

**DETERMINANTS OF ARMY STRUCTURES  
DEVELOPMENT IN THE CONTEXT OF MIDDLE  
SIZED COUNTRY EXPERIENCES IN  
CONTEMPORARY TACTICAL OPERATIONS**

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**ABSTRACT** Although a military organization is a special form of institution, grouping people and resources for the special purposes of defence and fighting in general, it is influenced by the same rules and conditions that other organizations are. Considering the problems of land forces organizational structures in tactical operations it is important to refer to the theory of organization and management which may constitute a point of reference to properly devise and forming up of land forces structures assuming that such forces make up an organization – since this is a team of soldiers including their resources, shaped into an adequate structure and predestined to perform a definite task. The article is an attempt to reveal multiple mutual relations of tactical, technical and economical inventions inflicting structural transformation of the army in the context of the reality of a middle-sized country today.

### **Introduction**

Considering the problems of land forces organizational structures in tactical operations it is important to refer to the theory of

organization and management which may constitute a point of reference to properly devise and forming up of land forces structures assuming that such forces make up an organization – since this is a team of soldiers including their resources, shaped into an adequate structure and predestined to perform a definite task. In the theory of organization and management a set of empirically verified statements was developed which relate to efficient functioning of an organization. (Tyrala 2003, p. 53) According to prof. W. Kieżun ... *the development of an organization consists in enduring change (streamlining). The shorter time is needed to implement improvements, the more efficient such an organization is, more flexible, more adapted to surrounds.* (Kieżun 1998, p. 383) Thus changes are an indispensable factor in the survival and development of every organization, including the military, (Ściborek 2005, p. 52) because the changing conditions of the contemporary world as well as the changing threats shape a new face of tactical operations.

Various organizations which function today are created by teams to execute specific tasks. This is why it is justified to cite the general principles of the establishing and functioning of organizational structures because they may constitute a foundation of proper functioning and forming up of task forces of the land troops component with regard to solving a critical situation. An organization, by means of assuming an adequate organizational structure, may take up activities or execute functions provided for it. (Ściborek 2005, p. 13) Referring to the subject of the research, i.e. the land forces it should be assumed that such groupings also make up an organization because it is a team of soldiers together with their resources, appropriate structure and qualified to accomplish definite tasks and missions. An organization is a team of people organized to achieve certain specific aims. (Robinson, Coulter 2007, p. 17) However, apart from the personal dimension, it uses some technology which is available to it. Therefore an organization is a structuralized, i.e. specifically ordered social-technical system. Such a system is a mutually related set of

elements, clearly distinguished from surrounding reality and possessing its own aims of activity. It means that every organization consists of two purposely related components: technical and social ones. (Krzyżanowski 1999, pp. 34-35)

The subject literature indicates that people function as creators of an organization but simultaneously they are the matter which fills its structure which has the mission to achieve the earlier posited aim using accessible techniques. It means that the function which an organization fulfils is a means to accomplish an objective and not the aim of its existence. (Krzyżanowski 1999, p. 49) Thus we face a well ordered, purposely created organized system. It should be mentioned that an organization also means connections and relations among elements of its structure. The most frequently cited kinds of organizational bonds include:

- official ties (hierarchical) joining the managers of different levels of management with their subordinates;
- technological bond fusing workstations participating in some process of production and executing its particular stages;
- functional ties uniting workstations and groups of workstations (cells, departments, sections) realizing various essential functions for efficient operation of the whole organization (for example personal function or financial function);
- informative relationship which consists in transmitting pieces of information necessary for accomplishment of tasks and undertaking decisions. (Bolesta-Kukulka 2005, p. 52)

Considering the social sub-system, i.e. people, as the material for an organization it can be stated that such bonds are reflected not only among the elements of structures but also in relations among people constituting such an organization. (Stoner et al. 2001, p. 322) Thus organizations are sets which possess common features - common elements. Such common features being components of all organizations include people, aim (mission), structure and

technique. (ibid, p.45) In view of the foregoing each organization can be pictured as a system consisting of five elements:

