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## APPROACH TO ANALYTICAL SUPPORT FOR ASSESSING THE SECURITY OF HUMAN DEVELOPMENT

## ПІДХІД ДО АНАЛІТИЧНОГО ЗАБЕЗПЕЧЕННЯ ОЦІНЮВАННЯ БЕЗПЕКИ ЛЮДСЬКОГО РОЗВИТКУ

***Urgency of the research.** In the conditions of instability and uncertainty of the processes that affect people's security and human development, the importance of preventing and avoiding negative environmental impacts highlighted the issue of assessing the human development security.*

***Target setting.** The formation of human development security is carried out under the influence of various factors, which are difficult to prevent in a timely manner, but with the help of a comprehensive assessment of this process it becomes possible to develop of a mechanism for anticipating and preventing the losses of human development.*

***Actual scientific researches and issues analysis.** The issue of developing methodological support for measuring human development and human security was considered by foreign*

***Актуальність теми дослідження.** В умовах нестабільності та невизначеності процесів, що впливають на безпеку людей і людський розвиток, необхідність попередження та запобігання їх негативного впливу актуалізують питання щодо оцінювання безпеки людського розвитку.*

***Постановка проблеми.** Формування безпеки людського розвитку здійснюється в умовах впливу різних чинників, яким складно своєчасно запобігати, але за допомогою комплексного оцінювання цього процесу стає можливим вироблення механізму передбачення та запобігання втрат людського розвитку.*

***Аналіз останніх досліджень і публікацій.** Над питаннями розробки методичного забезпечення вимірювання людського розвитку і людської безпеки*

scientists: *Mahbub ul Haq and A. Sen, M. Peleah and A. Ivanov, David A. Hastings and others; and Ukrainian scientists: O. Vlasjuk, T. Ivashchenko, E. Libanova, O. Makarova and O. Gladun and others.*

**Uninvestigated parts of general matters defining.** *Based on the work of foreign and domestic scientists, the issue of a comprehensive assessment of the human security development process has not been investigated.*

**The research objective.** *To develop a sequence for the development of a scientific and methodological approach to analytical support for the assessment of human development security.*

**The statement of basic materials.** *In the article a critical analysis of existing methodological approaches to the assessment of human development and human security was systematized and conducted. The methodical approach to the analytical support for assessing the security of human development, which will provide the most complete measurement of the process, is substantiated.*

**Conclusions.** *Taking into account the advantages and disadvantages of methodological approaches to the assessing of human development and human security has allowed to form a sequence of development of a scientific and methodological approach to analytical support for assessing the security of human development.*

**Keywords:** *human development, human*

*займалися і займаються зарубіжні: Махбуб уль Хак і А. Сен, М. Пелях і А. Іванов, Д. Хастінг та ін., та вітчизняні учені: О. Власюк, Т. Іващенко, Е. Лібанова, О. Макарова, С. Пирожков.*

**Виділення недосліджених частин загальної проблеми.** *Спираючись на праці закордонних та вітчизняних учених, питання комплексного оцінювання процесу безпеки людського розвитку раніше не досліджувалось.*

**Постановка завдання.** *Розробка послідовності формування науково-методичного підходу до аналітичного забезпечення оцінювання безпеки людського розвитку.*

**Виклад основного матеріалу.** *У статті систематизовано та проведено критичний аналіз існуючих методичних підходів до оцінювання людського розвитку та людської безпеки. Обґрунтовано методичний підхід до аналітичного забезпечення оцінки безпеки людського розвитку, який забезпечить найбільш повне вимірювання процесу.*

**Висновки.** *Врахування переваг і недоліків методичних підходів до оцінювання людського розвитку і людської безпеки дозволило сформулювати послідовності розробки науково-методичного підходу аналітичного забезпечення оцінювання безпеки людського розвитку.*

**Ключові слова:** *людський розвиток,*

**Urgency of the research.** In the conditions of instability and uncertainty of social, economic, ecological, political and other processes that affect people's security and human development, the importance of preventing and avoiding negative environmental impacts at both macro and micro levels highlighted the issue of assessing the human development security.

The value of the assessment work of the complex and measurable processes is not only in ranking countries and their comparisons on a single scale of assessment, but also in determining the high countries' results in the respective aspect of assessment, studying their experience in achieving high results; development or adjustment of national development strategies of the countries, etc.

