The Central Research institute
of the Armed Forces of Ukraine

Military Science. Vol. 2 No.4 (2024)

DOI: 10.62524/msj.2024.2.4.20

Procedure for Organising Forecasting of the Military-Political Situation as an Ensurance Element of the State National Security

Oleksiy Solomytskyi
Doctor of Military Sciences, Senior Researcher
Chief of Section
The Central Research Institute of the Armed Forces of Ukraine
03049, Povitrianykh Syl avenue, 28 B, Kyiv, Ukraine
e-mail: solosa1@gmail.com
ORCID: 0000-0001-8061-8895

Volodymyr Bashynskyi
Doctor of Technical Sciences, Professor
The Commandant of the State Scientific Research Institute
of Armament and Military Equipment Testing and Certification
State Scientific Research Institute of Armament and Military Equipment Testing and Certification
e-mail: dndivsovt@post.mil.gov.ua
ORCID: 0000-0003-0966-5714

Serhii Baranov
Head of the Main Directorate of the General Staff of the Armed Forces of Ukraine
General Staff of the Armed Forces of Ukraine
03168, Povitrianykh syl avenue, 6, Kyiv, Ukraine
e-mail: sharada3699@gmail.com
ORCID: 0000-0002-3306-943X

Polina Tolok
Candidate of Economic Science
Head of the Defence Management Department
The National Defence University of Ukraine
03049, Povitrianykh syl avenue, 28, Kyiv, Ukraine
e-mail: tolok100@meta.ua
ORCID: 0000-0002-2481-8152

Olha Taran
Senior Research Fellow
Millitary Institute of Armored Forces
of National Technical University Kharkiv Politehnic Institute
Kharkiv, Ukraine
e-mail: olgataran@ukr.net
ORCID: 0000-0002-9143-5821

Abstract. The relevance of the article is stipulated by the need to develop a formalized approach to the organization and conduct of the procedure for forecasting the military-political situation to ensure the stability of the results.

The article is aimed at outlining the procedure for organizing and conducting forecasting of

the military-political situation.

The procedure for organizing forecasting is developed considering the main provisions of the conceptual framework for forecasting the military-political situation and the cognitive-dynamic method of forecasting the military-political situation.

The article presents the main stages of developing a forecast of the military-political situation. A detailed description of each stage is given. Definitions of the terms "forecast option" and "forecast alternative" are proposed. The author raises the important issue of the frequency of forecasting the military-political situation. Considering the results of practical calculations, the author proposes a three-year forecasting cycle for the MPS, and its scheme.

To ensure the adequacy of the built models and the reliability of the developed forecasts, an approach to the organization of experts' work is proposed. It consists of five stages: selection of experts, assignment of forecasts, organizational and methodological preparation of forecast studies, conducting expert forecast studies, processing, and analysis of the results of forecast studies, and development of recommendations. Each of the stages is described in detail.

If implemented, the recommendations will allow for a more thorough organization of forecasting the military-political situation, make this process continuous and cyclical, and streamline the work of experts in developing forecasts, which will positively affect the reliability of the forecasts being developed. Areas for further research may include the development of recommendations on the procedure for forming conclusions based on the results of forecasting the military-political situation.

Keywords: military-political situation, military-political relations, forecasting, military security.

Introduction

In the 21st century, military security is no longer seen only in the preservation of state sovereignty and territorial integrity, as it was before. Now, in the context of globalization, it is necessary to protect national interests beyond the zone of territorial control and preserve national identity and value system. Supranational organizations with their own interests are being formed, and the value plane is changing. Military occupation and victory have ceased to be significant and the main goals in the military policy of states. In the modern system of military-political relations (MPR), the military-political situation in the regions has become purely individual. To achieve their goals, states use new military-political technologies that form a complex and dynamic military-political situation (MPS).

In this regard, it can be stated that the problem of analysing and forecasting the development of the MPS in the world and in the region is very important. The armed conflicts of the last decade have shown that there has been a turning point in MPS, and new potential threats have emerged. This may be due to global processes leading to further aggravation of the military and political situation.

