MINISTRY OF NATIONAL DEFENCE

DEPARTMENT OF TRANSFORMATION

VISION OF THE POLISH ARMED FORCES 2030

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INTRODUCTORY WORD BY THE MINISTER OF NATIONAL DEFENCE

A modern, strong and well-developed, in terms of the civilisation advancement, Poland must also comprise modern armed forces. It is our ambition to ensure that the Polish Army may join the most up-to-date European armies. We aim at developing and equipping our forces so as their efficiency, mobility, interoperability, and most of all the ability to effectively operate, build citizens' sense of security, contribute to a higher level of the collective security within the European Union and the NATO, as well as form basis for the Poland's position on the international stage. Only professional armed forces, which have an effective system for implementing innovations and ability to quickly adapt to changing environment, shall be truly able to face challenges of the future.

Prospects for a stable geopolitical situation of Poland on one hand and good economic conditions on the other hand create exceptional possibilities to develop armed forces in the decades to come. This is also an exceptional chance to make up for the distance between the Polish Army and standards in the leading NATO and EU countries. Yet, to achieve this it is necessary to intensify changes the armed forces are currently undergoing, and to convert them into an ambitious transformation programme which shall turn the Polish Army into a modern and efficient instrument of the state security policy. However, there are no lasting achievements without careful preparations, without taking decisive actions and responsibility for them. Preparation of a long-term vision of the armed forces as an integral and extremely important element of the system of strategic planning of their development is an essential step towards their comprehensive transformation.

I am deeply convinced that the "Vision of the Polish Armed Forces 2030" shall play a major role in this process. I also believe that it shall become a factor integrating the political circles, public opinion, commanding personnel, military experts and scientific centres, and mobilising them to launch a broad debate on the vision of the development of the Polish Army.

Bogdan KLICH

INTRODUCTORY WORD BY THE DIRECTOR OF THE DEPARTMENT OF TRANSFORMATION

Transformation of the Polish Armed Forces is a complex and dynamic process having its implications for soldiers, structure and organisation, equipment and technologies, as well as rules governing military operations. Due to its complexity, range of costs, consequences and risk, the transformation must be an organised and long-term activity basing on objectively defined future which covers, inter alia, a complex vision of the new quality of the armed forces.

The need to develop a vision of the Polish Armed Forces covering two or three decades has been for many years formulated by military practitioners and theorists, as well as experts involved in the defence issues, since it is a necessary element of a rational and multi-stage defence planning constituting the main instrument of the defence policy.

"Vision of the Polish Armed Forces 2030", as developed by the Department of Transformation, is the starting point for long-term planning of the military development in multi-annual horizon. Furthermore, it creates conditions necessary to implement and program development of the armed forces in shorter time scales. According to the adopted assumptions, the "Vision" should act as a guarantee of the coherence and unity of the aim and direction of undertaken actions, as well as help to specify in detail range, scope and depth of changes. Apart from typically practical and planning usage, the "Vision" aim is to popularise strategic thinking about the future and treating the planning process as a rational basis for shaping the future in strategic categories. The "Vision" should also become a starting point for a broad discussion on directions of the Polish Army development in the next decades of the 21st century. The discussion should involve political and military circles, as well as the public opinion. We hope that it will unfold and deliver expected results.

The "Vision" outlines a desired shape of the Polish Armed Forces within more than next 20 years, taking into account possible conditions for their development. I wish to underline in this place that the document is not a forecast. Its mission is to delineate the horizon of ambitions. The "Vision" generally describes the functional structure of the future armed forces and the basic features of their individual constituents. Furthermore, the "Vision"

also contains a set of potential operational abilities necessary for the army to rise to future challenges. On the other hand, the “Vision” may not be understood as a recipe or a collection of ready-made solutions concerning organisational structures, manpower of the army or basic weapon systems. Taking into account the complexity and unknown of even the nearest future, any attempts to determine details for the next two or three decades would be a risky or even a dangerous move.

Content of the “Vision” is a combination of the knowledge, experience and imagination, as well as our aspirations and expectations. It takes into account conclusions stemming from the analysis of main trends determining geo-strategic environment, directions of technological progress and innovations, as well as threats and opportunities resulting therefrom. When constructing the vision of our military forces, we also took into account development trends appearing in armies of other states, conclusions obtained through the analysis of similar documents prepared and published by the NATO and the European Union, as well as expert opinions issued by different national and foreign institutions. Theses of the “Vision” have been subject to both intra-ministerial and inter-ministerial consultations. They were also discussed during a conference in which representatives of political, academic and military circles took part.

Implementation of the assumptions contained in the “Vision” will allow us to create professional armed forces of a universal and modular nature, able to conduct military operations in a netcentric battlefield.

Brigadier general Marek OJRZANOWSKI

INTRODUCTION

By 2030, Poland shall be a modern state with a high level of the citizens' life quality. The country economy shall be based upon development of the human resources, improvement of innovations and competitiveness of enterprises, as well as investments in research and scientific centres able to generate new knowledge and technologies. Common access to electronic services and modern information technologies as well as Poland's full integration with the European economy and international financial institutions shall expand possibilities of the country development and make Poland one of the most developed states forming a global information society.

Poland shall also be a secure country. The sense of citizens' security will have its source in a modern defence system which shall be an integral part of the defence system of the European Union and the NATO. The Polish contribution in strengthening international security shall consist, inter alia, in the participation of the Polish Armed Forces in different operations carried out outside the Euro-Atlantic zone in accordance with mandates of internationally recognised organisations.

Operations carried out by the Polish Armed Forces shall be conducted in strict coordination with other instruments of the defence system. They shall aim at preventing and neutralising local and regional conflicts, as well as counteracting international terrorism and organised crime.

The Polish Armed Forces shall constitute an important element of the military and political potential of the European and Euro-Atlantic community. They will be modern, well-trained and well-equipped troops able to operate in a netcentric battlefield, characterised with a high level of flexibility and capable of conducting military operations both in their own territory and the Euro-Atlantic area, as well as outside it, and to support reconstruction activities carried out by civil institutions.

"Vision of the Polish Armed Forces 2030" describes the desired situation in 2030. It determines main directions for the development of the international security environment, anticipated nature of the operating circumstances for the armed forces, as well as directions of the technological progress.

The aim of this document is to indicate the desired nature and abilities of the future Polish Armed Forces and to direct the long-term defence planning to the development of a new quality of the army able to rise to the requirements of the security environment within the next 20–25 years. The "Vision" is an open document which will be updated according to changes taking place in the broadly understood security environment.

1. INTERNATIONAL SECURITY ENVIRONMENT

1. By 2030, the international security system shall evolve towards multipolar configuration. Its fabric shall be formed by superpowers which shall have global interests as well as economic and military potential necessary to secure them, then by a group of countries with regional and local aspirations, and by supranational political and military blocs and regional security structures. Also complementary, in the functional sense, and mutually supporting institutions of collective security and cooperation, shall play an essential role in the structure of the global security.

The system of international environment shall evolve towards multipolar configuration

2. A quick pace of the economic growth in Asian states in the decades to come shall result in a gradual creation of a new economic, political and military centre of the future world. Within next 20-25 years, the role of China, India and Japan shall significantly increase. The above states shall take leading positions in the world hierarchy and will become, apart from the European Union and Russia, important subjects on the international stage.
3. The United States shall preserve its political, technological, economic and military primacy, and their dominating role in shaping the international environment.
4. The NATO will remain an essential element of the international security system. It shall act as a bridge connecting the United States and the European Union, as well as a common ground for their strategic partnership. The NATO shall also act as a significant forum for the cooperation and dialogue concerning issues of a crucial importance for the international security, a forum open to new members.

