METHODS OF STATE REGULATION OF AGRICULTURAL SECTOR
IN TERMS OF THE ORIENTATION OF THE ECONOMY TO
SAFETY AND QUALITY STANDARDS

Abstract. The article is an attempt to realize the potential of system methodology with simultaneous shifts in standardization processes. On this basis will be consistent with the strategy for socio-economic development of Ukraine and its regions and industries, as well as appropriate programs of socio-economic development with regard to the requirements of the investment-innovative model of development of the domestic economy as a whole and its individual units. In addition there will be coordination of state regulation of agricultural sector in levels of the “center–region–area”. On these principles it will be possible to achieve close forward and backward linkages between the subjects of fisheries, aquaculture and the system of state regulation of economy. The proposal is an essential prerequisite of an optimum combination of the strengths of market and administrative levers.

Key words: methodology, agricultural sector, aquaculture, domestic economy, food safety, quality, standard, fisheries.

Introduction. The Plan of Action "Ukraine - EU" European Neighborhood Policy, approved by the Cabinet of Ministers of Ukraine from 12.02.2005, emphasizes that Ukraine and the EU agreed to intensify security and economic relations. In this case, Ukraine should ensure conducting of its legislative reforms in accordance with international standards; harmonize the necessary framework and sectorial legislation in priority areas with the EU technical regulations; rights and fundamental labor standards, based on European standards and in accordance with the ILO conventions; take further steps for the integration of environmental protection issues into other policy areas, in particular in the field of regional development and agriculture, increase food safety for all consumers, bring EU legislation into the field of food chain tracking "from field to table". Write down the general principles of food safety and implement a system of Hazard Analysis Critical Control Point (HACCP) in enterprises and controlling bodies, including the fisheries. Therefore, the strategy of Fisheries development today, in the view of the acknowledged Ukraine's priority of integration into the EU, cannot be implemented beyond the transition to modern international and
European standards. Moreover, the key security international standards are recognized as State Standards. It does not require any evidence that successful competition of fisheries enterprises on all types of markets, both domestic and foreign, at a large extent depends on the increasing demand for safe food. Intense competition in the markets foresees the expansion of list of objects of certification that virtually makes it impossible to promote virulent products to the markets. Overcoming of this situation requires a high standardization of production and management.

**Literature review and the problem statement.** According to G. Simon’s definition, every activity involves conscious and unconscious choice of certain actions from a range of physically possible actions for the subject. As a result of the specific process, the circle of alternative variants begins to narrow, until finally there is the one, which is implemented in practice. However, although the rationality means the complete knowledge and the ability to foresee the consequences of each selected variant of actions, in practice, this knowledge is always fragmentary [Simon 2001]. That is why every manager strives for comprehensive standardization of their decision-making algorithms based on those legal and regulatory restrictions, which apply to this environment and are reflected in the formal-logical (documentary) form. However, in other case the legal consequences of actions of a leader and his subordinates are essentially uncertain. It is necessary to take into account the opinion of R. Ackoff and F. Emery, that any standard provides idealized constructive definition of the concept, if it contains a clear statement of terms and operations, which could be used and which should ideally be used to resolve the issues relating to this concept. However, standards in general can only be idealized in relative terms - relatively the modern state of our knowledge [Ackoff, Emery 1974].

Economic Encyclopedia defines “standard” as: 1) an official governmental or regulatory and technological document of industry, enterprise, firm, company, which establishes qualitative characteristics, requirements to be met by a certain type of product, goods; 2) sample, the standard to which other similar objects are compared [Mochernage 2002]. The Law of Ukraine "On standardization" from 17.05.2001 № 2408-III [Law of Ukraine 2001] defines a standard as a document developed by consensus and approved by a certain authorized body, which sets rules for common and repeated use, guidelines or characteristics which are related to activities or their results, including products, processes or services, compliance with which is optional. Ensuring sustainable use of natural resources (including fish), standardization of objects according to their functional purpose, informing consumers about the quality of products, processes and services, support of development and international competitiveness of products and trade is defined as the main target of standardization in Ukraine.

