyprinids

In this table the number and total weight of the different age groups of below listed species and groups of fishes marked with NEI (Not Elsewhere Indicated) should be noted.

FAO code	Ukrainian name	English name	Scientific name
FCP	Короп/сазан	Common carp	*Cyprinus carpio*
SVC	Товстолобик білий	Silver carp	*Hypophthalmichthys molitrix*
BIC	Товстолобик строкатий	Bighead carp	*Hypophthalmichthys nobilis*
HXP	Гібрид товстолобиків	Hybrid of bighead/s. carps	*Hypophthalmichthys spp*

FAO code	Ukrainian name	English name	Scientific name
FCG	Амур білий	Grass carp	*Ctenopharyngodon idellus*
BKC	Амур чорний	Black carp	*Mylopharyngodon piceus*
FTE	Лин	Tench	*Tinca tinca*
FCC	Золотий карась	Crucian carp	*Carassius carassius*
WDX	Карась	Carassius NEI	*Carassius spp*
FBR	Лящі	Freshwater breams NEI	*Abramis spp*
FCY		Cyprinids NEI	

7.2 Predators

In this table the number and total weight of the different age groups of below listed species and groups of fishes marked with NEI should be noted.

FAO code	Ukrainian name	English name	Scientific name
FPI	Щука	Northern pike	*Esox lucius*
FPP	Судак	Pike-perch	*Sander lucioperca*
COM	Сом європейський	European catfish	*Silurus glanis*
MPS	Окунь великоротий	Largemouth black bass	*Micropterus salmoides*
BUF	Буфало (будь-які види)	Buffalo fishes NEI	*Ictiobus spp*
ITP	Сом канальний	Channel catfish	*Ictalurus punctatus*
CLZ	Сом африканський кларієвий	North African catfish	*Clarias gariepinus*
BSS	Лаврак	European seabass	*Dicentrarchus labrax*
SBG	Дорада	Gilthead seabream	*Sparus aurata*

7.3 Salmonids

In this table the number and total weight of the different age groups of below listed species and groups of fishes marked with NEI should be noted.

FAO code	Ukrainian name	English name	Scientific name
WHF	Сигові (інші види)	Whitefishes NEI	*Coregonus spp*
TRR	Форель райдужна	Rainbow trout	*Oncorhynchus mykiss*
TRO	Форель	Trout NEI	*Salmo spp*
HUC	Лосось дунайський	Huchen	*Hucho hucho*
SVF	Палія американська	Brook trout	*Salvelinus fontinalis*
CHR	Гольці інші	Chars NEI	*Salvelinus spp*

7.4 Acipenseriformes

In this table the number and total weight of the different age groups of below listed species and groups of fishes marked with NEI should be noted.

FAO code	Ukrainian name	English name	Scientific name
APB	Осетер сибірський	Siberian sturgeon	*Acipenser baeri*
APG	Осетер російський	Danube sturgeon	*Acipenser gueldenstaedtii*
APE	Севрюга	Starry sturgeon	*Acipenser stellatus*

FAO code	Ukrainian name	English name	Scientific name
HUH	Білуга	Beluga	*Huso huso*
STU	Осетрові (інші види)	Sturgeons NEI	*Acipenseridae*
PAM	Веслоніс	Mississippi paddlefish	*Polyodon spathula*
	Гібриди осетрових	Hybrid of sturgeons	

7.5 Other fish species

In this table the number and total weight of the different age groups of below listed species and groups of fishes marked with NEI should be noted.

FAO code	Ukrainian name	English name	Scientific name
FLX	Камбалові (інші види)	Flatfishes NEI	*Pleuronectiformes*
MUL	Кефалеві (інші види)	Mullets NEI	*Liza spp*
SCF	Калкан	Turbots NEI	*Scophthalmidae*
TLP	Тиляпії (будь-які види)	Tilapias NEI	*Oreochromis (=Tilapia) spp*
TLV	Харіус європейський	Grayling	*Thymallus thymallus*
ELX	Вугрі	Eels NEI	*Anguilla spp*

7.6 Crayfishes, shrimps, mollusks and mussels

EWA	Crayfishes NEI	kg	CZX	Caridina shrimps NEI	kg	MSR	River plata mussel	kg	MOL	Marine molluscs NEI	kg

In these above tables the total weight of the four below listed groups of species marked with NEI should be noted.