The NATO will remain an essential element of the international security system.

5. The European Union shall preserve its position on the international stage due to its further enlargement, deepening of the integration and a constant economic growth. The EU shall be a confederation of states having common currency and common external frontier. It shall act as a basic pillar of the security and stabilisation policy in Europe. Furthermore, it shall become a global player in the area of the security policy.

The EU shall act as a main pillar of the European stability and security.

6. A military instrument of the foreign and security policy of the European Union shall comprise a Euroarmy, which will be a strong European pillar of the North Atlantic Treaty Organisation. It will be created on the basis of military components delivered by individual member states and operationally subordinated to a supranational EU commandership. The Euroarmy shall also be composed of troops and units established by way of direct recruitment carried out by EU institutions.

The European armed forces shall be an important instrument for shaping the security environment.

7. Within next 20-25 years, the Euroarmy shall have operational abilities necessary for an autonomous planning and conducting a full spectrum of military operations

ranging from peace and stabilisation to full-scale, highly intensive military operations carried out both in Europe and outside it.

8. Opening of frontiers, growth of international trade and increasing interdependencies between states, which stimulate further integration of economic systems, shall essentially limit the possibility of existence of real confrontation sources having global range. However, their lack will not mean a complete disappearance of threats in international relations.

New threats will be more diverse and more complex, and less predictable.

9. Essential factors generating real threats for the international security environment in the first decades of 21st century and determining their qualitative and quantitative levels, shall be: negative results of progressing globalisation, significant demographic growth in African states and in the Middle East, climatic change and limited access to natural resources. The above mentioned factors shall also include growing disproportions in the quality of life between the rich and the poor, both inside particular countries and between individual states, infrastructural diversity, as well as polarisation of cultures and religions. Political, economic, social and cultural problems stemming therefrom shall contribute to further growth of ideological and religious extremisms and their transformation into political movements, growth of international terrorism and organised crime of a supranational or even supraregional range. Under unfavourable circumstances, the said problems may also become a source of instability and disintegration of state structures and state collapse. They may also lead to local or even regional conflicts and wars waged using differentiated forces and weapon systems.

The world shall struggle with negative results of the progressing globalisation, demographic growth and climatic change.

10. Waves of refugees and migrations of the population within a given state or group of states shall be another factor destabilising international political and military situation. These will be the result of natural disasters, poor economic conditions, internal crises, ethnic cleansings and conflicts. Migration waves of supranational and supraregional nature will result in transferring local conflicts to clusters of immigrants of different nationality and creed in rich countries, where they might become a source of antagonisms and internal crises whose scale and range might be difficult to assess.

Masses of emigrants shall constitute a political, social and economic threat to the stability of security.

11. A quick urbanisation and concentration of the population in urban centres will be a significant feature of the world development within the next 20-25 years. This phenomenon shall be particularly dynamic in the African continent and in the Middle East.

Intense urban development and a simultaneous decrease of employment possibilities will result in a growth of the unemployment, poverty and pathology districts in which huge numbers of people representing different religions shall be concentrated. It will also lead to increasing conflicts and tensions.

12. Nature of the future threats shall be linked with specific geographical areas. Conflicts and wars between states will be a characteristic feature of South and East Asia and Africa. The African continent will also see collapsing state structures.

Proliferation of nuclear, biological and chemical materials mass a challenge to the security.

13. Uncontrolled trade in weapons and dual-use materials and technologies, as well as proliferation of mass destruction weapons and means for their transportation, shall be a major challenge to the security environment. Certain states shall continue intense research and production works aimed at the construction and manufacturing of such weapons, which will be fostered by a further development of the nuclear energy sector and modern technologies. Mass destruction weapons possessed by authoritarian countries and international terrorist organisations will provide them with new possibilities of pressure and posing new threats.

Struggle for the control over natural resources shall underlie political, economic or even military confrontations.

14. A growing demand for depleting and non-renewable natural resources, particularly sources of energy, shall also be a major challenge to the international security. The fact that a significant part of the world oil and natural gas resources is concentrated in unstable regions and authoritarian states may lead to a formation of trouble spots, conflicts and wars which, in turn, might result in a significant energy crisis. Rivalry and struggle for the control over strategic resources, as well as the desire to ensure constant supplies of energy resources, may result in new turbulences and essential changes in the system of forces. As a consequence, numerous distrustful and rivalling blocs or alliances of local or regional range might appear, which would try to achieve their objectives through military confrontation.

15. Challenges to the future international security environment might also stem from the condition of international economy and financial markets. Periods of stagnation and economic depression may lead to disturbances of the world economic stability and cause crises and conflicts.

2. MAJOR CHALLENGES FOR POLAND'S SECURITY

16. A favourable for Poland direction of the international security environment development which has been shaped in recent years will be preserved in the next 20-25 years.

Poland's security shall be strictly connected with the collective security of the European Union and the NATO.

17. Political, economic and military integration of Poland within the European Union, as well as continuing process of enlarging the EU by countries to the east of Poland, shall be factors significantly reducing the possibility of destabilisation and tensions in the direct surrounding of the country's territory. As a consequence, only a small part of the current land-based, air and maritime borders of Poland will constitute external frontier of the European Union (Schengen area).

18. Unpredictability of the future international security environment does not allow for a definite exclusion of the possibility of new threats appearing in a close country surrounding within the next 20-25 years. However, these shall not be threats linked with a traditionally understood military invasion connected with attempts to occupy country's territory. Attacks carried out by extremist organisations and organised crime groups, as well as threats resulting from natural disasters, failures, as well as industrial or ecological disasters, are more probable challenges to Poland's security.

Nature of direct threats to Poland's security will change.

19. A constantly growing level of society's dependence upon telecommunication systems shall make cyber terrorism a real threat to the state security. It will essentially consist in attacking and destroying information resources of the state defence system and major elements of the IT system (info sphere) responsible for the administration of the energy sector, economy and state finances. Level of threats to Poland's security in the energy sector will also increase.

Cyber terrorism shall pose a real threat to the state security.

20. Migrations of the population from poor and underdeveloped countries to Europe might be a major challenge to Poland being an integral part of the European Union. Demographic changes resulting therefrom might, in turn, lead to essential revaluations in traditional social structures and to social and political tensions.

3. MAIN POLAND'S INTERESTS IN THE AREA OF SECURITY

21. A deepening integration within the European Union shall result in a change of philosophy and new approach to national issues in Poland, including national interests and European orientation. The above notions will essentially evolve and change within the next 20-25 years. Also hierarchy of national interests defined within the category of crucial and important interests, as well as interests necessary for the country's development, will change.

The European integration shall lead to a revaluation of national interests.

22. Major national interests shall concern protection of the country independence and territorial integrity, protection of the border of the European Union and Euro-Atlantic area, as well as ensuring security for the citizens living both in the country and abroad.
23. Major interests shall comprise ensuring an uninterrupted functioning of the state and its economic development, including energy safety. This means developing cooperation with the European Union, the United States and countries on the southern hemisphere which have significant natural and energy resources necessary for the economic development and which are potential output markets.
24. National interests shall also cover striving for a strong Poland's position on the international arena and ensuring possibility to effectively promote national interests. Taking into account Poland's geopolitical location and historical experience, the national interests shall include development of the European Union and its enlargement by countries to the east of Poland, as well as a lasting and robust relationships with the United States.