- a) social executive subsystem – people playing various parts;
- b) aims of an organization - comprehended as a set of targets to be achieved in definite period of time, taking into account the needs of surroundings as well as members of an organization;
- c) control subsystem - serving as widely understood control of an organization and its formation, indicating aims and defining tasks;
- d) structure – a set of various relations including associations and impacts of a mixture of types taking place inside cells and among organizational cells;
- e) technology – a set of resources, means (methods, techniques) serving to achieve the aim of an organization. (Zawadzki 1997, p. 12)

It should be analysed which of the abovementioned elements of an organization plays a decisive part. In the author's opinion an organization is a tool to attain an intended aim. People set up organizations, they run them, they define their aims, and they decide about the end of their activity (life of an organization). Therefore it is a correct statement that people as a social subsystem are the most important element within an organization, and an organization serves the accomplishment of their endeavours and plans. It is worth mentioning that the organizational structure should fulfil three principal conditions:

- assurance of the completion of aims which an organization posits (in this case the land forces component of the Armed Forces);

- endurance, enabling incessant functioning of an organization;
- adaptation to changing external conditions.

To assure the efficient functioning of the components of land forces it is necessary to change soldiers' mentality and/or other members of the team by means of changing individual behaviour into a team approach. It is difficult to the extent that, as practice to date shows, the land forces components are often formed up from men coming from various military units and very often possessing diverse skills and combat readiness and/or experience. J. Antoszkiewicz (1998, p. 217)<sup>1</sup> highlights that all personal attributes brought into a team by its individual members are shaped and developed together with them. He views the evolutionary passage from the set of individuals to a compact team in phases of a team development: diversification, integration, cooperation, drifting and cohesion break down. One should deeply think about when the new structure can be used most efficiently, i.e. in which phase of its *life* cycle, to attain the maximum of its effects. Presenting it in a time axis a conclusion can be generated that it is ineffective to assign difficult tasks to teams in the initial period of time – when their internal relations are not yet *run in* as well as in the final stage, i.e. when those internal relations are *attrited (worn away)*. In case of forming up a component of land forces destined to participate in foreign/overseas missions it is important to execute the phase of *running in* before departure to the conflict region. Therefore it is essential to train such a component as a whole from the moment of devising the task force.

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<sup>1</sup> B.W. Tuckman enumerates five stages of groups development: shaping, demolishing, standards setting, effectiveness and activity ending phase. (Tuckman 1997, pp. 419-427).

When planning the component of land forces one should, first of all, be driven by the organizational cycle<sup>2</sup> which is known in theory and supported by practice and which makes up a logical system consisting of the following five stages:

1. Defining a clear and precisely described objective.
2. Examination of resources and conditions to be implemented/met to achieve the intended aim - planning of operations.
3. Preparation of forces, resources and conditions treated as vital to accomplish the benchmarked tasks.
4. Fulfilment, i.e. completion (execution) of intended tasks in accordance with the scheduled action plan.
5. Control of results and drawing of conclusions.  
(Zieleniewski 1981)

This cycle is applied almost in all branches of an organizational functioning; it can also be used for devising structural changes in land forces.

Planning an organization, as H. Bieniok claims, should always be characterized with a multiple-variant and multidimensional nature. It is advisable to perform an organization upgrade using a few options, as follow:

1. *Elimination of* superfluous elements of structure and human activity. It belongs to one of the most advantageous and desired ways of an organization's enhancement. Elimination of redundant elements of activity leads to specialization enabling increasing the repeatability degree to optimum limits and thus to economization of activities.

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<sup>2</sup> Henry Louis Chatelier (1850-1936) – French chemist, physicist and organizer – the author of the organizational cycle.

2. *Replacement* (substitution, redeployment, etc.), consisting in replacement of a given element of an organization with another element, more efficiently striving for the goal and more adapted to needs and surrounding conditions.

3. *Merging* (uniting, integration, fusion, also increasing), is an activity consisting in spatial, temporal or functional integration of at least two objects or subjects of an operation to obtain the improvement of efficiency of their joint operation.

4. *Dividing* (separation, distribution, disintegration, also decreasing), based on breaking down of a given complex wholeness or a team into smaller elements to attain higher joint efficiency of operation of the whole system. It means work division into simpler component elements and assigning them for execution to specialized organs/agencies (team division, for example in case of excessive range of control), also separation of executors not adapted to each other with some regard is a frequent and very effective way of task streamlining.