Back in 1990, the Conception of transition of Ukrainian SSR to the market economy [The concept 1990] has orientated the system of governmental control on combination of normative, financial and administrative mechanisms. This indicated combination was immediately orientated on the highest world standards. At the same time, meeting the high world standards appeared difficult enough. The Law of Ukraine “On Conception of the National program of informatization” from 04.02.1998 №75, marked the slow process of mastering of perspective information technologies, which was complicated by the insufficiency and incompleteness of the system of standards, harmonized with international ones. By that time in Ukraine a general amount of informational technologies standards was about 4 % of general amount of state standards. At the same
time in other countries this part exceeded 10%. Besides the rates of international standardization in the industry of informational technologies were higher in relation to other industries and with annual growth of 10–15%. By that time ISO were developed and more than 1400 international standards of information technologies were accepted, and the same amount was under development. In Ukraine during 1992–1997 about 100 state standards of informational technologies, mainly terminological, were developed and implemented. The State standardization program for 2006–2010 shows that in Ukraine there are accepted 6113 normative documents in the field of standardization, from which only 2516 are harmonized with international and European standards. There are also about 19 thousands of intergovernmental standards in action, from which are only harmonized 10.3%. At that time international organizations of standardization accepted almost 20 thousands of standards, which are used in international trade in accordance with the requirements of WTO, and over 16 thousands of normative documents of European organizations of standardization operate. Coming from practice of economic standardization in the developed countries of the world, further economic development of Ukraine must acquire modern high standardization features.

**Research results.** The aspects of standardization are included practically into all spheres of economic activity. In the Law of Ukraine “On environmental protection” from 25.06.1991 №1264-XII [Law of Ukraine: On protection of the natural environment 1991] priority of requirements of ecological safety and obligatoryness of inhibition of ecological standards, norms, limits of the use of natural resources during realization of economic, administrative and other activity is attributed to basic principles of ecologization of material production. Such a requirement is relevant to an agrarian sector, which is one of main contaminants of the environment. In the US, this sector accounts for almost 3/5 of total environmental pollution [Maklerski 1980]. In Ukraine such pollution reaches the level of 35–40% (land and water bodies - up to 50%) due to the functioning agroindustrial complex [Sozinov 1999]. By the law of Ukraine “On an energy-savings” from 01.07.1994 №74/94-VR introduction of energy-savings management was provided – a control system, which must provide the rational use of fuel and energy resources, and also the realization of an effective governmental control of activities in the field of energy-savings on the basis of application of economic, normatively technical adjusting measures. Standardization in the field of energy-savings and setting the norms of fuel and energy resources usage, necessity of power standards and norms of fuel and energy usage observance are substantiated. It is also important that Power strategy of Ukraine till the year 2030, approved in 2006 by the order of Cabinet of Ministers Ukraine № 145-p, turns the agrarian sector of economy exactly to the fundamental diminishing of the energy intensity of products on the basis of new technologies, progressive standards and the control system. The law of Ukraine “On a labor protection” from 14.10.1992 № 2694 also focuses on obligatory for implementation rules, norms, regulations, positions, standards, instructions etc. State target program on development of Ukrainian village till 2015, approved by the Cabinet of Ministers of Ukraine from 19.09.2007 № 1158 provides for management reform in the agricultural sector, which should focus on resolving issues of formation of scientific and methodological, institutional, regulatory, technological and legal framework for the establishment of an information security management system that meets modern international
standards. That means there should be created a competitive system of governance of Ukrainian agricultural sector, which meets international standards of management as well as WTO requirements and EU guidelines. Ministry of Agrarian Policy of Ukraine has the authority to develop technical regulations, standards and other regulatory documents, and to establish procedures for the development and use of industry standards. However, the State Agency for Fisheries of Ukraine in this area was authorized only to introduce forms of statistical reporting in the fishing industry regarding aquatic biological resources in accordance with international standards and norms, and to ensure exchange of such information with relevant international organizations in accordance with current legislation and international treaties of Ukraine. The concept of the state target economic development program for fisheries for 2012-2016, approved by the order of the Cabinet of Ministers of Ukraine from 05.10.2011 № 1003-p, contains measures to enhance international and foreign economic activity, creating conditions for attracting investment and technical assistance. However, it lacks any mentioning of standardization prerequisites for such activities, without which the industry loses any investment attractiveness.