Poland shall strive for development and further enlargement of the European Union.

25. A systematic increase of Poland's position as a reliable partner and a member of the European Union and the NATO shall also be a major part of national interests in the predictable time-scale. This aim will be achieved through increasing Poland's engagement in the problems of the collective security and through expansion of defence capabilities of the above organisations, as well as through co-financing or participation of the Polish Armed Forces in initiatives fostering stabilisation of the international security environment.

Poland shall actively engage in the security issues.

4. FUTURE OPERATIONAL ENVIRONMENT OF THE POLISH ARMED FORCES

4.1. Enemy

26. Denationalisation, ideologisation and commercialisation of the sources for future conflicts and crises shall result in the appearance of new state owned and non-state owned actors in the security environment. They will be able to evoke internal crises and conflicts of international nature.

New actors in the security environment shall appear in the future.

27. Regular armed forces possessing complex weapon systems and appropriate logistic base will be less frequent enemy of the Polish army. Their place will be occupied by local (national) and trans-national guerrilla and paramilitary troops, mercenaries and rebel units using children as soldiers. Their distinctive feature shall be a particular determination of their members and high dynamics in the change of their tactics. They will have no heavy armament, as their military potential shall consist in light, portable anti-aircraft missiles, small-bore artillery sets and shooting weaponry of a diverse

level of modernity, as well as improvised explosive materials. The above mentioned subjects shall have no permanent bases, regular internal structures nor command systems, while compensating their military weaknesses with asymmetric operations (terror, revolts, large-scale public disorders).

28. The enemy applying asymmetric forms of combat will not observe any rules of the humanitarian law of military conflicts. It will attack persons and objects protected under international law and use civilians to cover its own operations. It will use neither uniforms nor identification badges of military troops.

The enemy will not observe any rules of the humanitarian law of military conflicts.

29. An essential group of enemies will include qualitatively new terrorist and crime groups. Due to the progress in the IT technologies, opening of borders, free movement of capital and progress in transports and communications, such groups will have completely new possibilities to act, as well as international significance.
30. The enemy shall operate in small formations or combat groups, in a decentralised and scattered way. Bigger military units will be created only on ad-hoc basis for the time of specific operation. Modern telecommunications systems shall be used in order to communicate and maintain command systems. Uncontrolled trade in weapons developed on the basis of advanced technological solutions will allow potential enemies to have extremely effective armaments whose destruction potential will be comparable with that of chemical or biological weapons.
31. When operating in its “own” territory, the enemy shall act in on easy terms, using camouflage properties of the terrain and its natural covering. In order to level technological supremacy of international troops in the field of reconnaissance and precise striking, the enemy shall apply changing war tactics. It will aim at moving military operations to populated areas.

The enemy shall operate on easy terms.

32. The enemy shall also operate outside its territory, that is in every place hosting in its opinion in hostile installations and military equipment. It will also operate on territories of hostile states. The aim of such actions will be to destroy selected, crucial parts of the defence infrastructure and elements of the infrastructure necessary for a proper functioning of the economy.

33. Methods of attack and means used for this purpose shall be very diverse. Attacks shall be carried out using explosives, portable means of destruction, remote-detonated bombs and booby traps, as well as civilian and military aircrafts, mechanical vehicles and vessels that were hijacked in advance. One should not exclude a limited usage of chemical and biological weapons with a view to evoke panic, fear and public disturbances inside a country and to weaken support of the public opinion for the operation being carried out. One of widely applied methods of influencing the enemy shall be cyber attack on both military and civilian IT systems.

The enemy shall employ a wide range of combat methods.

34. The enemy shall use a broad range of mass media in order to support its actions. By diffusing images displaying inhumane aspects of military operations, suffering of the civilian population, including children and persons advanced in years, which are the result of the military operations being carried out, the enemy shall try to preserve perception of the intervention forces as occupying troops which do not respect human rights. Based on the ideology or religion, it will instil fear, feed hatred and strive for mobilisation of the local and international public opinion against military forces and states fulfilling mandate of international organisations.

Mass media shall become an essential field of ideological struggle for the enemy.

4.2. Battlefield

35. Nature of the space in which future wars will be fought shall reflect complexity of the future combat. In the future, it will enter almost every field of the human activity and shall cover areas very different from the battlefield characterised by its width, depth and height. Apart from traditional geo-spaces, such as land, sea, air (including outer space), spheres unprovided with geographical parameters, immeasurable and unlimited, such as virtual cyberspace or information sphere, will be used as a battleground. The said areas shall overlap and complement each other, thus creating a uniform and unknown before space for military operations.

Future wars will be fought on a number of levels and in many spheres of the human activities.

36. The possibility of critical situations in every place of the Earth shows that the future battlefield of the Polish Armed Forces shall be very diverse as to the climatic and hydrological conditions, as well as the landscape and its coverage. This might be both an accidental or mountainous terrain densely covered with the vegetation and plain or even deserts.

37. The battlefield will have no classical, linear nature, there will be no points of contact between fighting units nor delimitation lines. The future battlefield will be space in which combat operations and other actions of different nature and intensity will simultaneously take place.

The battlefield will be of a diverse nature.

38. A significant part of military actions shall take place in urban areas or in regions which shall be used both by military units and civilians (refugees, inhabitants, representatives of governmental and non-governmental humanitarian organisations), where it will not be possible to definitely tell the difference between combatant parties and civilians or to distinguish between civil and military objects. Huge metropolises and cities, as well as settlements and villages, shall create specific combat conditions. For the enemy, these areas shall constitute perfect environment to increase efficiency of its attacks, to inflict damages as well as to defend and conceal its own actions. Contrary to the open terrain, urban areas shall form an ideal place to lay ambushes and to set traps, while restricting reconnaissance or manoeuvre possibilities, as well as the range and precision of the gun positions of intervening forces.

The military actions shall take place in urban areas and major metropolises.

39. A broad spectrum of using cyberspace in order to support combat operations, reconnaissance, command and communication, data transmission, as well as to operate weapon systems and conduct psychological war, means that it shall become an essential sphere of the future battlefield. Domination in this sphere will be treated as a decisive factor to gain information advantage.

Cyberspace and information sphere shall become combat areas of a huge potential.

4.3. Operations

40. Polish Armed Forces shall carry out their operations in international environment. They shall be planned and led by integrated international commands and staffs. Military operations of a domestic nature shall be conducted exclusively within the framework of crisis responses in the territory of the country. However, they will be of a limited nature in terms of space and time, and their essential objective will be to minimise results of a threat. In case of a threat escalation their task will consist in creating conditions for introducing international forces.

Operations of the Polish Armed Forces shall be carried out in international environment.

41. The basic form of activity of the Polish Armed Forces within next 20-25 years will be participation in military interventions conducted outside the territory of the country within the framework of crisis responses by the EU, NATO or state coalitions. They will be complementary to diplomatic and economic actions taken in order to prevent wars, stop escalation and proliferation of conflicts, as well as to counteract consolidation of forces which might be a source of future crises. Quite often, such operations

Military operations shall take form of armed interventions.

will take form of preventive interventions (precautionary actions).

42. Participation of the Polish Armed Forces in operations of an expeditionary nature shall each time be determined by particular strategic situation, political consensus and national interests, both political and economic ones.
43. Intervening forces shall have no permanent organisational structure. Instead, they shall be created on an ad-hoc basis. Depending on the needs resulting from the nature of a crisis situation, such forces shall comprise tactical units and military troops, as well as smaller units or combat groups created for particular purposes. Intervention forces shall be established by virtue of decisions taken by international organisations, and shall carry out their tasks under political control and strategic guidance of these organisations.
44. Operations carried out by armed forces shall be of a combined nature. Depending on the scale, nature and purpose of an operation, involved forces shall consist of diverse, in terms of their size, components: land, air, maritime, special units and forces executing tasks in the cyberspace and information sphere.