However, it should be noted that there is still no unified approach to the organization of MPS assessment and forecasting. Such forecasts are often developed on an ad hoc basis, with some important stages of forecasting not being completed at all. That is why the development of a formalized approach to the organization of MPS forecasting is an urgent task.

Methodological Framework

The proposed procedure for MPS forecasting organizing is based on the main provisions of the conceptual framework for forecasting the military-political situation and the cognitive-dynamic method of forecasting the military-political situation [7].

Many works are devoted to the theoretical aspects of MPS assessment and forecasting, for

example, [1]-[4], [6], [8], [10]. However, the actual procedure for MPS forecasting organizing is not considered, which leads to a decrease in the reliability of the forecasts obtained, given the lack of cyclicity and situational nature of forecasting.

Results and Discussions

Taking into account the general theoretical provisions on MPS forecasting and the main provisions of the cognitive-dynamic method of MPS forecasting [7], the following procedure for organizing and conducting MPS forecasting is proposed (Fig. 1).

The main stages are, respectively:

- definition of the task of MPS forecasting;
- pre-prognostic analysis;
- research (search);
- programmatic (normative);
- organizational.

The task for MPS forecasting specifies the scope of the forecast, goals and objectives of the forecast, the lead time, the required confidence interval or the probability of the forecast being realized. The task also defines the procedure for developing the forecast. At the same time, experts with the required level of competence in the relevant areas are selected.

At the stage of pre-forecast analysis, the MPS is studied, indicators and factors of its development are identified. To identify the values of indicators and factors in the past, a forecast retrospective is conducted - a study of the history of MPS and MPR development and the forecast background to obtain a systematic description of them. The next task is to identify the structure of the mutual influence of indicators and factors. This task is solved within the framework of the prognostic diagnosis, which studies the systematic description of MPS and the prognostic background to identify the trend of their development and select (develop) prognostic models.

A prognostic model provides information about possible future states of MPS and/or ways and timing of their realization [7]. The forecast model determines the laws of MPS development and is based on the identification of interdependencies between factors and indicators on which MPS depend. It can be presented in the form of a verbal or mathematical description of the factors and their interaction, a table or graph showing these relationships.

Proceeding from the fact that the essence of MPS forecasting is the decomposition of complex military-political processes into hierarchical components with their subsequent evaluation and aggregation to obtain a forecast, the research (search) stage involves the analysis of the forecast model and forecasting experiments. A forecasting experiment is a study based on forecasting models by varying the characteristics of the forecasting object included in the model to identify possible acceptable and/or unacceptable forecast options and alternatives for the development of the forecasting object. As a result of the research, trends and scenarios of the forecasting object's development are identified.

In this case, development trends may be forecast options or forecast alternatives. A forecast option is one of the forecasts that make up a group of possible forecasts. A forecast alternative is one of the forecasts that make up a complete group of possible mutually exclusive forecasts.

The research stage of the forecast also identifies the key problems of the forecasted object's development under different scenarios.

At the programmatic (normative) stage of the forecast, the scenarios of the forecast object's development are specified and the key problems (goals) for the forecast period are selected. Then, the problem area is structured and priorities in solving the problems are identified. The main content of this stage is the formation of alternative ways of solving problems (achieving goals) and selection of the best (rational) ways from this list.

After the forecast is made, the verification of its search and regulatory parts is carried out. Forecast verification is an assessment of the reliability and accuracy or validity of a forecast. There are the following ways to verify forecasts:

- Direct verification - verification of a forecast by developing it using a different method than the original one.
- Indirect verification - verification of a forecast by comparing it with forecasts obtained from other sources of information.
- Inverse verification - verification of a forecast by checking the adequacy of the forecast model in the retrospective period.
- Consequential verification - verification of a forecast by analytical or logical derivation of a forecast from previously obtained forecasts.
- Re-survey verification - verification of the forecast by using additional justification or changing experts.
- Verification by an opponent - verification of the forecast by refuting the opponent's critical remarks on the forecast.