Economic Encyclopedia defined norm as the maximum value of material, labor and financial resources used for the production of a unit, execution of work or service units, which are set for certain work conditions and standards - as indicators characterizing the level of use of tools and means of labor, objects of labor, living labor, money etc, their cost per unit area, mass, volume and others [Mochernag 2002]. According to V. Vitvitsky, the agricultural sector in Ukraine now needs the improvement of rationing system. Thus, the United States benefits farmers who are running their farms, basing on the sustainable development. This requires significant regulatory work. The needs of agricultural enterprises in normalization of the main production make up about 300 thousand norms. In the agroindustrial complex of Ukraine, based on the indicative data, more than 500 million norms are used, but there should be several times more. However, in England, where the agricultural sector operates on the foundation of the normative performance standards and norms of increase and losses of production caused by various factors, mikronorms of American system MTM-1 are in use. For practical purposes of system analyzing and planning enlarged mikronorms MTM-2 and ETA are used (only about 700 specialized agricultural regulations, combining of which allows to normalize the work process of the almost all performed assignments [Vitvitsky 2006]. Therefore, the methodology of improving state regulation of agrarian sector and aquaculture has to be coordinated by the standardization of production and management.

Economic Code of Ukraine from 16.01.2003 № 436-IV in Article 19.3 indicates that the state provides control and supervision of economic activities in the areas of: production and labor safety, fire, environmental, sanitary safety, compliance with standards, regulations and rules, by which are set mandatory requirements for management, consumption and foreign trade, quality and safety of products and services. Since Ukraine's becoming of a member of the UN FAO and WTO there has been a significant increase in the requirements for safety and quality of the agricultural sector, including aquaculture. State Program on development of Ukrainian village till 2015, approved by the Cabinet of Ministers of Ukraine from 19.09.2007 № 1158, introduced policies to guarantee the safety and quality of food which are directed to: development and implementation of quality standards for types of agricultural products and foodstuffs according to the international standards, creation of a database of
domestic and foreign technology, a new generation of product innovations which are on the same level as foreign analogues, improvement of the mechanism of state control over compliance with veterinary and sanitary requirements for keeping animals and production of animal products; monitoring the cultivation of animals, quality of food raw materials and food products in accordance with WTO regulations, improvement of control over the implementation of requirements of normative documents by the agricultural producers, technical regulations related to product quality, requirements of legislation in the field of consumer protection, changing the role of the state and the market operators on ensuring food safety according to the European principles. The Law of Ukraine "On fisheries, commercial fisheries and protection of aquatic biological resources" from 08.07.2011 № 3677-VI also is about the quality and safety of fish and other aquatic biological resources and produced from it products for life and health of people and the prevention of negative environmental impact. However, despite the fact that the quality and safety aspects are ordinary sets, as objects of standardization, they have individual characteristics. For example, the quality of food is defined as the degree of perfection of its specific characteristics and features that can satisfy needs (requirements) and wishes those who consumes or uses the food product, and food safety - as it is a condition that is the result of the production and circulation activities, which is provided according to the requirements, established by sanitary measures or technical regulations and provide assurance that the food is not harmful to human(consumers) health, if it is consumed on purpose [Law of Ukraine: On the safety and quality of food 1998].

