рентабельность инвестиций, финансируемых за счет кредита, привели к тому, что развивающиеся страны, не в состоянии своевременно погашать свои долги. Международный валютный фонд и Всемирный банк предложили помощь странам, пострадавшим от долгового кризиса, требуя осуществления структурной перестройки их макроэкономической политики. Это предусматривает открытие экономики и финансовых рынков этих стран, их интеграцию в мировую экономику и на международные финансовые рынки. В статье этот вопрос рассмотрен с помощью критического анализа литературы.

Ключевые слова: экономические, глобализация, развивается, страны, международные

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# MECHANISMS AND METHODOLOGY OF DATA COLLECTION IN THE AREAS OF AGRARIAN SECTOR OF THE ECONOMY

#### **VDOVENKO** Nataliia,

Professor, Doctor of Economic Sciences Head of the Department of Global EconomicsThe Honored Agriculture Worker of Ukraine

National University of Life and Environmental Sciences of Ukraine, Kyiv

e-mail: nata0409@gmail.com

#### **GERAIMOVYCH Violeta.**

Ph.D., Associate Professor of the Department of Global Economics

National University of Life and Environmental Sciences of Ukraine, Kyiv

e-mail: vita\_violeta@ukr.net

Abstract. In modern society under the conditions of integration processes development the role of statistics as one of the most important levers of State control of the national economy and culture is increasing. The statistics becomes an important tool for the effective management of phenomena and processes in the areas of agrarian sector of economy.

The effective management of the State, development and forecasting of socio-economic processes, including the agricultural production, is impossible without the analysis of statistical data and development of mechanisms and methodology of data collection in the areas of agrarian sector of the economy.

The article substantiates the mechanism and methodology of data collection in the areas of agrarian sector of the economy to develop practical recommendations for the implementation of regulatory policy in the sector of aquaculture. In the process of the research the dialectic method of reality

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cognition, systematic, comprehensive, differential approaches of economic phenomena study were applied, the results of fundamental research of domestic and foreign scientists were used.

The scientific and theoretical aspects of the mechanism of action of the particular model for aquaculture production statistical data collection and systematization are improved. The importance of transfer of authority for the fish production data collection from the State Statistics Committee of Ukraine to the State fishery agency of Ukraine

Keywords: agriculture, methodology, industry, agrarian sector, aquaculture, State, statistics, State regulation,, international standards, reporting forms

Introduction. Statistics and information services play a very important role in sector administration and management of the agricultural sector if reliable data and information are provided to all stakeholders. Besides, statistics plays an extremely important role for the assessment of the field potential, risks assessments in the economic field of the country and for working out the direction for the field support.

The statistical information is produced in Ukraine according to the plan of state statistical reviews; it meets current potential needs of the users and is in compliance with the basic standards for statistical products, being accurate and reliable, timely and punctual, consistent and comparable, understandable and accessible for users.

Analysis of recent researches and publications. The works of A. Dibrova, V. Halushka, S. Kvasha, O. Mohylny, D. Stechenko, L. Shvaika and others lay at the heart of modern domestic agricultural sector state regulation methodology. However, the level of systematic methodological excellence of the use of statistical and reported information important for the state regulation of the agricultural sector is now unsatisfactory in terms of its compliance with global food, financial and economic challenges that would actualize the research.

**The purpose**. Substantiation of the mechanism and methodology of data collection in the areas of agrarian sector of the economy to develop practical recommendations for the implementation of regulatory policy in the sector of aquaculture.

**Materials and methods**. The following methods were applied during the study: method of dialectical cognition of reality, a systematic, comprehensive, differentiated approaches to economic phenomena study, fundamental research of domestic and foreign scientists dedicated to the problems of State regulation of the economy, laws, programs, concepts and other legislative documents, the UN Food and Agriculture organization (FAO) and World Trade Organization (WTO) data.

Results and discussion. Statistical information is published on websites of the State Statistics Service of Ukraine and its local territorial departments, and is available to users for free, except for the cases that are stipulated by the current legislation. All users have equal and simultaneous access to the statistical information. Every important change in methodology is reported beforehand.

Subsequent to the results of Adapted Global Assessment of the National Statistical System, conducted by the European Commission and United Nations Economic Commission for Europe (UNECE) Ukrainian statistics is mostly considered adequate regarding the European requirements. The information produced by the state statistical administration is high-quality in most of the state statistical branches, and particularly in agriculture.

According to the assessment of international experts the institutional framework of functioning of the state statistics in agriculture meets statistical standards, including the basic principles of the official UN statistics.