Intervention forces shall be of a combined nature.

45. Operations carried out by military forces shall be inseparably intertwined and synchronised with actions taken by other governmental and non-governmental organisations aiming at achieving specified political, social and economic results necessary to obtain planned objectives of the operation *(effects based approach to operations).* As a consequence, role of the military component in combined operations, as well as objectives for particular phases of the military operation, shall stem from a broader plan of the military and civilian campaign. This will reflect a complex approach to the operation, approach combining its political, economic, social and military aspects.

Operations carried out by military units shall be synchronised with activities of governmental and non-governmental organisations.

46. An essential element of the operational environment of intervention forces within next 20-25 years shall be commercial, supranational paramilitary organisations which, under contracts concluded with national authorities or international industrial corporations, shall carry out a broad spectrum of tasks that currently are within the domain of the army. These organisations shall protect industrial infrastructure and people, perform training activities and carry out police tasks. Under mandate of international organisations, the above forces shall also undertake preventive measures of a police and military nature in particularly dangerous regions where introduction of the army units shall involve level of risk unacceptable by the international community.

An essential element of the operational environment shall be commercial, supranational paramilitary organisations.

47. Expeditionary operations of the military forces shall be carried out in accordance with a new command concept whose essence shall consist in establishing in a given area command posts with a limited number of personnel and technical equipment. The main part of the process of commanding expeditionary forces shall be implemented on the basis of human resources and technical possibilities of the posts and points within the stationary command system located outside the operation area. Practical application of the "reach back" concept shall reduce general costs of the operations, lightening the load of the logistic system and a significant reduction of the response time.

Military operations shall be carried out on the basis of new command concepts.

48. Actions of the armed forces within the scope of military interventions shall be carried out mostly in two phases. The first phase shall essentially consist in air and missile strikes (synchronised with the ground component) on stationary or mobile military objects, and precise attacks on selected and crucial for the enemy elements of its infrastructure. The attacks shall be preceded by and then supplemented with intense information and electronic influence, as well as psychological actions. This phase shall be carried out at an extremely quick pace irrespectively of the time of day or night and atmospheric conditions. The essence of military actions during the second phase shall consist in armed support to political and military activities and actions aimed at creating new political and military state structures, social structures, and market economy.

Military operations within armed interventions shall be carried out in two phases.

49. In every case in which there will be no necessity to take up the enemy territory in order to suppress a conflict or it will be impossible or pointless to use large clusters of ground forces because of political, social or military reasons, military operations shall be conducted using mainly air or maritime systems of fire control. In order to keep own losses at a minimum level, strikes shall be made from distant locations and high altitudes without penetrating air space of the enemy or its fire zone. Combat groups of the ground component (special units/land forces) and the military equipment shall be deployed in the region of the operation only to supplement effect of stand off actions and to increase their efficiency.

Air forces, special units and highly mobile task groups will be of basic importance.

50. Future operations of the armed forces shall be based upon the concept of netcentric actions. Its essence shall consist in a significant growth of the fighting force through combining sensors, decision-makers and destruction systems in a uniform information network, achieving information predominance, increasing speed of the command and pace of the operations, as well as improving efficiency of the weapon systems, resistance

Information predominance shall be a basic condition of the success.

to enemy attacks and increasing the level of action synchronisation.

51. More and more frequent usage of robots and remote-controlled devices in the air, maritime and ground combat shall be a distinctive feature of future military operations. They shall carry out the most burdensome and dangerous tasks replacing humans in cases where the level of threat to soldiers' life will be unacceptable or there will be a significant risk of increased costs of military actions. Furthermore, the scope of using satellite systems (military and commercial) by the army will also be increased. Apart from providing intelligence data and ensuring communication, systems of space bases shall make it possible to precisely determine location of one's own forces and enemy's stationary objects, warn of ballistic missiles attacks and monitor atmosphere conditions in the region of the operation.

Robots and remote-controlled devices shall be commonly used in military operations.

52. Military operations shall be carried out in constant presence of mass media reporting the course of the warfare to the global public opinion almost in real time. The desire to maintain a high level of acceptance by the international society of the conducted military operations shall result in a situation in which actions undertaken by the armed forces shall be carried out in more and more narrow legal and political framework. Rules of the international humanitarian law of military conflicts and of other acts of the international law shall be particularly demanding with respect to the protection of the civilian population and infrastructure, as well as protection of the natural environment. Each and every infringement of the above mentioned rules shall lead to information war run by the enemy and criticism on the part of internal opposition, mass media, and then public opinion. In practice, this shall mean necessity to widely use weapon systems of a high precision and non-lethal weapons, such as rubber bullets, deafening ammunition, microwave systems etc.

Military operations shall be carried out in constant presence of mass media.

5. POLISH ARMED FORCES - 2030

53. Thanks to their efficiency and ability to transform in a constantly changing security environment, the Polish Armed Forces shall be an important instrument for building reliability and international position of Poland both within the European Union and the NATO. They shall constitute an integral part of the European defence system and will be capable of solidary action in case of a direct threat.

Polish Armed Forces shall be efficient, flexible and mobile.

54. The Polish Armed Forces shall be professional and universal troops of a modular nature. They will display a high level of combat readiness and availability, and will be prepared for immediate strategic transportation by air and by sea. They will also be saturated with modern combat technique and military equipment. They will have integrated intelligence, command, support and logistic structures. The above mentioned objectives shall be achieved not only via technical modernisation or replacing one organisational structures with other, but also through deep changes in the organisational culture of the armed forces. Cooperation with allies and supporters shall ensure the possibility to introduce the best solutions functioning in that area in the world. Thus, the culture change, efficiency and organisational effectiveness shall result in a growth of overall effectiveness and multiplication of the combat abilities of the Polish Armed Forces.

5.1. Missions and tasks of the Polish Armed Forces

55. Missions of the Polish Armed Forces shall be determined by the national interest, situation of the international security environment, including nature of threats, as well as the function played by the army in the system of the national security and Poland's obligations with respect to the European Union and the NATO. They shall include:

Main determinants of the mission and tasks of the Polish Armed Forces shall be national interests and nature of threats.

- ensuring security and territorial integrity of the country, European Union and the Euro-Atlantic area;
- maintaining international peace and stability;
- supporting internal security and assistance to the society.

A low probability of real and direct military threats to the domestic and European security, which would require involvement of the Polish Armed Forces in full-scale military operations carried out in the territory of the country, European Union or Euro-Atlantic area, shall result in an essential revaluation of the hierarchy and structure of tasks assigned to the armed forces. By 2030, tasks of the Polish Armed Forces shall include:

Intervention operations shall be the main activity form of the Polish Armed Forces.

- participation of the national military components (task groups) in international crisis response operations carried out in order to suppress crises ensure protection against their results;
- participation in international stabilisation activities covering military support to efforts aimed at creation of state structures based on democratic principles, improving security and development of market economy in areas posing threats to the international security;

- participation in anti-terrorist operations;
- participation in international activities aimed at the protection of mining infrastructure and routes of transportation of energy raw materials in order to ensure continuity of their supplies;
- participation in maintenance of the country internal security and supporting non-army forces in ensuring public order and rules of law;
- conducting military activities in order to protect territory of the country, European Union or Euro-Atlantic area in case of a direct aggression, including usage of the whole or part of the defence potential to repulse the aggression by preparing and carrying out highly intense operations.

