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Armed Forces of Ukraine's mission and vision

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Abstract. The article's relevance is determined by the need to define how the Armed Forces of Ukraine, as part of the Defence Forces of Ukraine, will operate in the future security environment to deter a potential enemy, namely the russian federation.

Based on the future security environment analysis at the global and regional levels, it is identified that the main players in the world will be the United States of America and China, which will continue to form a world's bipolar order system. At the regional level, in particular on the European continent, the EU's countries main efforts will be focused on developing their own armed forces' capabilities and finding mechanisms to counteract the russian federation's "hybrid actions". At the meantime, military actions in future military conflicts will be carried out in a multi-domain operational environment with

the use of various high-precision "smart" weapons systems of wide range applications, robotic and unmanned assets for conducting armed struggle on air, above-water (underwater), space and land combat platforms. Based on the security environment analysis and the nature of future military operations, there have been identified the main directions of science and technology development for the production of the latest systems, complexes and armaments samples, military and special equipment, as well as requirements for them. The article's materials are of practical importance for specialists responsible for the defence planning documents development, namely, the Joint Operational Concept, the Strategy for the Development of the Armed Forces of Ukraine and the branches and separate services of the armed forces.

Keywords: vision, mission, multi-domain operation.

Introduction

Ukraine may face a renewed threat of military force from the russian federation in the future. And then the question arises as to how, taking into account the changes in the future security environment, the character of warfare in future military conflicts and limited resources, the Armed Forces of Ukraine (AFU) should operate as part of the state defence forces to deter a potential aggressor.

The main principles for achieving the goal of preventing a military conflict and deterring the enemy from launching a renewed armed aggression against Ukraine are set out in the guiding documents on defence planning, namely the Strategy for the Development of the Armed Forces of Ukraine until 2035, the Joint Operational Concept, and the Vision of the General Staff of the Armed Forces of Ukraine on the Development of the Armed Forces of Ukraine for the next 10 years (General Staff of the Armed Forces of Ukraine's Vision for the Development of the Armed Forces of Ukraine for the Next 10 Years, 2020). One of the main principles of these documents is the purpose (mission) and the general vision and guidelines for the development of the Armed Forces of Ukraine (vision) to achieve the goal in future military conflicts.

Many countries-partners pay sufficient attention to defining their armed forces' purpose and determining their development in the future. The analysis results of the views on the armed forces mission and vision of the world's leading countries are presented in Table 1.

Table 1. World's leading countries' mission and vision

Document	Mission	Vision
Army Doctrine Publication 1 Headquarters Department of the Army (Army Doctrine Publication 1, 2019)	The United States Army's mission is to fight and win. .	. . . the key to this success is the American soldier's skill and courage, his leaders' quality, his equipment's superiority, and the army's ability to adapt and dominate in a challenging operational environment. . .
Defence in a competitive age, March 2021 (Defence in a competitive age, 2021)	The UK's defence policy is based on the armed forces ensuring a credible nuclear and conventional deterrent	The Integrated Operational Concept's implementation will allow the Ministry of Defence to continue fulfilling many of the tasks we have traditionally performed. We will develop a new doctrine, new working methods, new capabilities and new partners to deter and restrain our enemies in the grey zone between peace and conflict

Continuation of the table 1. World's leading countries' mission and vision

Document	Mission	Vision
Israel's National Security Doctrine (How Israel ensures the country's defence and security with the help of special forces, 2021)	The Israel Defence Forces' mission is to "defend the existence, territorial integrity and sovereignty of the State of Israel"	Israel's top military and political leadership assumes that the state cannot afford to have a large army in peacetime, nor can it participate in full-scale combat operations for a long time. Considering the above, the Israel Defence Forces must always have a qualitative advantage over a possible enemy by: adopting the most modern military equipment; implementing a more advanced command and control system; maintaining an effective mobilisation mechanism and a high level of personnel training (including the reserve)
Turkish Armed Forces (TSK) 2033 Vision (Türkiye's geopolitical and security plans and Ukraine's place in them, 2024)	The Turkish Armed Forces are designed to defend a state's freedom, independence and territorial integrity	To create a highly mobile army equipped with the most modern weapons and equipment and intended primarily for participation in regional conflicts

At the same time, the changing security environment, science and technology development, and the emergence of new armed conflict forms and methods require constant adjustment and improvement of the main defence planning documents.

Methodological Framework

Based on the security environment analysis, new trends in armed warfare and prospective directions of military science and technology development, and taking into account the russian-Ukrainian war experience, to shape the Armed Forces of Ukraine mission and vision for the Armed Forces of Ukraine Development Strategy until 2035.