In theoretical terms, the problem of the quality level in the system in general, and management quality in particular, were examined by famous thinkers. Aristotle in his time concluded that the change in the number and change in the quality - are not the same, the number is that what can be divided into components, and the quality is a specific abolition of essence, or the condition that is moving and the difference in motion [Aristotle 1976]. G. Hegel considers quality as uncertainty of the definite being in relation to being in general, and perfection - as the quality of infinity [Hegel 1970]. From the perspective of Karl Marx, the material precondition for reproduction in an enlarged scale is not the change of quantity, but qualitative purpose of data elements of simple reproduction [Marx, Engels 1961]. Therefore, ensuring compliance with the characteristics of the object and the subject of regulation of quality requirements becomes an important task of state regulation in the context of transferring them to a state of sustainable growth based on the sectorial investment and innovation development model. In the development of theoretical principles of quality management system were engaged: E. Deming [Deming 1994], M. Imai [Imai 2004], K. Ishikawa [Ishikawa 1988], Y. Adler, E. Hunaidi, V. Spehr (2005) [Adler, Hunaidi, Spehr 2005]. According to E. Deming, the principles on which the manager must focus are: long-term strategy, transformation of management style, simple and reliable statistical process quality certificates, minimization of all costs, continuous system improvement, personnel training, responsibility for the quality, providing links between levels of the hierarchy, breaking barriers between subsystems, methods to reach the goals (not meaningless slogans and appeals), the elimination of arbitrary rules and quantitative objectives, providing opportunities to workers to be proud of the work, motivating the desire to receive knowledge, attracting senior management to improve quality, which, of course, is the innovation. However, in general, recognizing the significant contribution of E. Deming and W. Shuhart in the
theory of quality management, other scientists point to the need for further improvements [Lap 1999]. K. Ishikawa says: physics, chemistry and mathematics - are universal disciplines that can be applied equally to all countries, but when it comes to quality control or other discipline, which hosts the concept of "management", there is a big role of human and social factors. So, no matter how successful American and British methods are, they cannot be imported to Japan in the form that they are used in the US or UK. To succeed, you must create Japanese methods to overcome technocratization (monopoly of engineering and technical workers on statistical quality control), which significantly limits the scale of quality management system implementation. In this context, K. Ishikawa recalls J. Juran, who in his time created an atmosphere where quality management began to be perceived as a management tool [Ishikawa 1988]. In the opinion of J. Juran, the very fact of compliance with the requirements of ISO 9000 does not guarantee the companies occupation of leading positions in the field of quality. Examples of companies that have achieved such positions indicate the number of common points in their activities, including personnel training, high pace of improvements implementation from year to year, involving workers to ensure the quality, which are not embodied in ISO 9000 [Lap 1999]. However, the President of Ukraine Decree "On measures for implementation of the Concept of administrative reform in Ukraine" from 22.07.1998 № 810/98 emphasized that Ukraine's current system of state regulation remains generally ineffective, eclectically combining institutes inherited from the Soviet era, and new institutions that were formed during Ukraine's independence. The system is internally inconsistent, incomplete, cumbersome and detached from people, because of what existing government regulation has become obstacle in conducting socio-economic and political reforms. In other words, the system of state regulation faces the problem of quality changes. It was recognized by the Concept of improving of economic activity state regulation, approved by the Decree of the President of Ukraine from 03.09.2007 № 816/2007, which again called for the elimination of systemic accumulation of problems in the formation and implementation of regulatory policy. As we can see, with an interval of 9 years both Decrees of the President of Ukraine mention the systemic crisis in state regulation, which is a sign of its quality characteristics inconsistency that will negate any expectations of achieving competitiveness of the national economy and the agricultural sector in world agricultural markets. Since 2001 in Ukraine ISO 9000 series of standards have been adopted as Governmental standards. ISO 9001 specifies requirements for the quality management system where an organization needs to demonstrate its ability to provide products that are meeting the requirements of customer and applicable regulations, and is committed to improve customer satisfaction. ISO 9004 provides guidelines for the effectiveness and efficiency of the quality management system; ISO 9001 contains recommendations for auditing quality management systems and environmental management systems. It is clear, that eight ascending quality management principles (focus on the customer, leadership, staff involvement, process approach, system approach to management, continual improvement, making decisions based on facts, mutually beneficial relationships with suppliers) relate primarily to production systems. World practice shows that the quality management system (QMS) gained a significant spread in the field of governmental regulation. In Japan QMS introduced almost in 90% of municipal bodies. In Ukraine, such work is at an early stage. Resolution of Cabinet of Ministers of Ukraine from 11.05.2006 №
614 adopted a program of QMS implementation in executive bodies. It was created in accordance with ISO 9001: 2000, which effectively functions in public administration of majority of states - EU members). The first executive authority in Ukraine, which introduced QMS based on State Standard ISO 9001 was the MDCSU, and among local governments - a number of executive committees of local councils - Berdyansk (Zaporizhia region) and Komsomolsk (Poltava region). World experience undeniably proves that the effectiveness of the implementation of any external systems, including quality management system, which is supereffective in the country of origin, is achieved in the recipient country only after its careful preparation. Today in Ukraine is adopted State Standard P IWA 4: 2006 "Quality Management Systems. Guidelines for the application of ISO 9001: 2000 in local government entities." The standard is focused, firstly, on control documents, i.e. developing and documentation of methodology and the necessary means of control of the documentary process: avoidance of deliberate usage of outdated documents. Secondly, is focused on the analysis, namely to ensure continuing suitability, adequacy and effectiveness of the quality management system and to assess opportunities for improvement and determination of need for changes, that are inherent in the studied system.