5.2. Operational abilities

56. Depending on the nature of future missions and tasks, the Polish Armed Forces shall have operational abilities necessary to carry out a broad spectrum of operations in a varied environment. They shall be developed not only on the basis of their own national capabilities. In those areas in which obtaining of a certain ability shall be difficult or even impossible in a national context, the armed forces shall endeavour to acquire them within the framework of multinational cooperation or participation in the EU or allied defence programmes.

Ability for an effective reconnaissance.

57. The Polish Armed Forces shall have abilities to collect data concerning enemy and operating environment via a broad electromagnetic spectrum, irrespectively of the atmospheric conditions or the time of day or night. The Polish army shall be able to collect such data, as well as to process them and transform different data formats into a uniform picture of the enemy and the operating environment. The army shall also be able to make such data available to all levels of command, as well as to their visualisation and exchange (co-usage of the information) in real time with other players in the battlefield. The armed forces shall be able to recruit personnel intelligence sources and to develop intelligence networks within the operating area. Possessing the above mentioned abilities shall make it possible to analyse and reliably assess strategic, operational and tactical situation, properly identify events and monitor their course. Commanders will be able to receive and maintain a proper level of the situation knowledge and to consciously and effectively take opportunities appearing on the battleground in order to achieve tactical or operational success. They will also allow to essentially reduce the operational risk and develop decision-making predominance over the enemy in a given place and time, which in turn will make it possible to impose own will and take the initiative. The above ability will also ensure a possibility to monitor and verify on a constant basis level of actual destruction of attacked objects and, as a consequence, to work out decisions concerning direction of further

activities. In many cases, data collected via the intelligence and reconnaissance system shall be used also as the evidence against the enemy propaganda and mass media reports suggesting major incidental losses among civilians and infrastructure as a result of attacks.

58. The armed forces shall be able to effectively command, steer and control in real time on all commanding levels, as well as to cooperate with other elements of the domestic and international security system. Infrastructure of the system of commanding the armed forces shall be based upon a smoothly operating network of stationary, integrated command posts furnished with modern and automated commanding systems, clear and standard operational procedures and procedures of the staff work, as well as effective architecture of the command support. In order to ensure a proper command within the framework of the crisis response operations, the armed forces shall also have command posts, units and command support measures able to be quickly transported by air. Should Poland play the role of a “leading state”, the said forces shall be able to plan and carry out multinational operations. An essential part of the system of commanding the Polish Armed Forces shall comprise an integrated sub-system for identification and selection of object to be attacked and for determining the sequence of attacks. It shall act as a bridge connecting the command system with the army striking system.

Ability to effectively command.

59. The Polish Armed Forces shall be able to maintain a high level of operating effectiveness and to grade methods of using the force. This ability shall result, inter alia, from a broad spectrum of air, ground and maritime systems of fire and electronic attacks of a diverse destruction potential and different homing systems, ensuring a high precision of attacks. Thanks to the integration with an integrated system of recognition and identification of objects, methods of warfare shall make it possible to conduct military operations irrespectively of the weather conditions and the time of day and night. They shall also allow to carry out actions within a broad range of distances and altitudes against diverse enemy objects located within the operational area, irrespectively of the natural covering and shape of the terrain or level of urban development. The armed forces shall also possess non-lethal weapon system using electromagnetic impulses, sonic waves or guided energy. Such systems will make it possible for the army to react suitably to the nature of the operation, level of the threat, needs and political or legal restrictions, as well as to allow both physical fighting enemy objects

Ability to conduct effective activities.

and forces and their neutralisation using other, non-lethal methods. Also the ability of the armed forces to conduct information campaigns both in the cyberspace and in the information sphere shall be a source of a high operational efficiency. The above activities shall be carried out in the form of offensive and defensive actions and their aim will be to actively collect, process (modification) and use information, as well as to ensure security of own computer networks against physical and cybernetic attacks.

Ability to strategic transportation and ensuring high level of mobility.

60. The armed forces shall have access (within the framework of a national or multinational formula – military or civil-military one) to different air and maritime means of transportation of a strategic range. This will give them a possibility to quickly respond to threats arising even thousands of kilometres away from the country and to transport detached task forces to distant operating regions, including regions with a limited access to a proper airport, seaport or logistic infrastructure. The above ability shall be accomplished thanks to appropriate levels of the combat readiness and availability of the forces intended for the participation in the operations carried out by allied or coalition units abroad. The Polish Armed Forces shall also have the ability to freely move within the war theatre and the whole width and depth of the operational region, thanks to which they will be able to carry out highly dynamic, manoeuvrable and flexible actions. Depending on the needs stemming from the operational and tactical situation, the forces shall be able to quickly reconfigure units and fire systems, as well as to make sudden attack from unexpected direction.

Ability to survive and protect the troops.

61. The Polish Armed Forces shall have the ability to detect, identify and counteract weapons of mass destruction in order to limit effects of their use. Furthermore, the army shall have means of individual and collective protection against contaminations and a well-organised and well-equipped system of medical infrastructure ensuring high standards of medical care over the injured, as well as possibility of their evacuation. The armed forces shall also have integrated system of the protection and defence (physical and electronic one) of own troops located on the battlefield, military bases and logistic infrastructure, against conventional strikes from the ground and the air. The ability to identify forces and combat methods of own and allied units, as well as of other persons on the operational area, shall minimise a risk of their accidental or unintentional destruction.

62. The armed forces shall be able to conduct their actions irrespectively of the place, nature, intensity, duration and phase of the operation. This will be possible thanks to the introduction of mechanisms for monitoring stocks and tracking routes of their delivery, as well as commercialisation (outsourcing civilian suppliers and contractors) of the background and maintaining continuity of supplied for the fighting forces. The army shall be able to develop an integrated logistic chain and to properly deploy auxiliary and repair services, as well as logistic devices and installations within the operational area. This will make it possible to maintain a high level of the armament and military equipment fitness, timely replenishment of stocks and supplying the units with combat means and materials necessary to conduct operations in different climate zones and regions in distant location from the territory of the own state. Maintaining continuity of actions shall be ensured through keeping a high level of the troops completion and equipment, supplying means necessary to conduct operations, as well as ensuring fitness of the combat technique.

Ability to maintain continuity of actions.

5.3. Organisational structure

63. The organisation of future armed forces shall reflect nature and specificity of their tasks and adopted concepts of the military struggle. Its essence shall consist in jointness. This will be seen in appropriate sets of units created on the basis of all types of forces, services and functional areas of the army. Every set of units shall be trained and equipped in accordance with the nature of its tasks. It shall have a uniform level of ability to carry out tasks both within the country and abroad, within the framework of the EU and the NATO forces, as well as forces established by other international organisations.

Organisation of the armed forces shall reflect nature of their tasks.

64. The organisational structure of the Polish Armed Forces by 2030 shall result from the development of all components of the Polish army and units (services) in accordance with the tasks of the armed forces.

65. The manpower of individual types of the armed forces shall be essentially modified. A larger share of the military equipment and weapon systems based on modern technologies will allow to significantly reduce the number of soldiers while maintain or even increase the combat abilities as compared to the present troops and tactical units of a similar organisational structure.

The Polish Armed Forces shall have larger combat abilities despite smaller manpower of the army.

66. An integrated system of commanding the armed forces shall have a "flattened" structure, thus allowing to significantly reduce the decision-making chain. Its essential role will consist in a clear separation of planning, command, support and background functions.