**Target setting.** In practice the formation of human development security is carried out under the influence of various factors, which are difficult to prevent in a timely manner, but with the help of a comprehensive assessment of this process it becomes possible to determine the level of human development security, taking into account the probable risks and threats from the occurrence of such factors, determining the degree of their impact, which will further contribute to the development of a mechanism for anticipating and preventing the losses of human development.

**Actual scientific researches and issues analysis.** The literature review shows that the issue of developing methodological support for measuring human development and human security was considered by foreign scientists (Mahbub ul Haq and A. Sen, M. Peleah and A. Ivanov, David A. Hastings and others) and Ukrainian scientists (O. Vlasjuk, T. Ivashchenko, E. Libanova, O. Makarova and O. Gladun and others), expert groups of international organizations: UNDP specialists, the experts of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), groups of scientists from domestic and foreign research institutes and government agencies.

**Uninvestigated parts of general matters defining.** The results of the analysis of scientific literature show that in particular no study, to our knowledge, has considered the development of a methodological approach to measuring the security of human development, therefore we consider it to be quite reasonable and relevant to conduct a thorough search and study of the peculiarities of existing methodological approaches to assessing the processes of human development and human security separately and to formulate a sequence of development of a scientific and methodological approach to analytical support for assessing the security of human development.

**The research objective.** To develop a sequence for the formation of a scientific and methodological approach to analytical support for assessing the security of human development.

**The statement of basic materials.** Among the most popular methods for assessing complex and difficult formalized processes (including the process of human development) in world practice use a single indicator (integral indicator or composite index). The idea of the importance and popularity of the use of such an indicator is reinforced by the research of R. Bandura Bandura, R. (2011) about the phenomenal growth of the number of developed integral indicators which used for the comprehensive assessment of countries by economic, social, environmental, political and other criteria. R. Bandura notes that only from 2007 to 2011 formed 130 (45%) of 290 existing, according to the UN, aggregate indicators by 2011. Most international organizations: the UN, the World Bank, the International Monetary Fund and others are constantly working on the development of integrated indicators in various spheres of society development.

So, the methodical approaches to human development assessment, presented by the international method of measuring human development (Human Development Index (HDI), first proposed by UNDP specialists. This method has rapidly gained global significance and widespread use, but in addition has become the most discussed and criticized. Undoubtedly developed methodical approach has given significant impetus to research in the direction of improving, filling new

characteristics, rethinking and developing new approaches to human development assessment at the regional level (UNDP, 1990; UNDP, 2010).

In our opinion interesting is the study of T. Ivashchenko (2014), who argues that the calculation of the HDI makes it possible to determine the level of human development already achieved human development for a specific period of time and «the HDI does not take into account a number of factors which limit the development opportunities to subsequent generations» Ivashchenko (2014), depends on factors such as stability of generation reproduction and environmental stability.

Another attempt to improve HDI is presented at the Conference of European Statisticians «Affordable Human Development Index» in 2013. As a result of joint research by M. Peleah and A. Ivanov (2013) in Armenia, the index of sustainable human development has been developed.

Ukrainian scientists O. Vlasjuk (1995), in his own methodological approach to assessing human development, described in detail the main shortcomings of the international methodology: limited number of indicators; not taking into account negative indicators (destimulators) of human development; an urgent need to use qualitative characteristics in assessing human development.

The substantiated comments and reasonable arguments and also the inappropriateness of the application of human development index in calculating its value at the meso level motivate Ukrainian scientists to develop national methods. Further solid research in the direction of developing a national methodological approach was carried out by scientists of Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine under the leadership of Ella M. Libanova and with the participation of specialists of the State Statistics Service of Ukraine in 2000. The national methodology for measuring regional human development was updated in 2012 and was approved by the Resolution of the Joint Meeting of the Presidium of the National Academy of Science of Ukraine and the State Statistics Service of Ukraine, that confirms the high level of elaboration and practical importance of the methodology (Method of measuring regional human development, 2012).

Overall, the above results of the analysis presented by the developers of the methodological approaches to assessing human development indicate that the issue of security during its assessment is ignored. Although the topicality of human development security is objective and proved by scientists at the international level, it is still impossible to identify risks, threats, and hazards timely and prevent them; assessment of the real state of security and the level of human development losses (lost opportunities).