FAO code	Ukrainian name	English name	Scientific name
EWA	Раки (будь-які види)	Crayfish NEI	*Astacidae spp*
CZX	Креветки (будь-які види)	Caridina shrimps NEI	*Caridina spp*
MOL	Молюски (інші види)	Mollusks NEI	*Mollusca spp*
MSR	Мідії	Mussels NEI	*Mytilus spp*

8th Section: Fish hatchery

This section is for recording the main physical and production parameters of the fish hatchery.

8.1 Hatchery area and devices

In the tables of this section the different physical parameters of the hatchery and its devices can be recorded.

8.1 Hatchery area and devices	No.	Total area (m^2)
8.1.1 Hatchery area(covered):		130
8.1.2 Hatchery area (open):		110
8.1.3 Hatchery trays:		
8.1.4 Hatchery troughs:	10	1 200

	No.	Total volume (m^3)
8.1.5 Zuger jars 8 – 10 l:	20	160
8.1.6 Larvae jar 50 – 100 l:	4	200
8.1.7 Jars above 100 l:	8	1 280
8.1.8 Jars above 200 l:		

	No.	Total volume (m^3)
8.1.9 Tanks below 0.25 m^3:		
8.1.10 Tanks 0.25 – 0.5 m^3:		
8.1.11 Tanks 0.5 – 1 m^3:		
8.1.12Tanks larger than 1 m^3:	4	10

8.2 Produced eggs and feeding larvae

In the table of this section the total production of sold eggs or/and feeding larvae should be recorded.

FAO code	Fish species	Production sold (in 1'000)		FAO code	Fish species	Production sold (in 1'000)		FAO code	Fish species	Production sold (in 1'000)	
		Eggs	Feeding larvae			Eggs	Feeding larvae			Eggs	Feeding larvae
FCP	Common carp		20 000	COM	European catfish		85	CHR	Chars NEI		
SVC	Silver carp		30 000	MPS	Black bass			APB	Siberian sturgeon		
BIC	Bighead carp			BUF	Buffalo fish			APG	Danube sturgeon		
HXP	Silver/bighead hybrids		12 000	ITP	Channel catfish			APE	Starry sturgeon		
FCG	Grass carp		10 000	CLZ	African catfish			HUH	Beluga		
BKC	Black carp			BSS	Sea bream			STU	Sturgeons nei		
FTE	Tench			SBG	Sea bass			PAM	Mississippi paddlefish		
FCY	Cyprinids NEI			WHF	White fishes						
FPI	Pike		750	TRR	Rainbow trout						
FPP	Pike-perch		1 500	TRO	Trout NEI						

Annex 5
Review and recommendations on data collection and statistical services on fish processing and marketing

Contents

1. Range of data collected on fish processing and trading

1.1 Data from fish processing plants

1.2 Data from fish shops

2. Recommendations for data collected on fish processing and trading

2.1 Questionnaire for fish processing plants

2.2 Data from fish shops

1. RANGE OF DATA COLLECTED ON FISH PROCESSING AND TRADING

1.1 Data from fish processing plants

Degree of satisfaction of the interests of the fish processing plants, above all, depends on the results of its economic activity, which include:

- Getting profits;
- Ensuring the stability of fish production in the context of achieving food security;
- Forecasting development of fish production on the basis of real and veracious statistical data.

The latter is necessary for realistic planning and accurate evaluation of the results. Information about processed products at fish processing plants is submitted to the state statistics authority by the location or place of economic activity. The main data sources are the State Statistics Service of Ukraine (http://ukrstat.gov.ua/) and the State Agency of Fisheries of Ukraine (http://darg.gov.ua/). Types of reporting are:

State statistical reporting

- «**Report on the production and sale of industrial commodities**» (annual)
- «**Express report on the production of industrial commodities (goods, services) by type**» (monthly) - (individual entrepreneurs)
- «**Express report on the production of industrial products (goods, services) by type**» (monthly) - (legal entities).