The described methods of verification refer to the a priori assessment of the forecast - the quality assessment immediately after its development before the end of the warning period. There is also an a posteriori assessment, which is an assessment of the accuracy and reliability of the forecast after the end of the warning period. It is performed by comparing the forecasted events with the events that occurred.

The last stage of the forecast is organizational. At this stage, a list of organizational measures to achieve the goals included in the best development paths (in accordance with the regulatory forecast) is formed: the timing of the implementation of the best ways to achieve the goal, the necessary resources, the composition of executors and a list of specific measures are specified. The effectiveness of the required development options is also assessed.

An important issue is the frequency of MPS forecasting. The unpredictable development of the political situation and crisis processes in the world significantly complicate, and in some cases make it impossible, to develop an objective long-term (12-year) MPS development forecast. It should be noted that the issue of justifying the frequency of forecasting the level of threats has received little attention, except for the statement that with its growth, the frequency should decrease. Usually, it is only emphasized that monitoring the level of military threat is a prerequisite for identifying its critical values and timely implementation of a set of political, diplomatic, economic, and military measures to prevent and contain military conflicts, but the essence of "permanence" is not formalized. Justifying the frequency of MPS forecasting can be considered a separate task. One approach is proposed in [9]. According to this approach, the threat with the shortest growth period is preliminarily determined, hence the frequency of the assessment should be less than the period of change of the dynamic threat itself. Considering this approach, it is advisable to conduct forecasting once every 3-6 years. At the same time, the optimal option is once every three years, given that destabilizing influences accompanying socio-political processes are usually characterized by relatively long-time intervals of emergence, accumulation, and attenuation, which makes them inertial over long time periods. The three-year cycle will allow us not to forecast MPS, but to limit ourselves to refining some estimates (characteristics).

To ensure the adequacy of the models built and the reliability of the forecasts developed, it is necessary to carefully organize the work of experts. When forecasting according to the above schemes (see Fig. 2), it is proposed to organize the work of experts as follows (Fig. 3).

Stage 1. Selection of experts: based on the method proposed in [5], considering the specifics of the forecast task and all additional conditions for conducting research, a group of experts (or one expert) is selected (with or without using formal procedures for assessing their competence and number).