5. *Simplification* (generalization, modification), following the idea that specified aims should be attained with simplest possible means and resources, providing it does not result in a decrease of the product quality or diminishing of the operational efficiency of the given entirety. The object or activity which is somehow simple, not complicated, inflicts less difficulty to the subject of operation as well as also to the organ heading up/controlling this operation (especially team operation). Simplification is achieved by means of analysis and separation of a given object or operation into simple elements and then through elimination of unnecessary elements.

The newly arising structure marks the functioning frames and responds to the concept promoted, in the theory of management, of multidimensional organizational structures. (Mrelá 1989, p. 14) This model takes for granted the building of the organizational

structure at several planes (Mrela 1989, pp. 14-15; Gluszek, J. Skalik 1992, p. 50):

- configuration including the shape of structures, roles and organizational positions;
- centralization which characterizes the distribution of decision entitlements on particular stages, levels of hierarchic structure of the grouping;
- specialization of duties and task division amongst the elements of an organization;
- standardization showing the typical character of operations and behavior in conduct processes as well as repeatability of procedures;
- formalization including the system of patterns and/or rules of operation which are set forth in regulations and normative documents.

The analysis of the foregoing planes shows that they find their full reflection in the process of forming up of the land forces component with regard to tactical operations. Centralization, specialization, standardization and formalization constitute peculiar determinants allowing them to be described. However it does not result explicitly from the essence of devising of the land forces component *whether it is an enduring or interim structure*. Recent years' observations prove that the answer to the foregoing question is not unequivocal. Often during execution of long-term tasks there is a need for reorganization and implementation of changes in the task realization; additionally a change in the very task may also take place. It should be viewed as a natural phenomenon, resulting from the very character of tasks which change in the course of the conducting of tactical operations by task forces as a result of factors which are independent of their executors.

The military literature contains many examples taking into account the need of selection of appropriate means and resources to execute operations. Most frequently, depending on the planned tasks, there is a discussion about the setting up of task forces. In literature we can meet such terms as: combined weapons, warfare of combined weapons, battalion tactical and combat grouping, combat team, combat group or task forces. On the basis of results of the comparative analysis of the subject literature one can assume that the land forces component performing tactical operations stands for means and resources of troops intentionally formed up to complete a concrete task or a group of tasks. Such forces are made up appropriately for the operation objective, and more precisely for the character of tasks, method of their implementation and determinants which, according to forecasts, may appear in the course of their realization. In order to unify the notional apparatus the author uses the term 'task forces' from the point of view of specificity of the troops' tasks in principal tactical operations.

Generalizing, we can assume that units of the land component are formed up to achieve the best efficiency of tasks' execution under the existing conditions. The structure of land forces tactical groupings should be characterized with elasticity and should respond to existing demands and conditions of the contemporary battle field.

Referring to present-day tactical operations, forming up of land forces groupings is a particularly difficult project if we take into account appropriate distribution of means and resources, insertion of elements of the combat grouping, the place and role of troops in the formation, the order of their involvement in the warfare as well as efficiency of the operation. Such elements as the use of warfare principles, meeting the requirement of the enhancement of operations, the simultaneous influence on the whole depth of the enemy's combat formation, manoeuvring with the formation

elements as well as rational utilization of the combat potential on one hand give the commanding officer a large scope of independency, and on the other hand specific difficulties in the choice and distribution of forces. In the area of making up of land forces formations there arise definite problems relating to efficient command of different groups which is affected first of all by:

- mission aim;
- number of combat groupings;
- specificity of tasks;
- variants of operation;
- prospective enemy;
- correlation of the formation elements;
- volume of information;
- informative ties.

Troops' operations in foreign/overseas missions provided a new picture of contemporary operations, conducted in a dynamic, precise and systemic way and using modern technology. In the subject literature such operations are called network-centric warfare in which the basic role is played by information. In such operations the speed of acquiring information from the whole area of operation, their exactness and efficient use in the command process, connected with execution of precise attacks on the enemy's most important objects, makes up denial of traditional concentrated attacks and classic battles for consecutive grounds or objects. The analyses conducted of the troops' use in operations of critical response abroad shows that the variety of tasks as well as the character of operations, so to say, cause the structures of modern-day land forces to be characterized with elasticity, mobility, and the ability to conduct operations independently and in co-operation with structures of other branches of armed forces (national and allied).