Sectoral reporting

- «**Information about individual entrepreneurs which are carries out of canning and preserving from fish and other water biological resources**».

The statistics are based on the state statistics level. The State statistical reporting on fish processing plants is collected, formed and processed by the State Statistics Service of Ukraine.

The confidentiality of statistical information is provided by Article 21 of the Law of Ukraine «**On State Statistics**». Violation of the procedure for the submission or use of data from state statistical observation imposes the responsibility established by Article 186 of the Code of Ukraine on Administrative Offenses.

The «**Report on the production and sale of industrial goods**» (annual) is submitted by legal entities, separate units of legal entities engaged in industrial activities. This contains:

- Name of the type of goods by the Nomenclature of industrial products;
- Unit of measurement by the Nomenclature of industrial products;
- Actually produced goods for the reported year and for the previous year (including goods from the customer's raw materials);

- Sold commodities which have made from own raw materials for the reported year (amount and value).

The nomenclature of industrial products is harmonized with the Statistical Classification of Products by Types of Economic Activities of the EEC (CPA 2008) and the List of Products for European Statistics of Production PRODÑOM 2013. The degree of compliance with the CPA is identical at the level of subcategories, with PRODÑOM - identical at the level of types.

The nomenclature of industrial products is approved by the order of the State Statistics Service of Ukraine dated on 17.12.2012 № 520. It came into force on 01.01.2013. And designed to replace the Nomenclature of industrial commodities, approved by the order of the State Statistics Committee of Ukraine dated on August 30, 2002, No. 320 (with amended).

Nomenclature of industrial products was developed in the framework of the transition to international statistical standards at production statistics field, including fish processing. Contains the sections: B, C, D of the national classifier DK 009: 2010 Classification of types of economic activity.

The information on processing and canned fish, crustaceans and mollusks is provided at section number 10 «**Food products**», section C «**Production of the processing industry**» (Table A5-1).

Table 5A-1: Nomenclature of industrial commodities. Section C. Production of the processing industry. Chapter 10. Food products 10.20 fish, crustaceans and mollusks, processed and preserved

Code	Name	Unit of measurement	Periodicity
10.20 fish, crustaceans and mollusks, processed and preserved			
10.20.11	filleted and other fish meat (processed or not processed to mince), fresh or chilled		
10.20.11.00	filleted and other fish meat without bones, fresh or chilled	tons	month, year
10.20.12	Liver and fish milk, fresh or chilled		
10.20.12.00	liver, caviar and fish milk, fresh or chilled	tons	month, year
10.20.13	fish, frozen		
10.20.13.30	Marine fish, frozen, not disassembled	tons	month, year
10.20.13.60	freshwater fish, frozen, not disassembled	tons	month, year
10.20.14	filleted fish, frozen		
10.20.14.00	filleted fish, frozen	tons	month, year
10.20.15	Fish meat (processed or not processed to mince), frozen		
10.20.15.00	Fish meat without bones (except for fillets), frozen	tons	month, year
10.20.16	Liver and fish milk, frozen		
10.20.16.00	liver, caviar and fish milk, frozen	tons	year
10.20.21	dried, salted, in brine, not smoked fish, filleted		
10.20.21.00	Filleted fish, jerky, salted or in brine (except smoked)	tons	month, year
10.20.22	Liver and fish milk, dried, smoked, salted or in brine; flour of fine and coarse grinding, food pellets of fish		