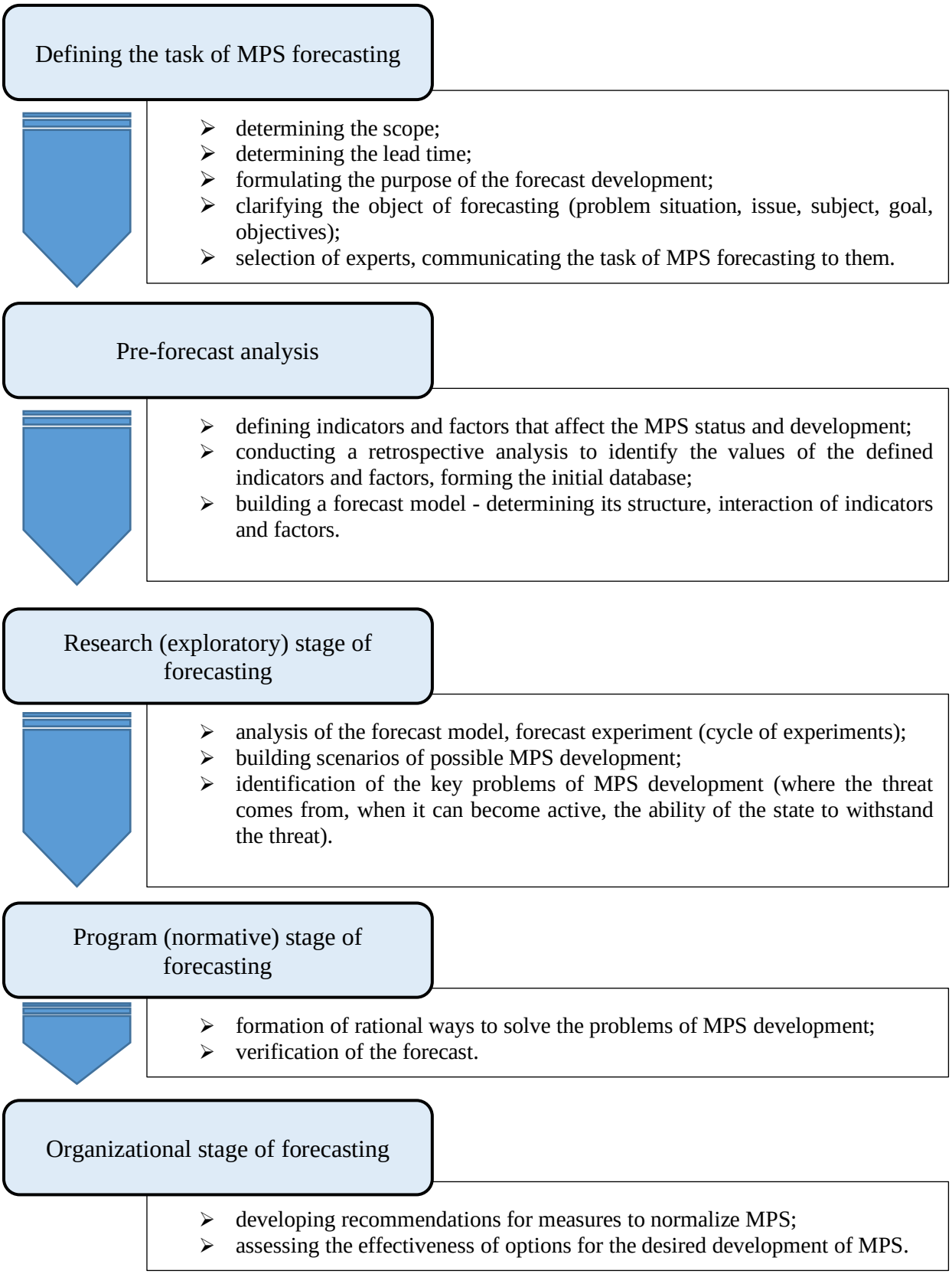


Figure 1. Main stages of MPS forecasting development

Stage 2. Forecasting tasks: we consider the characteristics of the forecast object, the required level of its detail, the possibility of experts using the information already available, specify the warning time (horizon forecasting), and the conditions of forecasting studies.

Stage 3. Organizational and methodological preparation of forecasting studies: in accordance with the tasks, conditions of forecast development and the chosen method, the form of work with experts is established, all organizational issues are resolved, and all methodological support for the studies is developed. Survey programs and survey documents are prepared.

Stage 4. Conducting expert forecasting studies: work with experts is carried out according to previously established procedures based on developed programs and survey documents.

Stage 5. Processing and analysing the results of forecasting studies and developing recommendations: based on the methodology developed in stage 3, which includes formal (quantitative) and informal procedures, the results of the examination are processed, a generalized opinion of the group of experts is formed, and a reasoned justification and assessment of the original individual judgments of experts is provided. Based on this analysis, forecast recommendations are made.