The elasticity of structures should first of all assure the possibility of easy establishment of any tactical and operation groups to be suitable for the assigned tasks. It should be affirmed that the contemporary structures do not assure opportunities which especially on the tactical level guarantee independence during task execution. The reasons of such a state of affairs include:

- heterogeneous military hardware;
- shortage of support and security assets (example: operations in-depth);
- limitations in the area of communications equipment;
- potentiality of tactical level staffs in the area of planning and controlling the operations of the branches of own armed forces and supporting forces.

As a result of the research conducted it can be assumed that functional elements are and will be formed up to be used in tactical operations home and abroad. Each time they can be diverse or change in the course of their construction. Such forces are created depending on the following elements:

- kind of task or operation mandate;
- character of tactical operations;
- potential enemy;
- type, forms and methods of planned operations;
- political - military situation;
- climate - geographical conditions;
- possibilities of organizational structures with regard to founding functional elements.

The essence of the building of the land forces component is the underlying cause of the thesis that depending on the content of the assigned task an adequate functional structure is formed up which is destined for that particular task completion. Additionally it is

posited that task forces should be able to conduct autonomic operations in allocated areas of responsibility.

While building task forces it is important to realize difficulties resulting from barriers and fears of changes (or of new challenges) resulting from innovative changes. Appearing barriers negatively influence the process of task forces building. When forming up national forces as well as multinational ones, such barriers include: organizational, technical, psychological and temporal obstacles. (*Ibid*, p. 98) It is more difficult in case of construction of multinational task forces. Unfortunately Polish COs of divisions and brigades experienced such situations in stabilization missions in Iraq.

The stances of particular contributors worked out during negotiations, and in fact limitations with regard to using individual national components used to give the Polish COs sleepless nights. In the context of multinational forces, the political and cultural barriers should additionally be taken into account. This is why the considerations relating to forming up of task forces should be viewed from the angle of not only needs but also possibilities, especially in the context of multinational forces.

According to J. Wolejszo, from a point of view of the strategy of structures devising (Wolejszo 2003, p. 66) the building of task forces structures can be done using various methods as: diagnostic, prognostic, diagnostic - prognostic and functional. While choosing the method of setting up of tactical formation structures a compromise between those methods seems recommended. (Zawadzki 1997, pp. 32-36) It results from the need of description of the real situation (for example the state of munitions and forces, losses to date, the quantity of the basic battle equipment, information about the enemy, battleground characteristics, etc.) as well as the forecast of the course of future combat operations. This state of affairs allows for foreseeing needs and objectives

within the scope of the building of tactical formations. (Mazurek et al. 2002, p. 49)

The essence of building of *task forces* consists in achieving the synergy effect. The potential of individual elements of the *task forces* structure should enable the use of combat possibilities (for example attack and fire) managed by an appropriate, coherent command system. The structure of *task forces* should be flexible and should make it possible to conduct various operations in changing conditions.

Conclusions from experiences from other states show that task forces should be formed up from two principal elements: the base subunit called the core of task forces and the optional module. The core is usually created on the basis of the following subunits: mechanized, motorized, tanks, airmobile or other subunits depending on needs. The main determinant deciding about the selection of the base subunit is the kind of operation (task character) as well as the objective to be achieved during operations. The base subunit determines the style of operation and the method to attain the aim. When planning the use of task forces one should take into account the specificity of all elements affecting the task execution (for example the principles of the forces use and rules of engagement). However the operation tactics will be subordinated and somehow imposed by the base subunit. This is why when analysing the assigned task, one should clearly define its tactical operation parameters as well as its specificity which in consequence will lead to the choice of the *base subunit* of the task group as well as the *optional module*. The change of the task character or conditions of its realization may lead to the necessity of modifying the composition of the optional module or even to changing the base subunit. The selection of elements of the optional module results mainly from:

1. Type of existing and future threats;

2. Conditions of task execution, including:
  - \* location of task forces in the structure of the operation component;
  - \* forecast time of operation and needs with regard to autonomy of operation;
  - \* legal aspects of the forces use (mandate, status of forces, international agreements, rules of engagement);
  - \* needs relating to reconnaissance and fire support;
  - \* environment (terrain, climatic conditions).