Code	Name	Unit of measurement	Periodicity
10.20.22.00	flour, grouts and pellets of fish available for human consumption; fish liver, caviar dried, smoked, salted or in brine	tons	year
10.20.23	fish dried, salted or not salted, in brine		
10.20.23.50	fish, jerky, dried, salted or not salted; fish, salted but not dried; fish in brine (except smoked fish, filleted of fish, fish heads, tails and abdomen)	tons	year
10.20.23.50.10	fish, dried and jerky	tons	month, year
10.20.23.50.20	clupea, salted	tons	month, year
10.20.23.50.30	fish, except clupea, salted	tons	month, year
10.20.24	fish, fish fillets, smoked	tons	month, year (Σ)
10.20.24.25	salmon from Pacific, Atlantic Oceans (salmon salar) and Danube river, smoked, (including fish fillets; except fish heads, tails and abdomen)	tons	month, year
10.20.24.55	clupea (including octopus fillets; except fish heads, tails and abdomen), smoked	tons	year
10.20.24.85	Fish (including fillets; except salmon from Pacific, Atlantic Oceans and Danube river, clupea, and fish heads, tails and abdomen), smoked	tons	month, year
10.20.25	fish preserves and canned fish prepared in different way, except prepared dishes of fish	tons	month, year (Σ)
10.20.25.10	Prepared and canned salmon, whole or slices, in vinegar, oil, marinade, tomatoes (except mince and prepared dish from fish)	tons	year
10.20.25.20	Prepared fish goods and canned clupea, whole or slices, in vinegar, oil, marinade, tomatoes (except mince and prepared dish from fish)	tons	month, year
10.20.25.30	Prepared fish goods and canned sardine, sardinella, sprats, sprattus, whole or slices, in vinegar, oil, marinade, tomatoes (except mince and prepared dish from fish)	tons	month, year
10.20.25.40	Prepared fish goods and canned tuna, striped tuna, Atlantic Pelamides, whole or slices, in vinegar, oil, marinade, tomatoes (except mince and prepared dish from fish)	tons	year
10.20.25.50	Prepared and canned fish goods of scomber, whole or slices, in vinegar, oil, marinade, tomatoes (except mince and prepared dish from fish)	tons	year
10.20.25.60	Prepared fish goods and canned anchovies, whole or slices, in vinegar, oil, marinade, tomatoes (except mince and prepared dish from fish)	tons	year
10.20.25.70	Filleted fish (including fish sticks), in dough or crackers (except prepared dish from fish)	tons	year
10.20.25.80	Prepared fish goods and canned of other fish, whole or slices, in vinegar, oil, marinade, tomatoes (except mince and prepared dish from fish)	tons	year

Code	Name	Unit of measurement	Periodicity
10.20.25.90	Prepared fish goods and canned of other fish (except whole or slices fish, and prepared dishes of fish)	tons	month, year
10.20.26	Caviar and its substitutes that are produced from caviar of other fish	tons	month, year (Σ)
10.20.26.30	Sturgeon caviar (Acipenseridae)	tons	year
10.20.26.60	caviar of other fish	tons	month, year
10.20.31	crustaceans, frozen		
10.20.31.00	crustaceans frozen; powder and pellets of crustaceans available for human consumption	tons	year
10.20.32	Mollusks frozen, dried, salted or in brine, smoked		
10.20.32.00	mollusks (combs, Mytilus galloprovincialis, cuttlefish, squid and octopus), frozen, dried, salted or in brine, smoked	tons	year
10.20.33	Other aquatic invertebrates, frozen, dried, salted or in brine, smoked		
10.20.33.00	Other aquatic in vertebrates (venus striped, jellyfish), frozen, dried, salted or in brine, smoked; flour, grouts and pellets of aquatic invertebrates, which is not crustaceans, available to human consumption, frozen, dried, salted or in brine, smoked	tons	year
10.20.34	crustaceans, canned or preserved in different way; mollusks and other aquatic invertebrates, canned or preserved in different way		
10.20.34.00	crustaceans, prepared or canned, mollusks and other aquatic invertebrates (except chilled, frozen, dried, salted or in brine; crustaceans with panzers, which are prepared on steam or welded; except finished dishes)	tons	year
10.20.41	Flour (small and large grinding) and grouts and pellets of fish or crustaceans, mollusks or other aquatic invertebrates, non-food		
10.20.41.00	flour, grouts and pellets of fish or crustaceans, molluscs or other aquatic invertebrates, not for human consumption	tons	month, year
10.20.42	Fish goods, crustaceans, molluscs or other aquatic invertebrates, non-food, other		
10.20.42.00	fish goods, crustaceans, molluscs or other aquatic invertebrates (including waste fish; except whale mustache, bristles of whale mustache, corals and similar materials, panzers, untreated or roughly treated natural sponges) non-food, other	tons	year
10.20.42.50	Fish heads, tails and abdomen, other fish waste available for human consumption, dried, salted, in brines, smoked	tons	year

Code	Name	Unit of measurement	Periodicity
10.20.91	Services for smoked and other methods of canning and cooking of fish products		
10.20.99	Work as part of the production of fish, crustaceans and molluscs, canned and preserved, performed by the contractor		

«**Express report on the production of industrial products (goods and services) by type**» (monthly) is submitted by individual persons-entrepreneurs engaged in industrial activities.