67. The Polish Armed Forces shall include: Polish Land Forces, Polish Air Forces, Polish Navy, Polish Special Forces and Military Gendarmerie. There will be also separate Information Forces, which will be the army response to transferring part of the future warfare into the information spheres (electronic, psychological and mass media).
68. **The Land Forces** shall be the basic component of the Polish Armed Forces. Within next 20-25 years, they will change their nature and become qualitatively new, highly mechanized formation displaying high mobility and manoeuvrability, similar to that of the present aeromobile forces. The main fire potential of the Land Forces shall be made up of mechanised and motorised troops. Armoured units will have a significant fire potential, though they shall be much less numerous as compared to other types of forces. Units of self-propelled artillery shall form an essential element of support to the Land Forces. They shall be equipped with modern long-range artillery and missile systems of a high precision. Units of airborne assault forces and air cavalry shall ensure a high level of manoeuvrability and flexibility, as well as time of reaction to the changing operational and tactical situation. The Land Forces shall also have units of unmanned reconnaissance aircrafts of different range and sizes, as well as battlefield robots.

The Land Forces shall become a qualitatively new army formation of a high mobility and manoeuvrability.

69. By 2030 **the Air Forces** shall become one of the most important components of the organisational structure of the Polish army. They shall be comprised of air force equipped with manned and unmanned aircrafts, troops and units of the air-defence forces equipped with mobile ground-air weapon systems and units responsible for reconnaissance and monitoring of the air space. They shall be equipped with stationary and mobile three-dimensional sets for active and passive radiotechnical and electronic reconnaissance. The Air Forces shall be the component of the Polish army which will be characterised with the highest level of integration with the air forces of the European Union and the NATO. Components of the air forces, first of all aircrafts and systems of monitoring the air space, shall form part of an integrated and extended system of the air and anti-missile defence system of the European Union and the NATO. Transport and fuelling aircrafts shall be integrated within the framework of the European transport aviation. Military search and rescue units shall form an integral part of the European rescue system. The Polish Air Forces shall be divided into wings, flights, squadrons, batteries and battalions.

The Air Forces shall be the army component which will be the most integrated with the NATO forces.

They shall be able to independently operate within an alliance (coalition) and to strictly cooperate with other types of military forces.

70. **The Polish Navy** shall consist of three basic components: combat ships, air units and coastal defence. These shall be highly effective units which will smoothly adapt to changing conditions of the maritime environment. The Navy shall include limited means of the sea transportation necessary to transfer troops and provide logistic support to future operations carried out by the Polish Armed Forces abroad. The core of the combat ship units will be made up of multitasking corvettes which shall protect communication lines and carry out a broad spectrum of tasks in the coastal waters, both in the Baltic Sea and in locations very distant from the Navy own bases. Patrol boats able to make sudden missile attacks shall play an important role in the exclusive economic zone. The counter-mine defence shall be entrusted to universal counter-mine systems based on the network of unmanned submarines. The coastal systems of the surface and underwater monitoring shall form part of integrated systems of the defence of navy bases, seaports and communication routes. Basic elements of the Navy structure shall be multitasking combat ship squadrons.

The Polish Navy shall be characterised with a high efficiency and quick adaptability to the conditions of the maritime environment.

71. Nature of future threats shall contribute to an increased importance of **Special Forces.** Therefore, they shall play more and more significant role in the organisational structure of the Polish Armed Forces. These will be units of the highest level of combat readiness and availability, as well as level of training. The said forces shall carry out special operations on the land, sea and in the air, both independently and in cooperation with other types (components) of the armed forces. Special Forces shall be able to attack vulnerable objects and persons of a strategic importance, to rescue hostages, to disable data transmission networks and IT devices, as well as to disrupt coherence of the defence systems.

Special Forces shall be a formation of the highest level of readiness and availability.

72. Creation of independent **Information Forces** within the army organisational structure shall be a consequence of the increasing importance of the information as a source of the military potential and of the role of information wars in military actions**.** They shall integrate means and methods of electronic intelligence and combat, psychological actions, and activities carried out in the cyberspace. The units shall be intended for offensive and defensive actions carried out in order to get information predominance over the enemy and to achieve expected military (political) results of the conducted operation. The Information Forces shall perform their actions in the information space, including devoid of geographical parameters, immeasurable and unlimited cyberspace.

The Information Forces shall be an essential instrument of the combat in the information space.

Limits of the said space shall be determined by the current level of the development of the enemy IT technology, as well as the level and scale of its networking.

73. The **Military Gendarmerie** shall be an essential element of the armed forces organisational structure. The said formation, apart from implementation of statutory tasks carried out internally for the Polish Armed Forces, shall also be an important component of the stabilising forces conducting operational tasks outside the Polish territory. Acting as a standalone formation or as auxiliary forces supporting combat units (remaining components of the task forces), the Military Gendarmerie shall carry out mainly police (or police-military) tasks within the operational regions. These shall include: restoring and maintaining public order, protection of the population and property, combating organised crime, monitoring communication routes, counselling and training local police forces, assistance in criminal investigations, anti-terrorist activities, border control, including measures against weapon smuggling and a free movement of persons suspected of terrorist activities, as well as collecting general intelligence data.

The Military Gendarmerie shall be an important component of stabilisation forces.

74. Division of the armed forces into specified, functional sets of combined units shall become more and more important within next 20-25 years. Such sets shall include rapid reaction forces and stabilisation units established on the basis of combat and auxiliary units, as well as integrated safeguard forces.

Functional sets of combined units shall become increasingly important.

75. **Reaction forces** shall form the core combat units of the Polish Armed Forces. They will be trained and prepared to participate and conduct full-scale and highly intense operations against regular armies. Such operations shall be carried out within the framework of international forces acting jointly in the territory of the country, Euro-Atlantic zone or outside these regions. They shall be able to perform in all dimensions of the future netcentric battlefield. The reaction forces shall consist of modern, well-equipped and combat-ready land, maritime and air components and a joint commandership. The forces shall constitute basis for establishment of task groups which will be detached and allocated to the EU and allied joint forces, as well as contingents intended for operations carried out by coalition forces.

The reaction forces shall have the largest fire potential.

76. **Stabilisation forces** shall be the largest, in terms of the manpower, set of the armed forces. These shall be light and modern units intended for a broad spectrum of tasks carried out within long-term stabilisation operations of a medium and low intensity. The above units shall be prepared and able to conduct actions against scattered and armed units and troops, as well as

Stabilisation forces shall be the most mobile force set.

other enemies conducting asymmetric activities. Their tasks shall also include implementation of projects within civil-military cooperation. The stabilisation forces shall be equipped mainly with armoured wheeled transporters and universal, multitasking and highly mobile field vehicles, air reconnaissance means (to perform both reconnaissance and strike operations), as well as different types of combat ships. Stabilisation forces shall monitor observance of the economic embargos, separate parties to a conflict, monitor ceasefire and neutralise forces trying to destabilise the process of political, social and economic stabilisation. They will also be able to protect civilians, politicians and economic and communication infrastructure, as well as maintain public order in a given operational area.