The condition of carrying out self-sufficient operations of land forces is the forming up of combat modules (task groups) whose basis is made up by battalions. The combat subunits on the tactical level (tactical combat groups) are replenished [recruited] with support and operations security subunits. (Ibid, point 5006) However the training of such subunits should be closely connected with the training cycle of combat modules - task groups (tactical combat groups). Such exercises should consist in thorough correlation and accommodation of their operations to the needs of the task group. (Ibid, point 5007)

Recapitulating, it should be affirmed that in the course of the forming up of task forces structures we cannot assert that there are enduring and invariable structures of troops or template ways of operations. These two approaches are dependent on a concrete political-military situation, geographic-climatic conditions as well as assigned tasks. Undoubtedly experiences to date show that considering foreign military operations, the building of land forces structures should go toward forming up of light units, equipped with military assets which are easy to relocate and possessing practical potential of power play (defeating enemy's forces), by means of stabilizing the situation in the crisis region. In other words, a difficult environment, like for example an urbanized

terrain, woodland or mountainous area, means that soldiers must efficiently not only fight in the specific warfare environment but also execute tasks connected with stabilization missions or providing relief aid. Therefore military formations assigned to operations connected with overcoming a crisis should be able and prepared to perform various functions of special character. The research conducted confirms a thesis that structures and methods of operation of the land forces tactical groups in their principal tactical operations will be selected for a specific task and objective to be realized in concrete surroundings.

### **Proposals of changes in land forces structures**

Among many changes defining the future operation possibilities of land forces, it is vital to make battalions independent and unassisted because battalions, according to numerous military theoreticians, are the basic organizational and training module of land forces which is a factor deciding the strength of brigades and divisions.

The analysis of the battalion structural elements as well as research conducted during exercises show (Wrzosek 2003, p. 6) that this organization does not meet the functionality requirements which in consequence creates the necessity of modifications during planning and tactical operations stages (tactical battle groups on the battle field, tactical task forces in foreign military operations).

The expansion of "the battle hard core" extorts strengthening of logistic subunits and the command. This is why maybe it is worth considering the issues of functional modification and building of the battalion structure with a larger number of combat companies, alternatively the introduction of combined structure, for example mechanized/tanks companies and maybe additionally the infantry company. Moreover, the battalion structure should also include: a support company equipped with light mortars, reconnaissance

elements (UAVs), anti-tank platoon equipped with PPK Spike, light anti-aircraft systems as well as the command and logistic support element. Following the foregoing analysis the current organizational structure of our battalions obliges the forming up of various structural variants as well as additional functional elements depending on the assigned task and conditions of its execution.

According to J. Zieliński battalions should fulfil the following basic condition: they should possess large fire and manoeuvre potential. At present, mechanized battalions as well as tank ones are equipped with larger than before quantities of munitions. On the basis of reorganized units, 58-AFVs battalions in brigades were formed up. Such a solution makes it possible to plan reserve forces, additional elements of the combat formation as well as tactical groupings of combined structure. That is why preparation of battalions for independent operations becomes a vital question, particularly with regard to guaranteeing the continuity of command and logistic support.

S. Koziej asserts that such independent battalions are capable of forming up autonomous brigades with regard to tactics (being tactical units) and in turn united into higher tactical units, which means divisions. (Koziej 1993, p. 45) Lack of such solutions in our land forces hinders undertaking effective operations in conditions of the contemporary battlefield, including co-operation on the tactical level as part of international forces. However the formation of stronger battalions, brigades and divisions meant decreasing the general number of tactical units in land forces to three combined-arms divisions and several independent brigades.

Any changes in battalions' structure and equipment cause explicit consequences on the level of brigades which originally should present large independence, mobility and ability to conduct autonomous operations. Therefore a brigade should be self-dependent to such an extent as to be able to execute tasks without the need of engagement of outside means and forces. It should

also be anticipated that in near future the brigade structure will include helicopters as well as the means of electronic warfare.