Results and Discussions

The future security environment in the world and on the European continent will be challenging, unpredictable and unstable. russia's war against Ukraine has shown the inability of international security organisations and blocs (alliances) to ensure peace and security in the region. At the strategic level, the formation the bipolar world order system will continue. The main players in this process will be the United States and China, which will try to expand their influence in the world, form alliances and seek for allies (satellites). The main competition between these centres of influence will take place in the economic sphere, characterised by increased defence spending and increased military potential, especially in high-tech weapons production.

The North Atlantic Alliance will be the only effective system of collective defence and will continue to increase defence spending and finance programmes for the development and re-equipment of its armed forces. The greatest threat to NATO will be the russian federation. At the same time, China will be considered by the Alliance as a challenge to the interests, security and values of the organisation. NATO's priority will be to strengthen the defence capabilities of the Alliance's eastern flank. The EU, together with NATO, will focus on developing defence capabilities to neutralise threats in the region, including with the Ukraine's participation. The main threat to NATO

and the EU will remain the russian federation, which will continue to be an obstacle to Ukraine's European choice realisation and its path to NATO. The russian federation will continue to use various forms and methods of influence on Ukraine, namely energy terror, information warfare, cyberattacks on critical infrastructure, religious confrontation and other unconventional aggression methods. The Swiss Federal Intelligence Service's report "Swiss Security 2023" and the German Federal Office for the Constitutional Protection (Western countries' intelligence on the current security environment, 2023) highlight the "hybrid influence" trends, including the spread of disinformation, forming public opinion and political discourse in their favour, influencing political decision-making, undermining public confidence in democratic institutions and mechanisms with the active use of social media, influence agents and pro-russian activists. There is a rather high risk that the russian federation will continue its military expansion against Ukraine and Eastern Europe in the future.

It is worth noting that all players on the European continent will increase their armed forces' capabilities primarily by deploying modern weapons, increasing the number of land- and sea-based high-precision weapons platforms (including nuclear powered ones). In future military conflicts, the opposing parties will try to minimise direct personnel contact on the battlefield, destroy or disable enemy forces and assets at long distances long before the direct combat engagement. This is expected to involve the widespread combined use of highly precision "smart" weapons systems for a wide range of applications, the use of robotic and unmanned warfare systems on air, overwater (underwater), space and land combat platforms, which will ensure the tasks' fulfilment in difficult operational conditions with minimal risk to personnel's lives: missile and air defence systems, strategic electronic warfare, hypersonic, high-precision, electromagnetic, laser, infrasound weapons. At the same time, as the military conflict grows in scale, the difficulty of achieving minimal direct combat engagements will increase significantly. According to the analysts' opinion (Ivashchenko, Hordiichuk, Andriianova, 2022), military operations will be conducted in a multi-domain operational environment. Partner states are now actively developing the multi-domain operations concept as an option to countermeasure an aggressor whose potential far exceeds that of its' aggression victim (Army Unified Network Plan 2021, 2021; Army Futures Command Concept for Manoeuvre in Multi-Domain Operations 2028, 2020; Multi-Domain Operations: Future of Conflicts, 2021). Warfare's new methods will be driven by the availability of new weapons, military and special equipment, long-range precision weapons, various intelligence assets and long-range reconnaissance capabilities.

The main directions of science and technology development for the manufacture of the latest systems, complexes and armaments samples, military and special equipment are as follows:

Artificial intelligence. Recent years have seen a surge in artificial intelligence systems' development. There have already been a revolutionary number of breakthroughs. In particular, the implementation of artificial intelligence in military systems, which is already underway and will continue to spread, will radically change the course of warfare.

Robotisation. Development analysis of the latest defence technologies shows that autonomy technology is actively evolving. Over the past ten years, unmanned systems have become common tools employed in conflicts, including the war with the russian federation. In the future, robots and "swarm" systems will perform tasks that are currently considered too risky, complex or even impossible for humans to perform. They are likely to change the way we conduct operations (warfare) in the future. That is why, in order to strengthen the defence capability, the President of Ukraine has made a decision to create a separate branch of forces, namely the Unmanned Systems Forces of the Armed Forces of Ukraine (Decree of the President (51/2024), 2024).

Quantum communications. Quantum communications will have a dramatic impact on improving the communication channels' security. This technology blocks any hacking attempts. It guarantees the information storage and communication channels invulnerability. This is especially important in the military, where the information security affects the successful mission execution or even the operation.