The formulation of the basic methodological guidelines for assessing the security of human development has continued throughout the last decade. Thus, scientist at U. S. Federal Government, David A. Hastings, the experts of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), as well as participants of the International Conference on GeoInformatics for Spatial-Infrastructure Development in Earth and Allied Sciences (GIS-IDEAS) have greatly contributed to the development of a methodology for assessing the integral index of human security, its practical calculation recommendations and worldwide dissemination.

The Human Security Index 2007–2008 (HSI) presented to the world public is a complex integral indicator, which includes the human development index and the «Social Fabric Index» (the last one introduced by D. Hastings, 2009). The Social Fabric Index attempts to describe the «social fabric» of a society, with the complex multi-stage calculation technology. Thus, in 2010, another (HSI Version 2), a substantially modified version of the index was proposed. The main value of the index is that in the calculation it includes food security and the system of indicators is regrouped according to the assessment of human security aspects proposed by UNDP in the Human Development Report (UNDP, 1994). The level of human security assessment has its own specificity. According to the author, developed by D. Hastings and a group of specialists of ESCAP and GIS-IDEAS, the human security index allows only to assess the level and identify the factors which threaten human security and the level of meet basic human needs (at the survival

level), that is, the index does not take into account the dynamic nature of the process and stability development.

So, the identified shortcomings of each of the methodological approaches relate mainly to the selection of indicators, their low informatively and quality when during assessing the level of human development or human security. The reasons for this may be either limited access to effective data quality for assessment of the processes, or too large data sets which causes confusion and lead to incorrect interpretations of the main trends and, as a result, erroneous decisions.

Undoubtedly, the process of human security development is dynamic, and the assessment procedure requires the availability of a large amount of data and information, their continuous updating in order to comprehensively determine the level of human security, taking into account its problematic aspects, priorities for the formation, identification of promising directions for development and further monitoring of the state. Thus, the study of the issue of appropriate analytical support becomes necessary in the conduct of a continuous effective assessment of the human development security and its aspects.

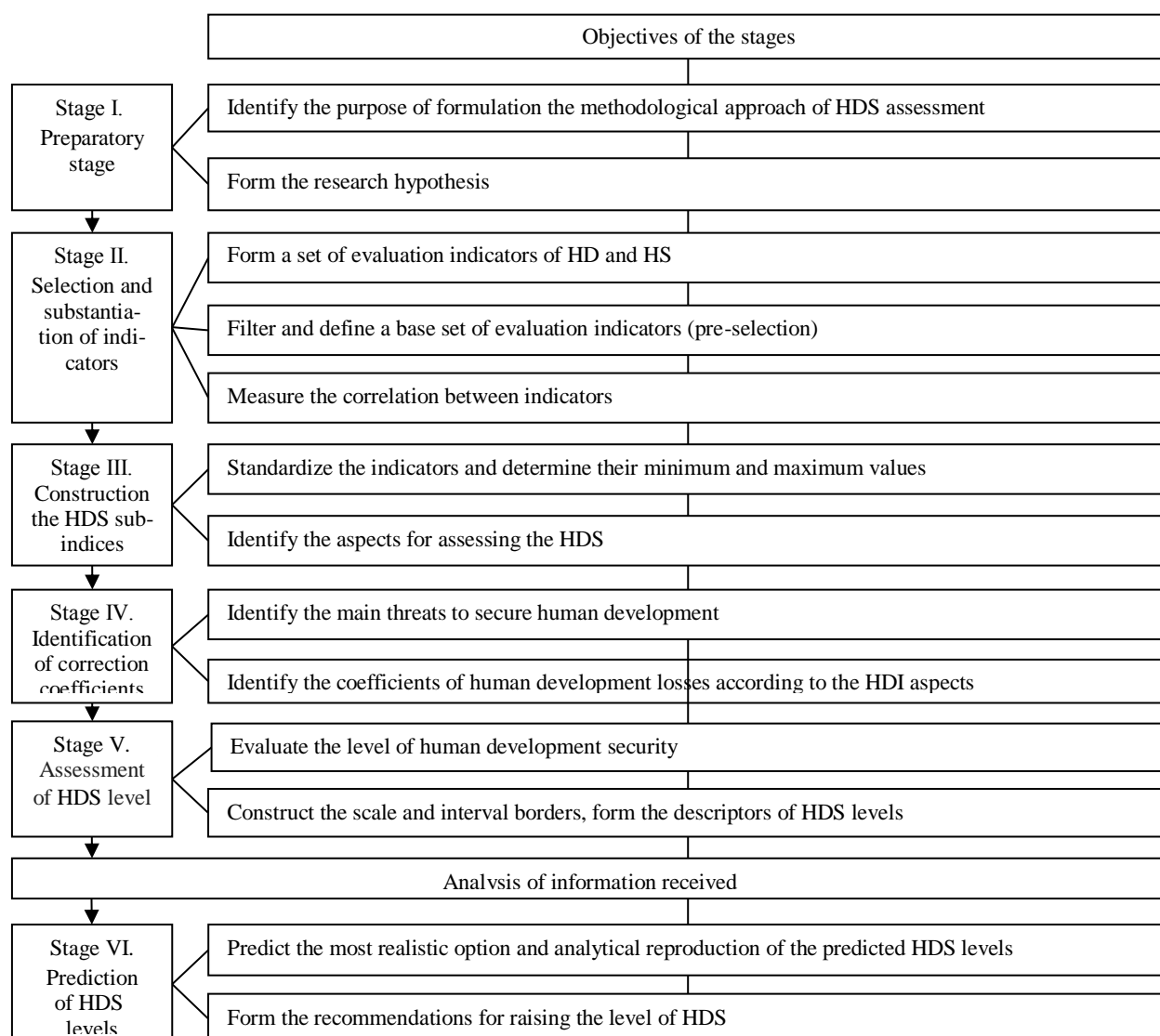
The development of a methodological approach to assessing the security of human development consists of several main interrelated stages (Figure 1). Let's consider each of the methodological approach stages in more detail.