Fish processing plants indicate the next information in the «**Express report on the production of industrial products (goods, services) by species**» (monthly):

- Name, place of residence of the respondent, address of the economic activity, which for the reporting form is submitted;
- The name of the goods' type by the Nomenclature of industrial commodities;
- Unit of measurement by the Nomenclature of industrial goods;
- Commodities' code by the Nomenclature of industrial goods;
- Actually manufactured products for the reporting month, including products intended for sale. Among them there are goods made from own raw materials by amount and value at actual prices of the manufacturer without the tax on added value and excise duty;
- The balances of finished commodities produced by the end of the reporting period. Products which accounted for in terms of value, positions codes 19.20.20.00.00, 23.63.10.00, class 06.20 and section 35 are not filling.

In the case of significant deviations in the reporting month against the previous capacity of output of the main (weighty) fishery commodities of the type of products (+, - 30% and more) for the prevention of requests from the statistical authorities explanations are given by name and type of products, code under the Nomenclature of industrial commodities and data from the previous reporting month.

«**Express report on the production of industrial products (goods and services) by type**» (monthly) submitted by legal entities, separate units of legal entities engaged in industrial activities.

Fish enterprises indicate the next information in the «**Express report on the production of industrial products (goods, services) by species**» (monthly):

- Location of the legal address of the activity for which the reporting form is submitted;
- Name of the commodities type in the Nomenclature of industrial commodities;
- Unit of measurement for the Nomenclature of industrial commodities;
- Commodities' code for the Nomenclature of industrial commodities;
- Actually manufactured products for the reporting month, including products intended for sale. Among them commodities which had made from own raw materials by amount and value at actual prices of the manufacturer without the tax on added value and excise duty;
- Balances of finished commodities produced by the end of the reporting period. Products which accounted for in terms of value, positions codes 19.20.20.00.00, 23.63.10.00, class 06.20 and section 35 are not filling.

In the case of significant deviations in the reporting month against the previous capacity of output of the main (weighty) fishery commodities of the type of products (+, - 30% and more) for the prevention of requests from the statistical authorities explanations are given by the name of the type of products, code under the Nomenclature of industrial commodities and data from the previous reporting month.

Fish enterprises submit sectoral reports also. In particular, «**Information on the subject of economic activity, which are carries out of canning and preserving of fish and other water biological resources**».

The State Agency of Fisheries of Ukraine provides collecting of such information to before 20, January, annually.

Business entities which are carries out of canning and preserving of fish and other water biological resources provides to the State Agency of Fisheries of Ukraine the next information:

- Amount of canned and preserves fishery commodities (thousands of conditional cans);
- product' range;
- Information about the accreditation certificate of the production laboratory for the last year.

A special industry questionnaire for the submission of data has been developed for fish processing plants (see Figure A5-1).

Figure A5-1: special industry questionnaire for the submission of data

«**Information about fish processing plants which doing canning and preserving fish and other water biological resources**»

1. Name and location (place of residence) of the fish processing plants during the number granting

2. Name and location (place of residence) of the fish processing plants during the information rendering

3. Number of canned and preserved fishery commodities produced in the reported year (thousands of conditional cans), per assortment (canned fish in tomato sauce, in oil, natural; fish preserves of clupea, scomber, laminaria etc.)

4. Information about the accreditation certificate of the production laboratory (number, date of the accreditation certificate, name of the authority that issued it, the validity period of the certificate)

5. Date of information providing,

In case of delay in submission of this information to the State Agency of Fisheries of Ukraine, the business entity number can be canceled, and the company would be excluded from the list of fish processing plants s that carry out of canning and preserving of fish and other water biological resources.