Innovative substances and materials. Scientific and technological progress makes it possible to create fundamentally new materials and substances: ultra-strong and ultra-light, with programmable properties. In particular, these are composite polymers and the most promising area - additive materials. They can be used to synthesise and build up objects of various shapes and purposes in layers.

Cyberweapons. Cyber warfare has already become a reality. In the future, the struggle in the information space will only intensify. The use of artificial intelligence and machine learning will create a new generation of cyber weapons that can adapt and evolve to overcome defences. It will paralyse the enemy's critical infrastructure, destabilise political systems, and disrupt economic stability.

Nanotechnology. The development and implementation of nanotechnology in the military sphere will allow the creation of materials for secrecy and object protection, adaptive camouflage, as well as self-healing materials that will automatically repair damaged surfaces and structures.

It is clear that the list of promising technologies is not limited to the mentioned ones, but from a military point of view, they are among the most important.

As for the requirements for armaments and military equipment samples, the following can be highlighted by:

creation of new high-precision weapons and their increased range;

Increasing the strike force's firepower and munitions' combat power;

use of aerospace systems to solve the problems of collecting and processing remote Earth sensing data, control, navigation and direct targeting;

Increasing the special equipment role, first of all, reconnaissance, electronic warfare, communications and automated command and control;

creation of robotic, autonomous and remotely controlled models and systems of armaments, military and special equipment;

development of neurocomputer technologies and neural networks, which are adaptive systems for data processing, intellectual analysis and forecasting;

development and application of armaments samples, military and special equipment based on non-traditional (including non-lethal) operating principles;

development of highly efficient medium and long-range vehicles for the purpose of operational troops (forces) mobility;

Increasing the armaments protection, military and special equipment, infrastructure facilities from damage by conventional weapons and mass electromagnetic destruction weapons;

improving the reliability, effectiveness of the use and simplification of the maintenance of armaments, military and special equipment, ensuring their seasonal and round-the-clock operation;

improving the ability to record, store, generate and analyse large amounts of data.

All these components, namely the security environment, new trends in armed conflict and promising areas of military science and technology development, require clarification of the Armed Forces of Ukraine's mission and vision in the future.

According to the Constitution of Ukraine, the Armed Forces of Ukraine are a military formation entrusted with the defence of Ukraine, protection of its sovereignty, territorial integrity and inviolability. Thus, this will be relevant in the future, and **the Armed Forces of Ukraine's Mission will be** to deter and repel armed aggression against Ukraine, protect the state's airspace and underwater space within the territorial sea of Ukraine. In cases determined by law, the Armed Forces of Ukraine will participate in activities aimed at counter-terrorism, peace and security support within the framework of regional and international security organisations' efforts.

The Armed Forces of Ukraine's Vision aims to formulate a general vision and intentions, define the guidelines for the capabilities development of the Armed Forces of Ukraine in a whole and of the branches and individual arms (forces), as well as their activities for the next 10-15 years.

The main directions of the Armed Forces of Ukraine's capabilities development will be as follows:

To ensure the reliable defence of Ukraine, protection its sovereignty, territorial integrity and inviolability, the main priority for development will be granted to the Special Operations Forces, the Unmanned Systems Forces, the Missile and Artillery Forces and Army Aviation of the Land Forces, the Anti-Aircraft Missile Forces of the Air Forces and the Coastal Missile and Artillery Forces of the Navy of the Armed Forces of Ukraine, the Medical Forces and the Logistics Forces.

In the long term perspective, increasing the combat capabilities of the Armed Forces of Ukraine as a whole, the development of these particular branches and individual arms (forces) is the most important.

The foundation for building the Armed Forces of Ukraine as part of the defence forces will be operational adaptability, interoperability and cross-domain synergy of their components, which will provide the capabilities necessary to fulfil the state defence tasks to form an operational environment and effectively respond to a wide range of tasks and changing threats and situations with the help of relevant flexible and operational forces and assets, freedom of action, the ability to act jointly, effectively and efficiently as part of the joint troops (forces) groupings and use their capabilities in different domains in such a way that each of them will increase efficiency and compensate for the vulnerabilities of others to establish an advantage over the enemy.