The first stage of the given sequence implies the necessity of setting the purpose and formulating the hypothesis of the study.

The next stage provides for the selection and substantiation of indicators for HDS assessment. The main goal is to select the largest base of indicators that it is possible and worthwhile to involve in building an integral index of human development security in its aspects. For the final determination the quality of the indicators system, we need to form the data space and formalize the available indicators in order to use the economic and mathematical procedures (correlation analysis) for the selection of indicators.

The formation of general indicators (sub-indices) for each aspect of human development security (with a single method) is the third stage of the presented

methodological approach, which involves determining the parameters for calculating sub-indices using the mathematical and statistical methods.



**Fig. 1. Sequence in the formulation of a scientific and methodological approach to analytical support for assessing the security of human development**

The fourth stage is to identify the correction coefficients for each aspect of human development security. The implementation of this stage of the sequence involves the search and classification of factors that affect the security of human development, the identification of cause-effect relationships that influence the change of specific indicators of HDS using the heuristic methods of analysis and their formalization.



The next stage is the formation of an integral HDS indicator, which consists of all sub-indices and correction coefficients.

According to the results of the analysis, the necessary conclusions will be drawn regarding the level of the HDSI of a certain region, the identification of region's «weaknesses».

**Conclusions.** Summing up the above, the lack of a methodology for measuring the security of human development have objectively increased the researches in the direction of developing an approach to assessing the human development security and formulating a comprehensive analytical support for its implementation, which involves its problematic aspects, formation priorities, and identifying promising directions of development.

Based on the results of the critical analysis of existing methodological approaches of human development and human security assessment, it was possible to identify the main disadvantages of measuring these processes, which mainly relate to the selection of indicators, their low informatively and quality. Consequently, the consideration of the positive and negative factors of the methods for assessing human development and human security has allowed us to formulate a sequence to develop a scientific and methodological approach to analytical support for the assessment of human development security. Thus, the prospects for further research is the implementation of a methodical approach to analytical support for the assessment of human development security in practice.

The particular value of a methodological approach to analytical support for assessing the security of human development lies in taken into consideration the aspect of security that allows assessing the level and identifying the factors which threaten human development and the level of meet basic human needs (that is not only at the survival level but at development). And the powerful analytical support will allow us to take into account the dynamic nature of the process of human development security and predict the most realistic option of the HDS.

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#### **Бібліографічний опис для цитування :**

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