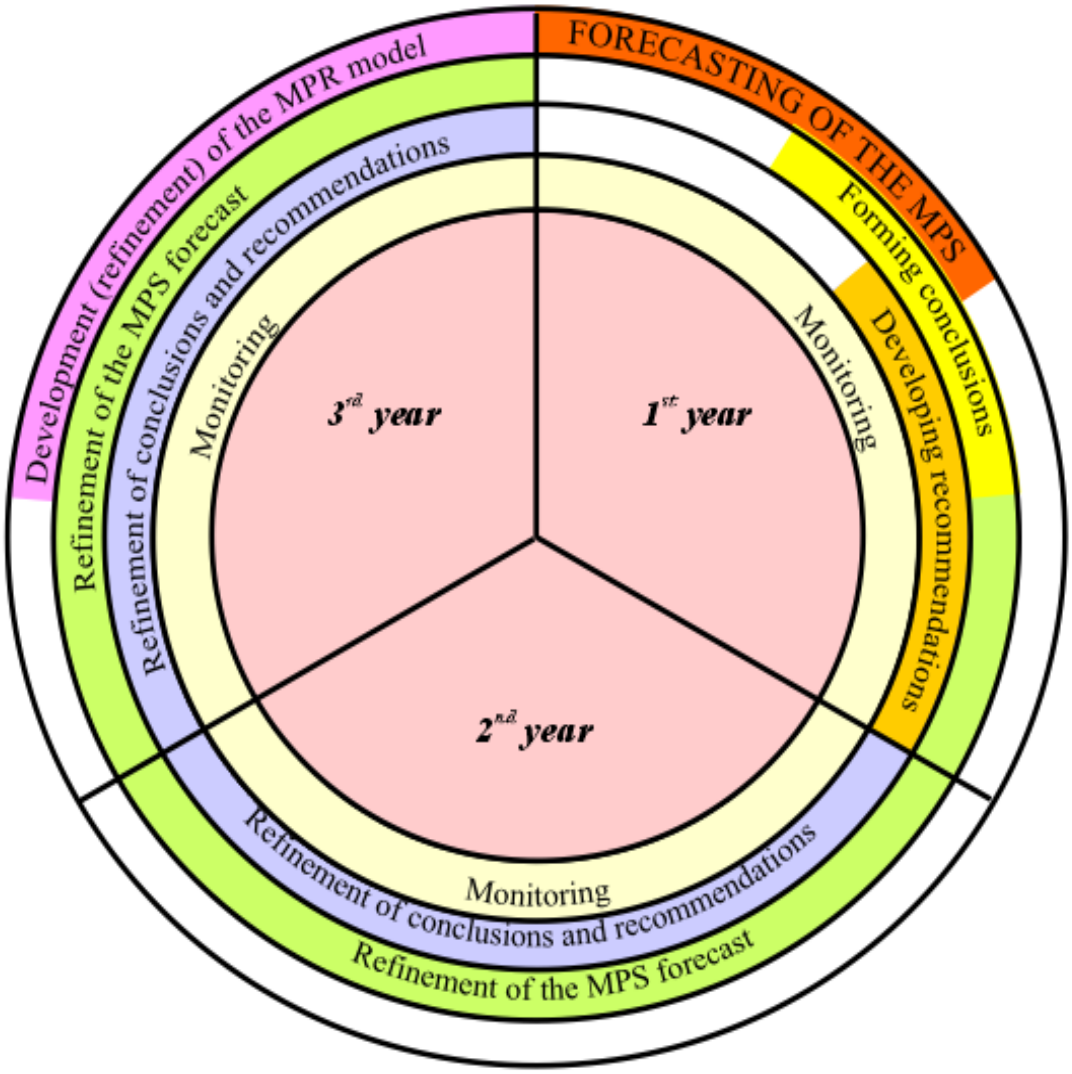


Figure 2. Schema of the MPS forecasting cycle

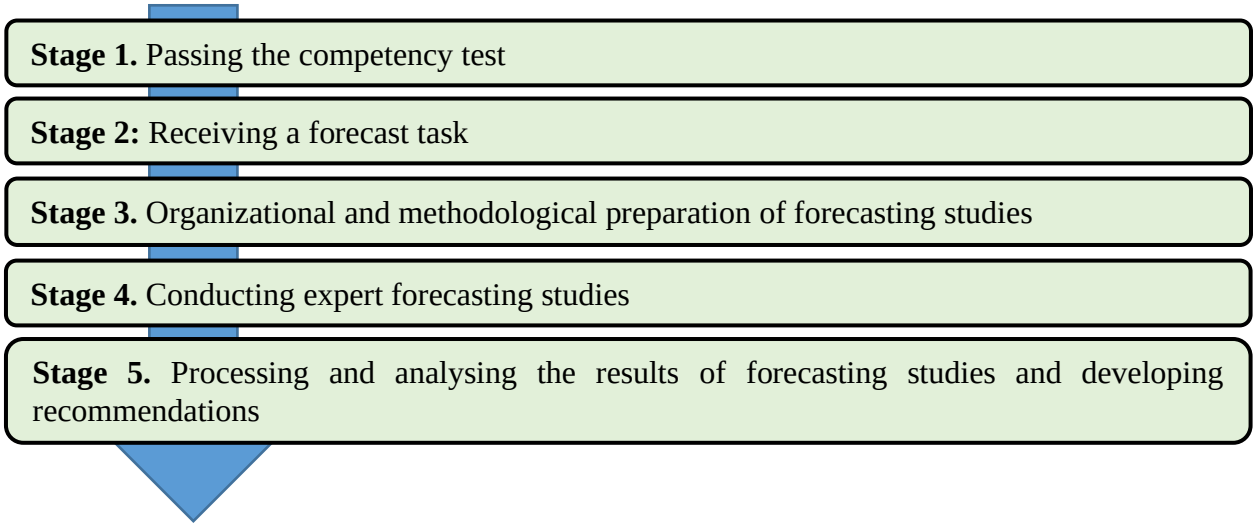


Figure 3. Procedure of experts' work during MPS forecasting

Conclusion

Thus, the proposed procedure for organizing the MPS forecasting process determines the general sequence of forecasting, the content of its stages and options for verifying the forecasting results, the frequency of forecasting and its cycle, which is designed for 3 years and determines the sequence of main activities during forecasting, the procedure for experts' work, which corresponds to the MPS forecasting procedure, and the content of each stage. If implemented, such a procedure will allow for a more thorough organization of MPS forecasting, make this process continuous and cyclical, and will streamline the work of experts in developing forecasts, which will positively affect the reliability of the forecasts being developed.

Areas for further research could include developing recommendations on the procedure for forming conclusions based on the results of forecasting the military-political situation.

Recommendations

The materials of the article can be used in the organization of MPS forecasting to prepare proposals for the formation and implementation of Ukraine's military policy. The article can also be useful for specialists of information and analytical services, scientists and analysts involved in the development of forecasts, elaboration and justification of state decisions in the military-political sphere, for teaching staff and students of higher military educational institutions.

References

1. Bogdanovych, V. Yu. (2020). *Development of new approaches to the integrated use of military and non-military forces and means of the security and defense sector to ensure the military security of Ukraine. Development of a methodological apparatus for forecasting the military-political situation*. Central Research Institute of the Armed Forces of Ukraine.