The Armed Forces of Ukraine's composition, structure and size, and the capabilities they have gained will ensure activities in several operational environment domains, the ability to effectively oppose the enemy, quickly create the necessary joint force groupings with sufficient control, manoeuvrability and appropriate firepower to destroy the enemy, who has an advantage, in the fluid conditions of the future multi-domain operational environment, in particular:

the land component would ensure the decisive universal, sustainable power of the defence forces for rapid and long-term combat operations to destroy the enemy's land forces and defend the state's land territory by fulfilling a wide range of tasks in interaction with other defence forces components in the air, sea, space and cyber domains, supporting strategic and operational mobility, fire, close air support and other capabilities with such main forces and assets as mechanised and tank units, missile forces and artillery, air defence, army aviation, communications, intelligence, electronic warfare, logistics and medical support, chemical, biological, radiological, nuclear defence, engineering, geoinformation and hydrometeorological support;

the air component would ensure gaining air superiority, isolating warfare zones (areas), defeating its reserves, destroying munitions stockpiles and other material and technical assets, and complicating logistics through the widespread use of precision-guided and self-guided weapons, reconnaissance and reconnaissance-strike systems, unmanned combat robotic weapons systems to cause continuous fire damage to the enemy at the depth of its location;

the maritime component would ensure that the state maintains control over the sea within the internationally recognised boundaries of internal waters, the territorial sea, as well as its exclusive (maritime) economic zone and continental shelf, and the prohibition of such control by the enemy through joint measures of air defence, anti-missile, anti-boat and anti-submarine defence, mine and anti-mine operations, electronic warfare, missile strikes, artillery fire, use of above- and underwater unmanned systems, sea (river) assaults, conducting specific actions on the sea surface, in underwater space and above the sea;

the cyber component would ensure the operational reliability and security of the forces and weapons command and control systems, institutions, organisations and objects of the defence forces and would contribute to gaining an advantage over the enemy in other operational environment domains.

The Armed Forces of Ukraine's components would include an optimised and functional-balanced number of military command and control bodies, formations, military divisions, units,

institutions and organisations, which, depending on the timeframe for readiness to fulfil their tasks, would have an appropriate combat readiness level.

The Land Forces of the Armed Forces of Ukraine will continue to develop in such a way they could conduct joint operations and use combat systems in a comprehensive manner.

The Land Forces' armaments and military equipment will be developing with regard to the experience gained in combat actions, requirements for units' high manoeuvrability, autonomy of their actions, and enemy long-range firepower with precision weapons systems, the main delivery vehicles of which will be missile forces, artillery and land robotic systems.

The Air Forces of the Armed Forces of Ukraine will be developing in order to ensure the most secure protection of Ukraine's airspace, covering particularly important objects on the territory of Ukraine, and, most importantly, covering forces groupings during the operations.

Alert systems for warning forces of an air attack should be connected with similar partner countries' systems, integrated with them into a single system, and based on early detection of the air enemy while it is still operating at military sites.

Priority in armaments and military equipment development of the Air Force will be given to joint production with partners, procurement of new and modernisation of existing samples, and improvement of the air defence system's firepower and unmanned aerial systems.

The Navy of the Armed Forces of Ukraine will be developing to ensure the defence of Ukraine from the sea, the most reliable underwater space protection, and support for land forces groupings.

Priority in the Navy's development will be given to surface forces, coastal missile and artillery forces, and maritime unmanned systems. A sufficient number of high-armed, manoeuvrable boats and ships will be provided through the ship and boat depot construction and the procurement of such models from our partners.

The Navy will be equipped with a sufficient number of modern missile systems and maritime unmanned systems to strike enemy ships at sea. The availability of modern air defence systems in the Navy will ensure the reliability of striking the enemy from the sea direction.

The Air Assault Forces of the Armed Forces of Ukraine will be developing for rapid deployment to cover (defence) individual directions (areas), conduct offensive (assault) operations and conduct combat operations in its rear.

They would be characterised by high mobility, the ability to quickly achieve certain areas and frontiers, independently fulfil tasks in difficult conditions, in any direction, and a high level of training, motivation and combat spirit.

The airborne assault troops will be deployed depending on the situation as part of a force grouping in a particular direction or as brigades within force groupings.

The Special Operations Forces of the Armed Forces of Ukraine will be developing to respond asymmetrically to existing and potential threats to the state's security by organising and supporting resistance movement actions, conducting military informational and psychological operations in a hostile environment against an enemy with a number superiority in order to reduce its capabilities, and fighting terrorism and piracy.