1.2 Data from fish shops

State Statistics Service of Ukraine carries out collection of the official statistical data, in particular information about prices for fish, types of fish and fish products sold in the trading network.

In particular the information is gathered separately on average prices for fish and fish products in the trading network (except for the city markets) in Ukraine from the beginning of the year; from January to December; determination of the growth of prices for December, % and the growth of prices from beginning of the year, %.

An average price growth is required for determination percentage by the State Statistics Service of Ukraine. Collecting information about the following types of fish and fish products:

- Fish, fresh or chilled (UAH / kg)
- Fish, frozen (UAH / kg)
- Fillets of frozen fish (UAH / kg)
- Seafood (UAH / kg)
- Sprat, salted (UAH / kg)
- Scomber, smoked (UAH / kg)
- Clupea (UAH / kg)
- Fish, tinned in oil (UAH / 250 g)
- Crab sticks (UAH / 250 g).

Information for each of the above groups is also collected in the regions and separately in Kyiv. The indicated prices (average prices) are intended only for the calculation of consumer price indexes for consumer goods and services and cannot be used for other purposes, in particular, it cannot be the basis for substantiating price proposals and determining the winners during the conduct of competitive bidding in accordance with the procedures established by the Law Of Ukraine «**On Public Procurement**».

Also, the State Statistics Service of Ukraine forms consumer price indices for goods and services in the given year, as a percentage of the corresponding month of the previous year. Fish and fish products data is reflected in the group «Foods» among the bread, eggs, milk, cheese, sunflower oil. Information on the types of fish and fish products is not shown. For example, if fish is mentioned, fresh and chilled, then information about common carp, silver carp, so-iuy mullet, pike, pikeperch, gobies, bream, tilapia, carassius is not revealed separately.

In order to partly correct the situation, territorial departments of the State Agency of Fisheries of Ukraine also collect various data. In particular the information on prices, types of fish and fish products which are sold in the trading network in the markets and wholesale markets for agricultural products.

At the same time, there is no officially approved form for data collection by the territorial departments of the State Agency of Fisheries of Ukraine.

Such work is mainly carried out for the purposes of internal management of the branch. It should be noted that the information which is provided by the State Statistics Service of Ukraine does not fully correspond with the following:

- Branch management and planning of economic activity;
- Definition of basic principles of activity and state regulation of fish farming;
- Protection and rational use of water biological resources.

2. RECOMMENDATIONS FOR DATA COLLECTED ON FISH PROCESSING AND TRADING

2.1 Questionnaire for fish processing plants

The system of collecting and processing statistical data from fish processing plants was developed and operates in Ukraine.

At the same time, an analysis of reporting forms made it possible to identify the need to addition such forms.

It has been established that at the state level it is also necessary to have information about the balance of production capacities in the fisheries sector.

It is necessary to understand how many products are produced in the fisheries sector, the amount of processed raw materials in the reported year, the use of average annual capacity in the reported year, as well as changes in production capacity in the reported year.

For the above reasons a new form «**Balance of production capacity of a fish processing plants**» is recommended (see below form).

2.2 Data from fish shops

For getting more complete and detailed information on prices, types of fish and fish products realized not only in trading network, but also on the market, a new form «**Monitoring of prices on the fish shops and internal market of fish and fishery commodities**» is recommended for reporting relevant information (see below form).

It is expected that the State Agency of Fisheries of Ukraine is able to collect such information in the form of administrative reporting by regions.

Balance of production capacity of the fish processing plants

Type of products	Capacity by 01.01. 20__[12]	Production capacity changes in the reported year								Capacity by 01/01/20_ (gr 1 + 2-7) in the nomenclature and assortment of commodities of the reported year	Average annual capacity, which operated in the reported year	Output of production or quantity of processed raw materials in the reported year	Usage of annual average and annual capacity in the reported year,% gr 12 / gr 11 x 100
		Capacity increase (total)	Including at the expense of				Capacity decrease (total)	Including at the expense of					
			Increase due to new production facilities	Increase due to reconstruction	Improved organizational and technical measures	Decrease of labor intensity		Increase of labor intensity	Retirement, aging and exhaustion of stocks				
A	1	2	3	4	5	6	7	8	9	10	11	12	13

[12] Approved for the previous year.