There is a list of state reporting forms for statistical observations, in particular, there are sections «Agricultural Statistics» and «Fisheries Statistics» (Annex 1).

The main data sources are:

- The State Statistics Service of Ukraine;
- The State Agency of Fisheries of Ukraine The type of reporting:
- 1. The State statistical reports
- «The report of water bioresources extraction» (annually);
- «The report of water bioresources extraction» (quarterly).
- 2. The regional reports
- «The report on amount of the aquatic biological resources catching».
- 3. The administrative reports
- «The report № 1A fish (annually) «Producing of aquaculture».

The names of tables and reports are given in translation to English from Ukrainian. Failure to give data to the State Statistics Service of Ukraine is punishable by administrative responsibility, the failure to provide the data on aquaculture is not punishable. The mechanism and methodology of data collection has been developed. All members should submit data and reports on issues concerning fisheries and aquaculture.

Statistics are based on State statistics level. State statistics is collected by the Statistics Service of Ukraine. Information about fish extraction and water biological resources extraction is collected on the basis of state statistical observation data, which is submitted by enterprises, regardless of size, organizational form of the subject of economy.

Collection of administrative information about growth and fishing of aquaculture products is a responsibility of The State Agency for Fisheries of Ukraine. Starting from 2012 the regional departments of the State Agency for Fisheries of Ukraine are collecting the local data. The information is submitted to the territorial authority of specially authorized central body of the executive power in the sphere of fisheries by location or by place of residence of the respondent, who produces planting material and marketable fish in conditions of aquaculture.

The State Agency for Fisheries of Ukraine is collecting, assembling, analyzing and providing statistical information and informational materials to the Section statistical data and information services (FIPS) at the Department of Fisheries and Aquaculture FAO, and also to Service of fishing statistics FAO. The Public Sector Institution «Methodological and Technological center of Aquaculture» is accountable for it.

The generalized statistical data is provided to FAO in the following forms:

AQ-NS1 — Form for reporting statistics on aquaculture of fish, crustaceans, mollusks, etc., by species, environment and fishing areas.

NS1–Form for reporting statistics on capture production of fish, crustaceans, mollusks, etc., by species items and major fishing areas.

NS9–Form for reporting statistics on capture production of aquatic plants, by species items and major fishing area.

FAO – FISHSTAT FC 1 Form for reporting statistics on production of fishery commodities.

FISHSTAT AQ FAO/CWP Form for reporting statistics on aquaculture.

FISHSTAT FF-1 Fishery fleet – Number of decked vessels / total tonnage and total power by L.O.A. (Length overall) and type.

FISHSTAT FF-2 Fishery fleet – Number of undecked, powered and not powered vessels by L.O.A. (Length overall) and type.

Ukraine is gradually adapting the system of governance of national fisheries and statistics to be in line with the requirements of the General Fisheries Commission for the Mediterranean (GFCM) and Scientific Committee on Aquaculture (CAQ) - SIPAM.

Summary data is provided by way of reporting forms according to the General Fisheries Commission for the Mediterranean, Scientific Committee on Aquaculture (according to Recommendation HKRS 35/2011/6):

- 1. Aquaculture production statistics.
- 2. Aquaculture production centers.

Requirement for harmonization of national statistical classifications with their international analogs contributed to the update of the current system of national statistical classifications of kinds of economic activities and production.

The first edition of NACE was developed for execution of the Government program of transition to the international account and statistics system. The purpose of working out the second edition of NACE was to bring it into compliance with EU base of international statistical types of activity classification (DK 009:2005) and revision of certain positions of classification on national level.

The State Agency for Fisheries of Ukraine developed the national version of NACE (DK 009:2010) (fig. 1).

Usage of methodical approaches to divide the economic activities in phases allows allocating: Section A «Agriculture, a forestry and fishery». Chapter 03 «Fishery and cultivation of aquaculture» now consists of two groups; each of them is specified by the type of activity (marine and inland fresh-water aquaculture). Also a new classification by activity type and types of aquaculture in Ukraine is offered.

Before the introduction of the DK 009: 2010 «Classification of economic activities in Ukraine" fishery and aquaculture were accounted for together, in one indicator. Today the indicators on fisheries and aquaculture are accounted separately as different kinds of economic activities.