77. Logistic potential of the armed forces and basic elements of the combat support of non-fighting nature shall form **units of integrated support** which will integrate human resources, equipment and materials of the logistic and medical support, protection against weapons of mass destruction, transportation, protection and defence, military administration and education. The above units shall also include forces and means for securing command posts, strategic and operational reconnaissance, military intelligence and counter-intelligence, civil-military cooperation, information activities, as well as topographic and meteorological support services. Integration of the above elements in one set shall make it possible to more efficiently use the logistic potential and combat support services of all armed forces. The main task of these units shall be allocating forces and means in accordance with the needs as well as ensuring possibilities necessary to achieve high efficiency and continuity of combat activities carried out by reaction and stabilisation forces during preparations to the operation and the operation itself.

Units of integrated support shall include logistic potential and basic elements of combat support of non-fighting nature.

5.4. Human resources

78. The Polish Armed forces shall retain their national character and will foster national military tradition.
79. Military personnel shall be one of the crucial elements of the future armed forces potential as its qualifications, abilities, activity and motivation shall decide about the value of the army as a whole and its individual components.
80. A modern, more efficient military equipment and weaponry based on sophisticated technology shall lead to a reduction of the army manpower on one hand, but on the other hand it will increase requirement that candidates to the army service will have to fulfil in the field of the knowledge, independence, self-discipline and responsibility.

Military personnel shall be a crucial element of the Polish Armed Forces potential.

81. Participation in combat operations carried out in diverse climate and geographical conditions, as well as specific nature of the military service, shall require a high level of physical and moral immunity, significant motivation to act in extremely difficult circumstances and dangerous conditions, as well as personal flexibility. Commanders of tactical units will have to be able to independently take quick and right decisions while operating under huge pressure, since their decisions shall in many cases be of a strategic importance and may determine the military success or political failure of the whole mission.

Requirements to be fulfilled by the candidates to the army shall be significantly raised.

82. Personnel of the Polish Armed Forces shall comprise three corps composed of soldiers of the professional military service and soldiers of the voluntary contract service. The largest group of the Polish army soldiers shall be privates' corps consisting primarily of the contract service soldiers. Within next two decades, this corps shall cover some 55 – 60% of the general number of the regular posts in the armed forces. The core of the professional service shall be made up of the non-commissioned officers corps. NCOs, who account for over 30% of the overall number of soldiers, shall become direct commanders, tutors and trainers of subordinate soldiers of the contract and professional services. The officers corps shall account for some 10 - 15% of the overall number of regular army posts.

The corps of non-commissioned officers shall form the core of the professional military service.

83. Officer of the future armed forces shall be a professional displaying a high level of general and specialist knowledge. He/she shall be particularly creative and adaptive, as well as capable of life-long learning. A commanding officer shall be an independent organiser and leader who understands all aspects and conditions of the activities (political, military and legal ones) carried out by his formation. The future officer shall be able to use modern IT technologies that will let him take quick decisions not only on the basis of his/her own experience, but also modern means supporting the decision-making process.

Nature of the tasks and modern weapon systems shall result in a revaluation of the model of the Polish army officer.

84. Developing national economy and openness of the European labour market which generates new jobs, as well as demographic low expected to take place in Poland in the next 20 years, shall make the Polish Armed Forces meet increased requirements of the future labour market. The army shall endeavour to ensure attractive and competitive conditions of the military service as compared to the civil labour market through a systematic development of complex motivation packages.

Complex motivation packages shall ensure competitiveness of the military service.

They shall consist of: a competitive remuneration system, appropriate social conditions, planned and transparent path of the professional development, stability of the employment, as well as the system of improving educational background and professional qualifications.

85. Within next 20-25 years, share of women in the Polish Armed Forces shall systematically increase, and their role shall be revaluated. Women shall increasingly take roles which previously were intended exclusively for men. The number of women in combat units carrying out operational tasks within the framework of peace missions or crisis operations shall significantly increase.

Women shall account for a significant percentage of the army manpower.

5.5. Training and military education

86. The educational system of the future armed forces shall be an extremely important instrument for shaping knowledge, professional qualifications, leadership and language competence of the military personnel. Its essence shall consist in a professional preparation of privates, non-commissioned and commissioned officers of the active military service and of the reserves to take up their duties and carry out their tasks.

System of the military education shall be able to cope with new challenges.

87. The military education system shall aim at facing challenges generated by a rapid technological development, as well as changes taking place in the political-military and operational spheres. This will be made through implementation of a flexible system of education and life-long learning, perceived as one complex process taking different forms during the whole period of the military service, based upon both the army's own education centres and civilian institutions. This will also be achieved through an effective system of lessons learned from the participation of the armed forces in different operations and implementation of these lessons in training and educational programmes, exercises, operational concepts and doctrines.

88. The military education system shall be based upon two main pillars. The first one shall be composed of training centres for particular types of the armed forces. The second pillar shall comprise a higher school integrating functions currently performed by officer schools and military academies (WAT, AON, AMW). Training centres shall mostly prepare privates and non-commissioned officers in specialised and general military fields. The higher school shall prepare officers specialised in areas needed by particular types of the armed forces. It shall also prepare officers to take up their

The military education system shall be based upon two main pillars.

professional duties in national and international command posts and staffs appropriate for the senior commanding and staff personnel. Education of the officers shall be carried out in integrated training groups composed of land, maritime, air and special force officers. Preparing civil personnel for the needs of the defence sector, strategic research and analyses, expert activities in the areas of the national and international security, as well as defence techniques and technologies, shall be another essential area of the activities carried out by the higher school.

89. The military education system shall be strictly integrated with the allied system of the military training. This will be done through introduction of uniform educational standards, exchange of the teaching and didactic personnel, exchange of students, organisation of common exercises of an international nature.

The educational system of the Polish Armed Forces shall be strictly integrated with the allied system of the education.

90. Technical infrastructure of the educational system of the Polish Armed Forces shall be based upon modern IT systems and technologies. It will be a standard procedure to use on all levels of the education of the military personnel digital technologies and simulation systems which will enable generating virtual “reality of the battlefield" and operational or tactical situation. Modern simulators and training devices shall also form part of the soldiers’ training base which will include both laser (electronic) simulators of gun positions and devices intended for the coordination (training persons carrying out certain functions on combat platforms) and complex training of crews.

Usage of digital technologies and simulation systems shall be a standard.

91. An essential part of the teaching and didactic personnel in training centres will be composed of commissioned and non-commissioned officers who shall have experience gained during military operations and missions carried out abroad or during execution of their military duties in international commanding posts or staffs.

5.6. Military technique

92. Modern weapon systems and military equipment shall constitute the main foundation of the operational abilities of the future Polish Armed Forces. They shall be built based upon modern technological solutions in the microelectronics and information technology, as well as achievements in biological sciences, nanotechnology and acquiring new sources of energy. Their application shall enable a high efficiency of data collecting and managing, communication, precision of strikes and effective protection against enemy actions.

Military technique shall be based on modern solutions.

93. Modernity of weapon systems and armament shall be ensured through an integration of the Polish armament industry with that of the EU and allied countries, international nature of the research activities, Poland's participation in international research and development as well as production programmes or in common projects concerning purchase of the military equipment. Thanks to the consolidation of the defence industry and Poland's participation in joint programmes, the interoperability (uniformity) of weapon systems and military equipment shall be ensured. Maintenance of the technical modernity of the Polish Armed Forces shall be also implemented through the process of a quick conversion of civil technologies into the military equipment meeting technical and operational requirements of the army.

The Polish defence industry shall be integrated with the European one.

94. Level and pace of the technological development and spread of new technologies, as well as growing unit costs of the military equipment and weapon systems means that they shall be introduced into military service in relatively short production series. They will also display a high modernisation potential (particularly with respect to dynamically developing digital technologies and data management systems) so as to maintain a high level of their modernity and combat features through modernisation and extension during their whole life cycle.