Regardless of the proposed solutions, the brigade configuration should result from assigned tasks as well as characteristics of its munitions. It appears that the brigade should base its operations on tactical groupings, created on the basis of battalions supported with the branches' equipment. The foregoing change of destination of the brigade organizational structure shows the need of the change of the character and equipment of battalions. Since they are going to be the basis of the brigade operations then their internal structure and combat potential should enable transforming them into tactical groups. These groups should have a character adapted to the environment of operations.

From the point of view of tactical operations the most convenient solution is formation of the brigade structure consisting of 5 battalions: 2 mechanized battalions, 1 tank battalion and 2 motorized battalions. That is why brigade commanders possessing five elements of the combat grouping may easily plan the delaying actions in the area of covering force, to organize strong defence of the main battle area, to prepare counter-attack, to increase the defence and to assure the freedom of operation in the back zone as well as to create additional elements in the battle order (for example the anti-airborne landing reserve, the Tactical Airborne Landing or the Strike-Landing Group). The present structure assures only the template solutions relating to defence or attack planning, the so-called *three - field system* [in Polish: *trójpolówka*]. The very idea of the forming up of four tactical groups from three battalions is as accurate approach as possible, however there are doubts relating to the commanding of such a group (i.e. who will be the commanding officer - the company commander or deputy commander of the battalion), operations planning (no staff), providing of signal services or logistic support.

The analysis conducted showed clear discrepancies in the area of needs and possibilities of the forming up of a combat formation within the existing structures of land forces. Under the Polish military regulations a formation means *planning and deployment of munitions and forces in the field appropriately to attain the objective (conception) of fighting a battle*<sup>3</sup>. Besides defining this notion, our national regulations' solutions specify elements which are elements of the combat formation. The accepted division of these elements into basic and additional, as well as such elements which are organized in specific combat environments raises many doubts. The analysis of the first group of elements, i.e. the basic ones, enables the drawing of a conclusion that these are mostly homogeneous elements, i.e. they organizationally make up a specific branch unit. The exception includes the first attack and the combined arms reserve which is not usually organizationally homogeneous. This example proves the wrong criterion of division, i.e. the reference to the organizational structure of forces waging war (Huzarski 1999, p. 40) and not to the functional division. That is why for the tasks of particular elements of the combat it should be underlined that a combat formation is established suitably to attain the posited aim having in mind the enemy's character of operations, its thrust lines and the munitions potential. It should guarantee the stability of defence and simultaneously it should enable flexible and quick modifications reflecting the changes occurring on the battlefield. It permits focus on the combat effort in the selected region. It also contributes to outgunning and/or advance of forces.

Facing tendencies aiming at reduction of the volume of possessed munitions and forces as well as improving their quality, special attention must be paid to the rational utilization of the possessed combat power. Therefore each variant of the formation should

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<sup>3</sup> See, *Regulamin działań wojsk lądowych [The rules of land forces operations]*, Land Forces Command, Warsaw 2008, p. 92.

also result from concrete surrounding factors. The essential aspects exerting significant influence on the selection of the specific variant of the formation include but are not limited to:

- character of combat operations and the place in the superior's formation;
- location of troops at the moment of the task receipt;
- enemy's activity;
- conception of fighting the battle;
- lay of the land as well as the rate of replacements and training of manpower.