The unmanned systems forces will be developing in order to preserve human resources through the measures system implementation by means of widespread application of unmanned (crewless) systems and artificial intelligence:

in the land domain, unmanned systems used to strike the enemy, transportation, mining, logistics and other tasks on the battlefield. In case of a shift to the long-term positional warfare format, the direction of underground digging drones will be developing, which will be able to reach enemy positions under the surface invisibly for the subsequent mining and destruction purposes, as well as counter assets against them;

in the air domain, the comprehensive use of unmanned aerial vehicles equipped with high-precision weapons. Expanding the practice of manned and unmanned aerial vehicle systems integrated use, including "swarm" tactics with a large number of smaller drones;

in the maritime domain, in future military actions, large-scale use of unmanned maritime systems, particularly autonomous reconnaissance, strike, anti-aircraft, anti-mine and other special underwater and above-water (semi-submersible) vehicles;

in cyberspace, the main targets of cyber attacks will remain state information resources, information and communication systems of government authorities and military command bodies, force and weapons' command and control systems, robotic and unmanned platforms, as well as data processing centres and the communication infrastructure that ensures their operation. Including, but not limited to, cyber assets, there would be extensive use of electronic warfare assets to disrupt reconnaissance, signalling and communication systems' assets, and to disable unmanned systems and weapons control systems.

The Logistics Forces of the Armed Forces of Ukraine will be developing to fulfil the logistics support tasks for the daily activities of the Armed Forces of Ukraine and defence forces' strategic activities.

The Logistics Forces of the Armed Forces of Ukraine, as a rationally organised and extensive system, will gain the ability to:

guaranteed fulfilment of the logistics support tasks for the state's defence forces;

meeting the need for armaments, military and special equipment, material and technical assets, works and services, defence forces military transportation ((transportation);

maintenance of armaments and military equipment strategic stocks and material and technical assets;

ensuring the engineering and infrastructure needs of the troops (forces);

compatibility with NATO member states' military logistics units (institutions).

The Medical, Support, Communications and Cybersecurity Forces will further gain the capability to support troops (forces) activities during multi-branch, multi-agency joint operations.

The realisation of these principles will allow to create the Armed Forces of Ukraine, which will be able to:

ensure successful aggressor deterrence, prevent military crises, conduct state armed defence, protect its sovereignty, territorial integrity and inviolability;

achieve NATO membership criteria and to participate in multinational operations.

Conclusion

This article presents the author's view on the Armed Forces of Ukraine's mission and vision. It is based on the analysis of: the future security environment, both in the world and on the European continent; the future military operations' nature; the main directions of science and technology development for the manufacture of the latest systems, complexes and weapons samples, military and special equipment, as well as requirements to them.

The Unmanned Systems Forces of the Armed Forces of Ukraine's mission and vision are presented separately from the existing branches and individual arms (forces).

Recommendations

The research results can be used in the Development Strategy of the Armed Forces of Ukraine until 2035 elaboration and serve as a basis for branches and individual arms (forces) missions and visions development. The article may be useful for specialists in defence planning, researchers and analysts involved in the development and justification of state decisions on the Armed Forces of Ukraine's development.

References

1. *General Staff of the Armed Forces of Ukraine's Vision for the Development of the Armed Forces of Ukraine for the Next 10 Years*. (2020). https://www.mil.gov.ua/special/news.html?article=55107.
2. *Army Doctrine Publication 1 Headquarters Department of the Army Washington, D.C*. (2019).
3. Defence in a competitive age. Presented to Parliament by the Secretary of State for Defence by Command of Her Majesty. (2021).
4. *How Israel ensures the country's defence and security with the help of special forces.* Ч.1. (2021). https://defence-ua.com/army_and_war/jak_izrajil_zabezpechuje_oboronu_ta_bezpeku _krajini_za_dopomogoju_spetspriznachentsiv_ch1-4062.html
5. *Türkiye's geopolitical and security plans and Ukraine's place in them.* (2024). https://defence-ua.com/army_and_war/geopolitichni_ta_bezpekoviplani_turechchini_ta mistse_v_nih_dlja_ukrajini-5563.html
6. *Western countries' intelligence on the current security environment*. (2023). https://armyinform.com.ua/2023/07/25/rozvidky-zahidnyh-krayin-pro-potochne-bezpekove-seredovyshhe/
7. Ivashchenko, A. M., Hordiichuk, V. V., & Andriianova, N. M. (2022). The Multi-Domain Operations Concept and its application by the Defence Forces. *Collection of scientific works of the MSRC, 3* (76), 62–67.
8. *Army Unified Network Plan 2021*. (2021). Enabling multi-domain operations.
9. *Army Futures Command Concept for Manoeuvre in Multi-Domain Operations 2028*. (2028). AFC Pam 71-20-1.
10. *Multi-Domain Operations: Future of Conflicts.* Annual Seminar. (2021). CLAWS.
11. President of Ukraine. (2024). *About increasing the capabilities of the defence forces. Decree of the President* (51/2024).