In addition, efficiency of the quality management system, created by the algorithm of State Standard P IWA 4: 2006 is provided by the following principles: 1) four themes in the inspection system with the anticipation of subtopics disposition installation in the range "red" (high threat), "yellow" (medium level of threat), "green" (no real threat). Institutional development (competence of public servants staff, responsible budget spending, developed and implemented legal framework, efficient financial management, awareness of security issues); sustainable economic development (economic and innovation activity opportunities, development promotion of sectors of agriculture, industry, trade, etc.); comprehensive social development (responsibility for risk and vulnerable sectors of the population, health care and education, an acceptable level of assistance for menage); sustainable environmental development (monitoring of environmental responsibility for cleaning and waste disposal, protection of key natural resources, and the effectiveness of the land-water use, soil protection, etc.); 2) recognition of the quality management system as a part of the governance system, which is usually aimed at achieving results according to the quality objectives and the needs, expectations or requirements of stakeholders; 3) quality policy: compliance with the purpose; continuous improvement of the results; establishment and revision of accepted objectives; prevalence and clarity; analysis of the object in the aspect of suitability; 4) planning: setting goals, including aimed at product requirements for departments and levels of organization (measurability of objectives and the coherence with the policy). According to the State Standard P IWA 4: 2006 management entity should provide metodologized development of the strategic plan for the facility, which is subordinate to it. For this purpose, it has to determine on the basis of his earlier documented methodologies: short, medium and long-term objectives, potential areas of development; priorities of programs, projects and activities, the availability of the necessary resources for the normal activity, organizational diagnostics (strengths, weaknesses, opportunities, threats), analysis and risk assessment. State Standard ISO / TR "Guidance on developing quality management system documentation" defines the structure and form of presentation of techniques (text, maps of work sequence, tables, their combination, etc.) that can have links to work instructions. The method of
preparation of quality management system documentation includes: determining necessary for the effective implementation of the quality management system processes, understanding of the interaction between these processes, documentation of processes to the extent, necessary in terms of ensuring their effective operation and management. According to this, analysis of processes and their results is carried out. State Standard ISO 10006 "Guidelines for quality management in projects" identifies the program as a document that defines what methods and resources by whom and when have to be used for a particular project. About the urgency of state regulation quality improvement mentions V. Yurchishin, according to whom, the agricultural sector has to move to systematic development of governance, the distinguishing feature of which is the simultaneous inclusion in it not only structural, but also legal, institutional, economic, social components and comprehensive elaboration of scientific-methodological and organizational-economic basis in the direction of obtaining higher quality management in the form of a positive synergistic effect [Yurchyshyn 2003]. In recent years, in the world and in Ukraine the problem of the national security systematic maintaining becomes more important, part of which is also food security. The role of food security in civilizational process was regarded in Ukraine on its way to national independence in view of the fact, that one of its first acts was the current Law of Ukraine "On the priority of rural and Agroindustrial Complex social development in the national economy" from 17.10.1990 № 400-XII. Ukrainian SSR’s concept of transition to a market economy from 11.01.1990 also mentioned the adaptation of production to world markets, intensive use world-class techniques, technology and production organization, taking part in world economic relations, foreign investors, agrarian reform (which aimed at rational use of lands), ecology. And the law of Ukraine "On economic independence of Ukrainian SSR" from 03.08.1990 № 142-XII has actualized the issue of comprehensive satisfaction of citizens’ needs in material and social goods, a key component of which is precisely the issue of food security. The next stage of security principles of Ukraine formation - is the adoption of the Constitution, where security issues and citizens' right to have adequate food resources received the highest status. Logical was also the adoption in 1997 of the Law of Ukraine "On the safety and quality of food" from 23.12.1997 № 771/97-BP. Also there was introduced the State Classifier of Emergencies (SC 019-97). The aspect of security of Ukraine, including food security, received a standard term. The concept of the State Program on technological security ensurance in key sectors of the economy, approved by Cabinet of Ministers of Ukraine from 11.06.2003 № 351-r, contains an analysis of the causes of and technogenic emergency situations. In 48% of cases they inherent technical nature: unsatisfactory technical condition of buildings, structures, equipment and engineering services, due to their significant depreciation because of expiration of regulatory term of operation - regulatory resource. According to specialists, the technical condition of buildings, structures, equipment and engineering services in key sectors of the domestic economy has reached a critical point that threatens its sustainable operation, increases the likelihood of accidents and technogenic emergency situations. To eliminate this state of affairs authors of the Concept offer: development of theory and scientific foundations of security valuation methods, criteria and rules for calculating regulatory resources of facilities, development of methodology of formation and support of industrial and regional components of the Program, improving the branch system of state regulation and control of economic activity in this area.
Therefore, aspects of security management principles methodologization and standardization have gained systematic scoring in the Concept. Approved by the Decree of the President of Ukraine "National Security Strategy of Ukraine" from 12.02.2007 № 105/2007 made its emphasis on developing and implementing national standards for information and communication technologies harmonized with the relevant European standards. In this context since 2007 in Ukraine has been introduced the State Standard 4423-1 "Management of documentation processes", which contains methodological basis of development and implementation of information systems based on a number of techniques: preliminary study; analysis of business activity, establishing requirements for official documents; processes of evaluation existing systems and determination of the action strategy which fulfill documentation requirements, development, implementation and analysis of the new system effectiveness. It should be emphasized that the documentation techniques should be coordinated with the Methodology of the economic security of Ukraine calculation, which came into effect by the order of the Ministry of Economy of Ukraine from 02.03.2007 № 60, which diversifies components of the economic security: macroeconomic, financial, foreign trade, investment, science and technology, energy, industrial, demographic, social, food. Method determines the level of economic security of Ukraine as the main component of national security and the list of the main indicators of the economic security state, their optimal, threshold and limit values and methods of calculation of economic security integral index. In methodological terms, application of State Standard ISO 22000 allows agricultural and aquaculture enterprises, firstly, to plan, practically implement and use, maintain and to upgrade safety management system of its own products; secondly, to demonstrate their compliance with the current safety requirements; thirdly, to identify and evaluate customer requirements; fourthly, to effectively inform about the safety problems of manufactured products, suppliers, customers and relevant stakeholders; fifthly, to ensure compliance of its own organization with stated policy towards product safety, respectively demonstrating such compliance to stakeholders; sixthly, to seek certification of its own safety management system of certain products (Fig. 1).