Monitoring of prices on the fish shops and internal market of fish and fishery commodities

Sequence number, №	Product name	Unit of measurement	Average price from the year beginning	January	February	March	April	May	June	July	August	September	October	November	December	Annual growth rates, %	Individual price index of the reporting month	Individual price index from year beginning
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Fish, fresh and chilled																		
1	common carp	kg																
2	silver carp	kg																
3	so-iuymullet	kg																
4	esox	kg																
5	pikeperch	kg																
6	gobies	kg																
7	bream	kg																
8	tile	kg																
9	carassius	kg																
2. Frozen fish																		
1	sprat	kg																
2	clupeonella	kg																
3	gobies	kg																
4	pikeperch	kg																

Sequence number, №	Product name	Unit of measurement	Average price from the year beginning	January	February	March	April	May	June	July	August	September	October	November	December	Annual growth rates, %	Individual price index of the reporting month	Individual price index from year beginning
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
5	so-iuymullet	kg																
6	khamsa	kg																
7	theragra	kg																
8	merluccius	kg																
9	merluccius (filleted)	kg																
10	saithe	kg																
11	capelin	kg																
12	scomber	kg																
13	clupea	kg																
14	sardina	kg																
15	trachurus spp	kg																
16	sardinella	kg																
17	atlantic salmon	kg																
18	pink salmon	kg																
19	gadus	kg																
20	squid	kg																

Sequence number, №	Product name	Unit of measurement	Average price from the year beginning	January	February	March	April	May	June	July	August	September	October	November	December	Annual growth rates, %	Individual price index of the reporting month	Individual price index from year beginning
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
21	stromateidae of butterfish	kg																
3. Salted fish																		
1	sprat	kg																
2	clupeonella	kg																
3	khamsa	kg																
4	clupea	kg																
5	scomber	kg																
6	atlantic salmon	kg																
7	pink salmon	kg																
8	clupea harengus membras	kg																
4. Cold smoked fish																		
1	sprat	kg																
2	capelin	kg																
3	pink salmon	kg																
4	bream	kg																
5	layer of carp	kg																

Sequence number, №	Product name	Unit of measurement	Average price from the year beginning	January	February	March	April	May	June	July	August	September	October	November	December	Annual growth rates, %	Individual price index of the reporting month	Individual price index from year beginning
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
6	rutilus	kg																
7	tile	kg																
8	saira	kg																
9	clupea	kg																
10	scomber	kg																
5. Jerky fish																		
1	silver carp	kg																
2	rutilus	kg																
3	tile	kg																
4	gobies	kg																
5	scardinius erythrophthalmus	kg																
6	Pelecus	kg																
7	bream	kg																
8	pikeperch	kg																
6. Fish preserves																		
1	clupea (filleted) in oil	0,5																

Sequence number, №	Product name	Unit of measurement	Average price from the year beginning	January	February	March	April	May	June	July	August	September	October	November	December	Annual growth rates, %	Individual price index of the reporting month	Individual price index from year beginning
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
		kg																
2	salmon (filleted) in oil	0,5 kg																
7. Canned fish,																		
1	sprat in t/s *in a jar*	0,240 kg																
2	clupeonella in t/s *in a jar*	0,240 kg																
3	gobies in t/s *in a jar*	0,240 kg																
4	sardine nat., with add of oil *in a jar*	0,240 kg																
5	scomber nat., with add of oil *in a jar*	0,240 kg																
6	clupea nat, with add of oil *in a jar*	0,240 kg																
7	sprattus *in a jar*	0,240 kg																
8	saira nat. *in a jar*	0,240																

Sequence number, №	Product name	Unit of measurement	Average price from the year beginning	January	February	March	April	May	June	July	August	September	October	November	December	Annual growth rates, %	Individual price index of the reporting month	Individual price index from year beginning
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
		kg																
9	pink salmon nat. *in a jar*	0,240 kg																
10	clupea harengus / nat. *in a jar*	0,240 kg																
Average index price by region																		