Constant modernisation shall be a means to maintain modernity of the armament and military equipment.

95. Basic feature of all weapon systems and military equipment shall be their ability to operate in a netcentric environment whose basis shall be made up of a modern digital IT platform for a multi-directional exchange of information with a multi-level security system. The net shall integrate in a complex manner means of reconnaissance, decision makers and weapon systems, as well as military equipment in other functional areas of the armed forces.

Ability to operate in a netcentric environment shall be a basic feature of weapon systems and military equipment.

96. A full practical implementation within next 20-25 years of the netcentric battlefield concepts which are currently being developed shall transform the Polish Armed Forces into a completely "networked" army. This shall ensure a full access to the information, ability to communicate, precision of attacks and a better protection against enemy activities.

97. **The intelligence system** shall be based upon a broad range of multi-spectral active and passive (i.e. digital camcorders, scanners, radars, electronic devices) recognition sensors which will be able to collect information about the enemy operating in the air space, land and sea, as well as about the battlefield in a broad electromagnetic spectrum, both at day and night, irrespectively of the weather conditions. Intelligence sensors shall also enable buildings' scanning without necessity of their entering, as well as scanning their construction and locating persons inside. Sensors

The intelligence system of the Polish Armed Forces shall be based on a broad range of recognition sensors.

shall be installed in manned and unmanned aircrafts (reconnaissance mini- and micro-robots of the land units, as well as long range aircrafts), manned and remotely controlled land and sea platforms, and in warheads of the weapon systems. They shall be dislocated in important ground areas (movement, seismic, acoustic and magnetic sensors), and also distributed as personal equipment of soldiers. Recognition sensors shall be horizontally connected in an integrated reconnaissance system based on broadband systems of quick data transmission and satellite communication channels resistant to interference and beam weapons. As a result, intelligence data collected via sensors shall be transmitted in real time to commanding posts on different levels or directly to the weapon systems of the conventional or information destruction. Technically, the intelligence system shall also include systems for the processing of information into particular data, and systems enabling transformation of words, texts, images, sounds, signs or video sequences into a uniform format, allowing their visualisation in the form of an integrated image of the battlefield. The Polish Armed Forces shall also have access to military or commercial recognition sensors dislocated and operating in the outer space, capable of multi-spectral imaging of the Earth surface.

98. **The commanding system** shall be based upon advanced IT and communication technologies, including broadband systems for the data transmission, computer systems and software. Besides, networks of physically isolated, though uniform in the informational aspect, banks of information and electronic systems for imaging operational situation, shall form an important part of the commanding system. The above elements, which will be integrated into one system, shall form technical basis of a common information environment covering all commanding posts on the strategic, operational and tactical levels of command. Modern technologies which support decision-making process shall enable a high efficiency and acceleration of the process of taking decisions, issuing orders, setting tasks and on-going monitoring of the operation course.

The commanding system shall be based upon broadband systems for the data transmission, computer systems and networks of intelligent banks of information.

99. **Weapon systems** of the Polish Armed Forces shall include manned and unmanned land, sea and air platforms (remotely controlled vehicles). They shall be equipped with modern navigation and aiming systems and precision arms (ammunition, missiles, pods with autonomously homing sub-missiles

programmed to combat only previously determined category of objects, means of electronic fight), as well as non-lethal armament. Thanks to the ability to collect data via external information network, necessary to detect and locate objects to be attacked, to recognise them and to steer on-board systems of destruction, the combat platforms shall be equipped only with indispensable systems ensuring their operation on the netcentric battlefield. Furthermore, new systems shall be universal and multitasking as a result of their increased "intelligence". Multitasking nature of the weapon systems shall consist in the possibility of their use for different tasks through their equipping in appropriate mission kits which, depending on the needs, will be quickly removed and replaced with other systems.

Weapon systems shall cover a broad range of manned and unmanned combat platforms equipped with intelligent arms of a high striking precision.

- Combat platforms used by the **Land Forces** shall have smaller dimensions, while preserving manoeuvrability and ability to be transported by air. They will be equipped with hybrid engines. An increased resistance to damages shall be ensured by a larger number of more effective counter-measures, application of new types of the active armour and reduced electronic signature. The platforms shall also have protection systems ensuring survival of the crew in case of the platform destruction. Besides, they shall have significantly larger fire power resulting from, inter alia, increased effectiveness of warheads, application of more efficient systems of fire control and systems for collecting and exchange of information on the battlefield. Weapon systems used by the Land Forces shall also include remotely controlled robots intended for mine and bomb disposal, demolition and making passages.
- **The Air Forces** shall have weapon systems of a significantly wider spectrum of applications, which will be equipped with a broad range of homing systems. They will make combat operations independent of the weather conditions and time of day or night, as well as ensure a high precision of attacks. Air defence sub-system of the Air Forces, which will be an inherent part of the integrated system of the NATO/EU air defence (active multilayered anti-missile protection) shall be equipped with next generations of mobile missile systems able to a simultaneous combating several air objects of different characteristics, including aircrafts of a low efficient reflection surface, winged missiles, tactical ballistic missiles, or

even anti-radiolocation missiles. The air forces shall be equipped with multitasking, unmanned aircrafts combining reconnaissance and attack functions.

- Due to their modular nature and a high level of arms integration, combat platforms forming part of the **Navy** weapon systems shall have relatively smaller dimensions and manpower, while increasing their fire power and precision. An indispensable element of manned platforms, reinforcing their multitasking nature, will be on-board unmanned devices of a different scale (air, surface and under-water ones). The basic ship armament intended for destroying land, sea and air targets shall be missile systems of a high precision, larger manoeuvrability and resistance to disruptions. The survival ability of maritime combat platforms shall result from the minimisation of the electronic signature, efficient adaptation to the maritime environment and improved effectiveness of weapon and electronic combat systems being the result of innovative solutions, compound materials used for their construction and development of technologies for collecting data about the environment. Increased ability to destroy targets in the areas of operational responsibility of the Navy shall be achieved through the application of costal missile systems, protection of sea bases, ports and communication routes.

100. **Personal equipment of the future Polish soldier** shall radically change. His look will be entirely different – the uniform/outfit will display intelligent features providing an increased protection, comfort and medical support. The equipment shall include a modern armament and other elements which will significantly improve effectiveness of soldier's actions. Means of communication, sensors, displays or GPS shall ensure a high level of the sense of situation, significantly exceeding the picture he/she will be able to see with his/her own eyes.

Personal equipment of the future soldier will turn him/her into an independent combat system.

CONCLUSION

Evolving security environment, including the operational one, forces necessity to adjust the armed forces to new challenges. This may be achieved only through a comprehensive change to be done within the army transformation process. The starting point and a prerequisite for an effective transformation of the armed forces is implementation of a coherent and based on profound analyses Vision of the Armed Forces which would be commonly supported by political, social, scientific and military circles.

“Vision of the Polish Armed Forces 2030" is an attempt to define shape and nature of the future Polish army. It is also an attempt to re-orientate the previous philosophy of the armed forces from a static model, geared mostly for the defence of the Poland’s territory against a conventional attack, into a flexible and modern instrument of the security policy, adequate to the realities of the 21st century.

Forecasting the future is a highly complex task bearing the risk of failure due to the changing environment and impact of new external conditions. Likewise, an attempt to define the nature, shape and abilities of the Polish Armed Forces within next 20-25 years, bears a similar risk.

Therefore, the presented document has an open nature and should be treated as a basis for a long-term planning of the armed forces development.