Researches of S. Shkarlet show that the factor of safety development is closely related to the innovative factor [Scarlet 2007]. According to him, economic security of enterprise is a system task, which consists of three components, interconnected by conjunctive correlation and it is determined as a continuous and dynamic process of diagnostics and evaluation of financial and economic, operational, technological, resource, marketing, innovative, organizational, functional, legal, structural and administrative criteria. The purpose of which is the early authentication of origin’s sources, kinds and stages of dangerous for an enterprise displays development; timely application of relevant catalogue of antichrists measures in the case of the real necessity to neutralize both internal and external factors or anticipation, defense and counteraction to their influence; forming of the system of recommendations and measures with the purpose of competitive advantages creation and providing the development of the entity on all stages of its life and operating cycles. The specific of Ukrainian mentality easily fits exactly into creative part of innovative activity as a guarantee of success and development on every entrepreneurial step [Scarlet 2007]. Therefore innovativeness and taking into account the specifics of life cycle of the entity are the preconditions of creation of an effective safety management system for its products. It should be noted, that M. Porter
also mentioned the importance of targeting of the economic systems on innovation and reflecting the specificities of the organizational life cycle. He alleged that the new theory must go toward the competitive advantages of the country, understanding that these advantages are created and kept in close contact with the local conditions. It should be mentioned that the crucial role for the competition is played by innovations, changes and systematic approach, and the state should create circumstances that will allow their companies to update technology faster than their foreign competitors [Porter 1993].

Figure 1 – The scheme of standardized of food safety management actions directing, based on HACCP