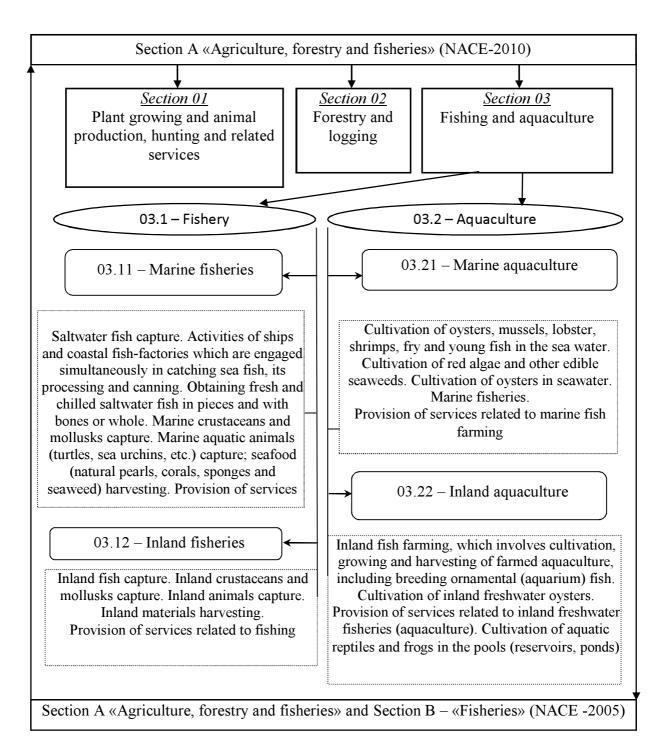


Fig. 1. Positioning of aquaculture in the new Classification of Economic Activities (NACE-2010) (DK 009: 2010 «Classification of economic activities», (2010)

With the transition to international standards in the sphere of fisheries statistics and separation of products and services in the Chapter 03 of Section A «Agriculture, forestry and fisheries economy» of national classifier DK 009: 2010 «Classification of economic activities» the Nomenclature of fisheries and aquaculture products was developed (2010).

Fish and other water biological resources were divided into 17 groups by industrial characteristics (by their habitat, way of extraction, and mode of existence). There are: decorative fish; ocean and marine fish; inland freshwater fish; anadromous fish; aquatic invertebrates; water plants and animals etc; pearls.

Users make the «Report on the amount of extracted aquatic biological resources» in carrying out special usage of water bioresources in the inland fisheries water bodies (or parts), an internal sea waters, territorial sea, exclusive (maritime) economic zone (EEZ) and on the continental shelf of Ukraine. A report is submitted monthly to local territorial departments of the State Agency of Fisheries of Ukraine.

Fishermen submit the «Report of extracted water bioresources» (annually) and the «Report of extraction of water bioresources » (quarterly) to the State Statistics Service of Ukraine.

For timely provision of information on the implementation of control and regulatory functions of protection, usage and reproduction of water biological resources and regulation of fisheries the territorial fish protection authorities provide information and reports to the Department of Water Bioresources Protection, Fisheries Regulating and Ichthyology of the State Agency for Fisheries of Ukraine, namely:

- the information of limits exploration and prognosis of acceptable special usage of water bioresources, information of the volume of special usage of water bioresources by users not later than the 10<sup>th</sup> day of month, following the accounting month (on accrual basis);
- the information about the volumes of fingerlings' reproduction in the natural water bodies, information on the volumes of fish stocking with fingerlings in special freight (trade) fisheries; volumes of fish stocking the water body with fingerlings with the scientific and biological purposes and also volumes of fish stocking with fingerlings in cultural fisheries not later than the 10<sup>th</sup> day of month, following the accounting month (on accrual basis);
- the information about testing fish protection devices, intakes and culverts, about recreational and sport fishing in public water bodies (for inland freshwater bodies) and about recreational and sport fishing in public water bodies (for marine waters) twice in a year, not later than the 10<sup>th</sup> of July and 10<sup>th</sup> of January.

**Discussion**. We developed recommendations for solving the problems:

- need to develop new rules for amateur fishermen, the mechanism of accounting amounts of amateur fishermen and amounts of their fish catch;
- provide an electronic documents circulation for fish protection authorities, which could keep a constant on-line communication with the users when the fish is catching;
  - introduce the collection of statistical data of marine aquaculture;
- to develop the reports for marine aquaculture, and special forms of primary documentation that enterprises of marine aquaculture have to fill;
- the full amount of revenues of aquaculture products to the domestic market from fish farms is not covered by official statistics;

- need to establish and maintain the list of entities that are engaged in the production of marketable fish and fish planting material in aquaculture;
- introduce the licensing of aquaculture entities, which would include the commitments of providing correct reporting and observance of environmental requirements;
- need legally register an article in the Administrative Code of Ukraine that would have strengthened the administrative responsibility for providing correct data from aquaculture entities;
- low professional level of Fishery Patrol which is collecting the reporting data (lack of professional education);
- to develop a report form for collection an information on the employment of workers in fish economy;
- need to develop a methodology and mechanism for collection and submission of such information (since this form for FAO also still haven't filled).