2. Bogdanovych, V. Yu., Romanchenko, I. S., Svyda, I. Y., & Syrotenko, A. M. (2019). *Methodology for the integrated use of military and non-military forces and means of the security and defense sector to counter modern threats to the military security of Ukraine: monograph.* NALF.
3. Bocharnikov, V. P., & Svyeshnikov, S. V. (2019). *Security environment 2030*. Master Books.
4. Gogonyants, S. Yu., Hrytsai, P. M., & Shapran, O. O. (2019). General provisions of the methodology for assessing the level of military threat based on taxonomic methods. *Modern Information Technologies in the Field of Security and Defens*e, *1* (34), 29–36.

5. Romanchenko, I. S., Butvin, B. L., Hvozd, V. I., & Solomytskyi, O. I. (2018). Methodical approach to assessing the competence of experts based on binary relations. *Collection of scientific papers of the Central Research Institute of the Armed Forces of Ukraine*, *3* (85), 5–14.
6. Romanchenko, I. S. (Ed.) (2021). *Fundamentals of military theoretical studies: new realities and technologies: a monograph*. NUOU.
7. Solomytskyi, O. I. (2020). *Development of the Theory and Practice of Forecasting the Military-Political Situation* [Doctoral Thesis in Military Science, Central Research Institute of the Armed Forces of Ukraine].
8. Svyda, I. Y. (2012). *Methodological bases of organization of functioning of the system of ensuring military security of Ukraine in the conditions of non-alignment* [Doctoral dissertation in Military Science, Central Research Institute of the Armed Forces of Ukraine].
9. Svyda, I. Y. (2009). *Substantiation of Recommendations for Assessing and Forecasting the Levels of Military Threat to the State* [Dissertation for Candidate of Military Sciences, Central Research Institute of the Armed Forces of Ukraine].
10. Stychynska, A. B. (2022). Military and Political Forecasting as a Condition for Ensuring the National Security of the State. Actual Problems of Politics. *Collection of scientific papers of the National University "OJSU", 69,* 101–107.