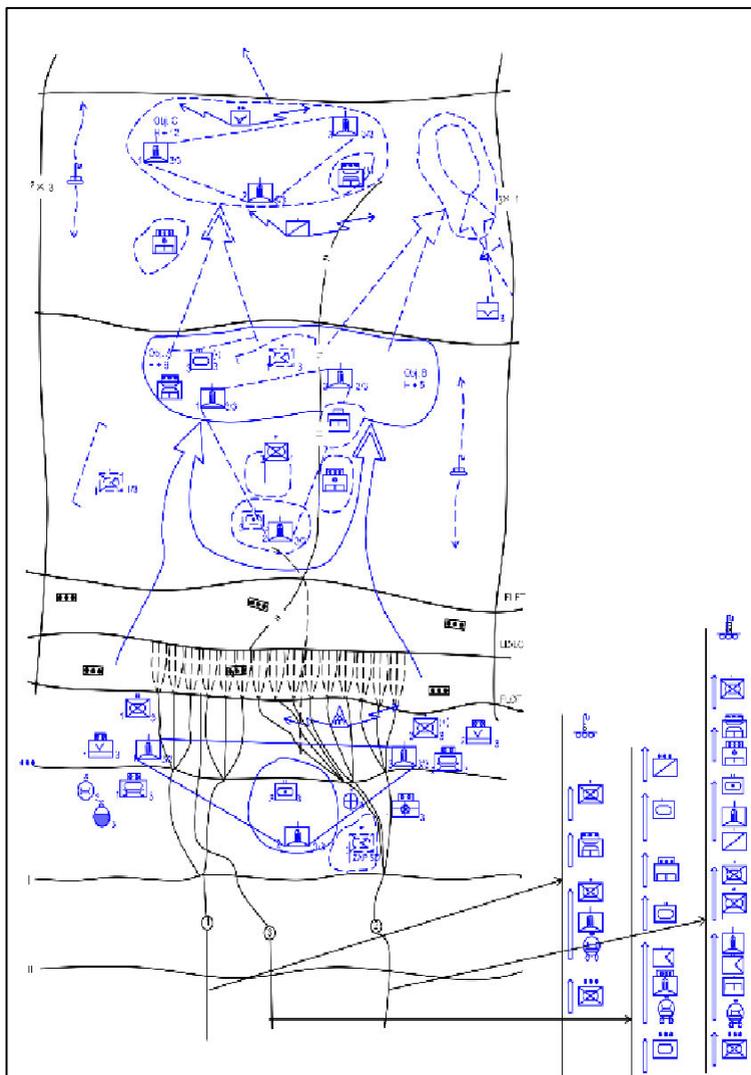
Giving an example - alongside the currently binding structures a classic formation of a MD consists of two brigades in the first echelon/attack and the third one in the reserve (uncommitted force) - most frequently an armoured brigade. Trying to maintain the readiness to execute repeatedly changing tasks, the composition of the defensive formation still has to be unceasingly modified. The reason for quantitative changes may result from decisions taken whereas the qualitative changes result from the needs of introduction to the armed forces of new munitions and supporting elements. Making various 'reshuffles' concerns to a larger degree the composition of the combat elements, whereas the special elements present more stability. Moreover some doubts are raised by the fact of forces acting in the forward area of the corps. On the basis of exercise experience the following brigades are recommended for such operations: independent, airmobile and airborne. However from the effectiveness of a combat operations point of view of a brigade, conducting delaying actions of about 250 km width and 100 km depth does not constitute any threat for the enemy's predominant forces. Operations of airmobile forces in such an area will contribute to holding of facilities, disorganizing of the enemy's approach and canalizing its movements. In the end, having finished the delaying operations the airmobile elements stay in the area occupied by the enemy and they undertake

asymmetrical operations. This is the most acceptable/correct approach from the point of view of the tactics of these branches. It is not rational to send transport helicopters to evacuate troops from the battlefield due to the threat from the enemy's side. On the other side the exploitation of all airmobile and airborne elements at this stage of the fight will deprive the CO of the initiative during counterattack. Therefore it is so important at this stage to implement the principles of the art of war and first of all the economy of power. From another point of view planning delaying actions for one of three divisions in the area of the corps defence means that we will get rid of the strategic reserve to execute the counterattack or to develop the defence in depth.

To attain the advance on force over the enemy one can create different variants of the formation and this may require making it independent of the formed up tactical groupings so as to enable them to execute assigned tasks even in the situation of losing contact with the main forces. Instead of one strong reserve it is sometimes better to form up two - three smaller combined arms reserves and several specialist reserves on particular lines of operations.

On the level of the higher tactical unit (troop) it is assumed that the tactical grouping consists of the following elements (*Taktyka ogólna [General tactics]* p. 78): first echelon, combined arms reserve (reserves), the artillery group formation, air defence unit (subunit), reconnaissance elements, the anti-tank reserve, barrage troop, command posts, reserves of other branches, troops (subunits) and logistical support/devices. Additionally one can form up: allocated troop, tactical airborne landing force, landing-shock troops, anti-landing reserve, rescue – evacuation troop (fig. 1 and 2).