Source: authors’ own development

Today in Ukraine the State Standard ISO / IEC 15288: 2005 "Information Technology: Processes of life cycle of the system" is introduced. The processes in this standard can be used as the basis for setting techniques and methodologies. The model of life cycle is defined in this standard as a structure that combines the processes and actions related to the the life cycle, and serves as the generally accepted standard for communication and understanding. Each life cycle is characterized by specific stages, concerning which it is necessary to define their purpose and results. Adaptations of the standard may include the following measures: identification and documentation of factors which are affecting this process (stability and diversity of environments, risks, novelty of
the system, size, complexity, starting date and duration of use, indicators of integrity - safety, security, privacy, etc; evolution of technological capabilities, financing structure and available resources), determination of an appropriate model of the system's life cycle, identification of life cycle model in terms of stages, their identifiers, predesignation and the results they achieve during the execution of processes of a certain cycle. From a methodological point of view, the most important stage of the life cycle is the stage of determination of the concept that starts with the early identification of needs or formation of the idea about the new basic system (a modification of the current system) - the period of the initial research, detection and gathering the facts and also planning, where the economic, technical, strategic and market indicators are assessed, and feedback from the user to this concept is received. An important feature of modern innovative activity is its consistency with the process of standardization. Today in Ukraine is adopted State standard of Ukraine GOST 31279: 2005 "The Innovative activity" which defines the essence of the given kind of activity and innovation management is defined as a set of principles, methods, means and forms of innovative process control with the purpose of investments value maximization. The Law of Ukraine "On innovative activity" from 04.07.2002 № 40-IV in article 1 defines innovation exactly as a significant factor in the improvement of the production quality. Article 4 of the Law among the objects of innovative activity highlights innovative programs / projects, new knowledge and intellectual products. In areas of state regulation of innovative activity (Article 6 of the Law) is particularly highlighted: definition and support its priority areas, the formation and implementation of innovative programs (national, sectorial, regional and local); as well as creation of the legal framework and economic mechanisms for its support and stimulation. Of course, for the effective implementation of the innovative functions into the system of state regulation it is necessary, first of all, to develop certain methods and standards. However, the Law of Ukraine "On innovative activity" from 04.07.2002 № 40-IV does not mention these instruments. If we turn to the Law of Ukraine "On Basic Principles of Information Society Development in Ukraine for 2007-2015" from 09.01.2007 № 537-V, we find the information about the formation and implementation of legal, organizational, scientific and technological, economic, financial, technological and methodological terms of information society development in Ukraine, considering global trends; secondly, the development and introduction of indicators of information society development in Ukraine, and the process of making appropriate changes in the system of state statistical observations with their coordination with international standards and methodology; thirdly, conformity of the resources (electronic informational) with standards and technical regulations, national, sectorial and local classifiers and directories. In other words, the information society (as the organic component of the innovation process) requires simultaneous changes in processes standardization.

"The Concept of the State program of development of informational and analytical support of state innovation policy realization and monitoring of innovation development of the economy", approved by the Cabinet of Ministers of Ukraine from 16.05.2007 № 285-r, says that the effective state innovation policy is one fo the preconditions for successful implementation of investment and innovative model of economy. Its development and implementation is not possible without the development of informational and analytical support for these processes, but the parts of the system are still functioning independently. This fact prevents their coordination and harmonization. Also, today there is not
carried out any systematic monitoring of innovation development of aquaculture, analysis of effectiveness of state support mechanisms and stimulation of innovation, scientific and technological activities, as well as a comparative analysis of the state policy implementation in the respective area in foreign countries. Inadequate state in this sphere is caused by: departmental distribution of competence for implementation of state innovation policy in aquaculture; the lack of a common approach to determining the tasks, to achieving the objectives aimed at their implementation, and analysis of the effectiveness of implementation of the state policy in the field of innovation; inconsistency of statistical monitoring methods in the field of innovative, scientific and technical activities with world standards; lack of unified scientific and methodological approach to monitoring of aquacultural innovation development.

Conclusions. Studies have confirmed that further sustainable development of aquaculture can be carried out with the harmonization of relations both the state regulation and market mechanisms, and with the control of compliance with the requirements of sustainable development; implementation of scientific and innovative investment model of industry development and the existence of perfect management tools; coordination of diversified components of national classifications as part of ensuring the efficiency of decision-making process by the system of the agricultural sector state regulation; achieving integration of aquaculture with complementary branches of the agricultural sector of Ukraine. This approach allows to realize the potential of systematic methodology, based on which will be coordinated the strategy for socio-economic development of Ukraine, its regions and sectors, and relevant social and economic development with the requirements of investment and innovative model of development of the national economy in general and its individual units, coordination of state regulation of aquaculture at "center-region-district" levels. In addition, only on this basis it will be possible to ensure close and direct feedbacks between the subjects of fisheries in the field of aquaculture and the system of state economy regulation, which is the crucial precondition of optimal combination of the strengths of the market and administrative levers.

References


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