Порядок організації прогнозування воєнно-політичної обстановки, як елемент забезпечення національної безпеки держави

Олексій Соломицький
доктор військових наук, старший науковий співробітник
начальник відділу
Центральний науково-дослідний інститут Збройних Сил України
03049, проспект Повітряних Сил, 28 Б, Київ, Україна
e-mail: solosa1@gmail.com
ORCID: 0000-0001-8061-8895

Володимир Башинський
доктор технічних наук, професор
начальник Державного науково-дослідного інституту
випробувань і сертифікації озброєння та військової техніки
Державний науково-дослідний інститут
випробувань і сертифікації озброєння та військової техніки
e-mail: dndivsovt@post.mil.gov.ua
ORCID: 0000-0003-0966-5714

Сергій Баранов
начальник Головного управління Генерального штабу Збройних Сил України
Генеральний штаб Збройних Сил України
003168, проспект Повітряних Сил, 6, Київ, Україна
e-mail: sharada3699@gmail.com
ORCID: 0000-0002-3306-943X

Поліна Толок
кандидат економічних наук
начальник кафедри оборонного менеджменту
Національний університет оборони України
03049, проспект Повітряних Сил, 28, Київ, Україна
e-mail: tolok100@meta.ua
ORCID: 0000-0002-2481-8152

Ольга Таран
старший науковий співробітник
Військовий інститут танкових військ
Національного технічного університету «Харківський політехнічний інститут»
Харків,Україна
e-mail: olgataran@ukr.net
ORCID: 0000-0002-9143-5821

Анотація. Актуальність статті обумовлена необхідністю розроблення формалізованого підходу до організації та проведення процедури прогнозування воєнно-політичної обстановки для забезпечення стабільності отримання результатів.

Стаття спрямована на викладення порядку організації та проведення прогнозування воєнно-політичної обстановки.

Порядок організації прогнозування розроблений з урахуванням основних положень концептуальних основ прогнозування воєнно-політичної обстановки та когнітивно-динамічного методу прогнозування воєнно-політичної обстановки.

У статті наведені основні етапи розроблення прогнозу воєнно-політичної обстановки. Наданий детальний опис кожного етапу. Пропонуються визначення термінів “прогнозний варіант”, та “прогнозна альтернатива”. Підіймається важливе питання періодичності проведення прогнозування воєнно-політичної обстановки. З огляду на результати практичних розрахунків, пропонується цикл прогнозування ВПО розрахований на три роки, запропонована його схема.

Для забезпечення адекватності побудованих моделей та достовірності розроблених прогнозів запропонований підхід до організації роботи експертів. Він складається з п’яти етапів: добір експертів, завдання на прогноз, організаційна й методична підготовка прогнозних досліджень, проведення експертних прогнозних досліджень, оброблення й аналіз результатів прогнозних досліджень а також вироблення рекомендацій. Кожний з етапів детально описаний.

У разі втілення рекомендації дозволять більш ґрунтовно організувати прогнозування воєнно-політичної обстановки, зробити цей процес безперервним та циклічним, а також дозволять впорядкувати роботу експертів під час розроблення прогнозів, що позитивно вплине на достовірність прогнозу, що розроблятиметься. Напрямами подальших досліджень може бути розроблення рекомендацій щодо порядку формування висновків за результатами прогнозування воєнно-політичної обстановки.

Ключові слова: воєнно-політична обстановка, військово-політичні відносини, прогнозування, воєнна безпека.