**Fig. 2.** Brigade in offensive operations (created by the author based on research).

Such large number of elements of the tactical grouping cannot be organized in any conditions of the battlefield. The CO should each time identify these elements of the formation which would enable him to achieve the aim of the battle. This also results from the combat potential and the organizational structure of the higher tactical unit and subordinate troops. Forming up a tactical grouping one should depart from the principle of concentration of troops/fire in appropriate locality and time for considerable mobility of troops combined with accurate synchronization of all elements of the division tactical grouping.

At present, under the peaceful organizational structure of land troops there are subunits, units and higher tactical units. Subunits make up the smallest organizational link and it is assumed that they should consist of homogeneous munitions and troops. According to W. Kaczmarek such division, however, raises certain reservations: ... *[such division] is incoherent, and what is most important, it does not result from the needs of conducting modern warfare but rather from administrative needs.* (Kaczmarek 1999, p. 32) Moreover, as results from considerations to date the currently functioning structural models on tactical levels prefer ternary structure, with relatively firm combat potential. For example the primary combat skeleton of every mechanized division is made up from three brigades - two mechanized and one armoured. Military experts' opinions as well as results of practical verification of the abovementioned structures show that such a solution is not functional. Namely it imposes some limitations on the use of the possessed potential and negatively affects the freedom in forming up of the tactical grouping. (Huzarski 1995, p. 8) The foregoing premises substantiate the necessity of making changes in structures on the tactical level.

A right concept realized by the land troops is the concept of functioning of two components: heavy and light. The heavy component includes armoured and mechanized brigades together

with branches' units. Whereas the light component includes air cavalry, assault/landing brigade as well as brigades equipped with wheeled APCs. On the basis of this it appears that the light component is formed at the cost of reducing the number of units planned for operations within the borders of the country.

The necessity of possessing extremely mobile, light troops makes up some challenge for the land forces resulting from international obligations. The essential determinant of operational potential includes: possibility of troops' quick and efficient movement over large distances, as well as possession of modern munitions and equipment which should assure the professional execution of tasks. At present the following troops possess such potential: landing/assault troops, air cavalry units and, as a result of broadening of our foreign commitment, two mechanized troops (12<sup>th</sup> and 17<sup>th</sup> Mechanized Brigades and 21<sup>st</sup> Highlanders' Rifle Brigade).

Generalizing the presented research results of this study, one can perceive a considerable scale of changes taking place in tactical operations which influences deep and multidirectional needs of adaptation of existing structures of land forces to challenges and requirements conditioning the adequate execution of military tasks. This is an undertaking requiring from executors perfect planning and organizational skills, the effect of which should be the transformation of the land forces structure to date into a new, more functional organization.

Changes in "enduring" structures of land forces of the "P" time should have a complex and continuous character. It results from way the modification of the lower level structures causes definite consequences at superior levels. Moreover, every change of the scope and character of tasks to be executed requires verification of organizational structures, equipment and the training range of the land troops.

The land forces' operational capacity in the third - airborne dimension – acquires critical importance. Such potential is guaranteed by helicopters of various type and purpose. The currently used helicopters, on account of working out of the target service norm, will enable the security of the land forces without reducing their potential during the next several years. Taking into consideration the experience connected with the introduction of F-16 fighters it should be underlined that the launching of the National Helicopter Program becomes the vital factor affecting operational potential of the land forces.

Analysis always refers to the detailed situation of the country, such as geopolitical location, cultural and historical heritage and experiences. Other important elements are economic abilities and future threat prognosis. In the Polish reality both experiences from Iraq and Afghanistan operations and current geopolitical eastern European challenges are taken into consideration.

Nevertheless the analysis of the complex range of tactical operations and resulting tasks shows that the main areas of changes in the land forces structures should concern the following aspects:

- change of organization and subordination of land forces units;
- launching of the module structure of brigades;
- increasing the number of battalions in brigades (to 4-5);
- removal of non-prospective equipment and its replacement with the new generation of munitions and military equipment;
- possibility of support of operations in depth;
- increasing of the combat potential and manoeuvrability of subunits;

- increasing of the efficiency in the area of support on the level of subunits and brigades;
- reinforcement of higher tactical units with helicopter flights;
- establishment of qualitatively new elements of reconnaissance;
- assurance of quick, safe and unfailing communication on the tactical level;
- reorganization of the training process.

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