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### МЕХАНІЗМИ І МЕТОДОЛОГІЯ ЗБИРАННЯ ДАНИХ У ГАЛУЗЯХ АГРАРНОГО СЕКТОРУ ЕКОНОМІКИ

## Н. М. Вдовенко, В. Л. Гераймович

**Анотація.** У сучасному суспільстві в умовах розвитку інтеграційних процесів зростає роль статистики як одного з найважливіших важелів державного управління національною економікою і культурою. Статистика стає вагомим знаряддям ефективного управління і керівництва явищами та процесами в галузях аграрного сектору економіки.

Неможливим є ефективне управління державою, розробка й прогнозування соціально-економічного розвитку, в тому числі і в галузі сільськогосподарського виробництва без аналізу статистичних даних та розроблення механізму й методології збирання даних.

Метою статті є обґрунтування механізмів і методології збирання даних у галузях аграрного сектору економіки для розроблення практичних рекомендацій щодо реалізації регуляторної політики в секторі аквакультури. У процесі дослідження застосовано такі методи: аналіз, синтез, узагальнення, систематизація, трансформаційний та компонентний аналізи.

Науково-теоретично обґрунтовано механізм дії конкретної моделі збирання та систематизації диференційованої статистики вироблення продукції аквакультури. Доведено важливість передачі повноважень щодо збирання даних про виробництво продукції рибництва від Держкомстату України до Держрибагентства України. Розроблено звітну форму та спеціалізовані форми первинної документації для підприємств аквакультури.

Ключові слова: сільське господарство, методологія, промисловість, аграрний сектор, аквакультура, держава, статистика, державне регулювання, міжнародні стандарти, форми звітності

### МЕХАНИЗМЫ И МЕТОДОЛОГИЯ СБОРА ДАННЫХ В ОБЛАСТЯХ АГРАРНОГО СЕКТОРА ЭКОНОМИКИ

Н. М. Вдовенко, В. Л. Гераймович

**Аннотация.** В современном обществе в условиях развития интеграционных процессов повышается роль статистики как одного из важнейших рычагов государственного контроля национальной экономики и культуры. Статистика становится важным инструментом для эффективного управления и руководства явлениями и процессами в отраслях аграрного сектора экономики.

Невозможным является эффективное управление государством, развитие и прогнозирование социально-экономического развития, в том

числе в отраслях сельскохозяйственного производства без анализа статистических данных и разработки механизма и методологии для сбора данных.

Целью статьи является обоснование механизмов и методологий сбора данных в отраслях аграрного сектора экономики для разработки практических рекомендаций в отношении осуществления регуляторной политики в секторе аквакультуры. В процессе исследования применяются такие методы: анализ, синтез, обобщение, систематизация, трансформационный и компонентный анализы.

Научно-теоретически обоснован механизм действия конкретных моделей сбора и систематизации дифференцированных статистических данных производства продукции аквакультуры. Доказана важность передачи полномочий, касающихся сбора данных о рыбной продукции от Государственного статистического комитета Украины к Государственному агентству рыбного хозяйства. Разработана форма отчетности, и специализированная форма первичной документации для предприятий аквакультуры.

Ключевые слова: сельское хозяйство, методология, промышленность, аграрный сектор, аквакультура, государство, статистика, государственное регулирование, международные стандарты, формы отчетности

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# ДЖЕРЕЛА ФОРМУВАННЯ КОНКУРЕНТНИХ ПЕРЕВАГ ПРОДУКЦІЇ СКОТАРСТВА

В. Д. ЄВТУШЕНКО, здобувач кафедри організації агробізнесу\*

Національний університет біоресурсів

і природокористування України\*

e-mail: kaf\_orgagro@ukr.net

Анотація. Досліджено джерела формування конкурентних переваг продукції скотарства. Визначено вплив природно-економічних умов та інноваційних технологій вирощування тварин на підвищення конкурентоспроможності продукції скотарства. Результати дослідження методом групування сільськогосподарських підприємств України за рівнем рентабельності свідчать про незначний вплив природних умов на рівень конкурентоспроможності продукції вирощування великої рогатої худоби. Водночас, створення спеціалізованих підприємств із вирощування та

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<sup>\*</sup> Науковий керівник – доктор економічних наук, професор, член-кореспондент НААН України М. М. Ільчук