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"DEFENSE RESOURCES MANAGEMENT - TRENDS AND OPORTUNITIES"

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EUROPEAN WIDER NEIGHBOURHOOD: OPPORTUNITIES AND CHALLENGES IN EASTERN EUROPE

Captain Commander Marian BARBU

The name changing from the European Economic Community (EEC) to the European Union (EU) in 1993 reflected that the Union had evolved from an economic organization into a political one. Through successive enlargements, EU has become a home for more than 500 million people, stretching from the Atlantic in the West to the Black Sea in the East. The European Commissioner for Enlargement and European Neighbourhood Policy, Štefan Füle, stated in 2011 that EU *„has brought the longest period of peace, and thus great advantages to all Europeans - stability, prosperity, democracy, human rights, fundamental freedoms, and the rule of law. By promoting economic growth and solidarity, and strengthening democratic forces in countries emerging from dictatorship, the EU represents a growing family of democratic European countries committed to working together for peace and freedom, prosperity and social justice."* [1]

The goal of European Neighbourhood Policy (ENP) is to substantiate relations with the neighbouring States of the enlarged European Union, *„in order to create an area of prosperity and neighborliness, to create a `circle of friends` at the borders of the Union. In this sense, this policy proposes a partnership with a set of ambitious objectives for the neighbouring States of the European Union, based on sharing the same political and economic values and through institutional reform".* [2]

But the conflicts lately arisen within and between European "neighbours' neighbours", have brought new challenges on the EU's foreign and security policy agenda. In particular, the developments in Eastern Europe have emphasized the advantages of integration-focused action and unveiled existing vulnerabilities in the initiative's concept.

As a consequence of this, the EU's Eastern Partnership endeavour itself could be dramatically jeopardized, and that have brought up the concept of a New European Neighbourhood Policy and pointed out the need of differentiated and politically driven approaches.

1. FROM EUROPEAN UNION TO WIDER EUROPE

'I look forward to a United States of Europe, in which the barriers between the nations will be greatly minimised and unrestricted travel will be possible.' Winston Churchill, U.K. Prime Minister, 21 October 1942[3]

1.1 The EU - from economic to political union

The first ideas regarding the United Europe were that countries trading with one another become economically interdependent; therefore more likely potential conflicts are avoided among them. The European Union Project was initiated by the French foreign affairs minister Aristide Briand in 1930, when he put forward an original proposal for a new economic union of Europe. The project was given a strong support by Romanian diplomat Nicolae Titulescu, in his position as a president of the General Assembly of Society of Nations. From that time to the nowadays European Union as in the present, there was a long road to be gone through.

The first steps were done in 1950, when the European Coal and Steel Community begin to bring together European countries not only economically, but also politically, with the aim of ending "age-old rivalries" and creating a Union that builds cooperation between former rivals. The six founders are Belgium, France, Germany, Italy, Luxembourg and the Netherlands. In 1957, they sign the Treaty of Rome, forming the European Economic Community (EEC), or so called 'the Common Market'.

Fig. 1: The EEC - 1967[4]

Fig. 2: The European Union 28 members[5]

The number of member states raises to nine, on 1 January 1973, when Denmark, Ireland and the United Kingdom join the European Union. The next member is Greece, in 1981, followed by Spain and Portugal five years later.

Austria, Finland and Sweden become the new members of the EU in 1995, afterwards the biggest enlargement in respect of people and number of countries occurs in 2004, when 10 new countries join the EU (Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovakia and Slovenia). This was followed by two more in 2007 (Bulgaria and Romania) and one in 2013 (Croatia), raising the number of member states to 28 countries.

1.2. Wider European Union - Beyond the Union borders

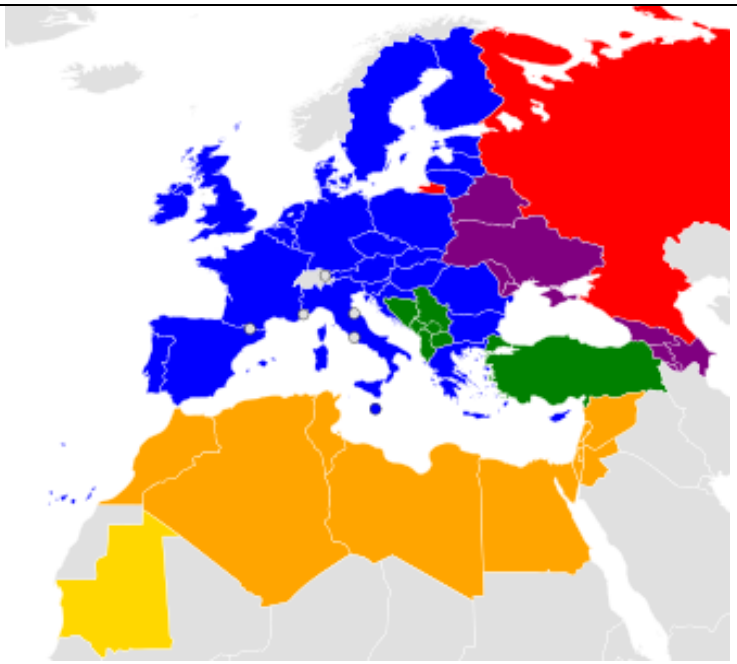

Fig. 3: EU European Neighbourhood Policy[6]

EU member states

Enlargement agenda

ENP East

Russia

ENP South

Other Union for the Mediterranean member states

The enlargement of the European Union brought up the necessity to institute a deeper relation with its neighbouring countries, offering closer relations and dedicating more attention

and energy to utilize aid and support to the countries with which it shares its borders. *„These countries in Eastern Europe, Southern Caucasus, the Middle East and Northern Africa confront the EU with (common) challenges such as minority issues, illegal migration, security issues, environmental degradation, and economic and institutional instability."* [7]

In November 1995, it is launched The Barcelona Process, an Euro-Mediterranean Partnership based on the principles of joint ownership, dialogue and co-operation, intended to generate a Mediterranean region identified with peace, security and shared prosperity. This partnership becomes in 2008 the Union for the Mediterranean, consisting now of the 28 member states of the European Union and 15 Mediterranean partner countries from North Africa, the Middle East and Southeast Europe.

The Union launches in 2004 the European Neighbourhood Policy (ENP), developed with partner countries from the South and the East, in order to attain close political association and profound economic integration. This objective is mainly based on EU political pillars and values: common interests, democracy, the rule of law, respect for human rights and social cohesion.

ENP endorses the EU's relations with 16 of the EU's closest Southern and Eastern Neighbours: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria and Tunisia (to the South) and Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine (to the East). Russia is not a part of the ENP, yet takes part in Cross-Border Cooperation activities under the ENP frame.

Over time, there were two instruments used for founding the programmes developed under ENP: *„the European Neighbourhood and Partnership Instrument (ENPI), which started in 2007 and had a budget of €11.2 billion, and the more policy-driven European Neighbourhood Instrument (ENI), effective from 2014 to 2020, with a budget of €15.4 billion. ENI will build on and strengthen some of the key features of the ENPI, notably greater differentiation between countries based on their progress with reforms. "* [8]

In 2011, the EU introduced the more-for-more principle: the countries making more steps forward in implementing democratic reforms will be offered stronger partnerships and higher support for their efforts. These countries have to prove a noteworthy commitment for promoting *„free and fair elections, freedom of expression, of assembly and of association, judicial independence, fight against corruption and democratic control over the armed forces."* [9]

2. THE EASTERN PARTNERSHIP PROJECT AND ITS OPPORTUNITIES

The EU's Eastern Partnership (EaP) project is a part of the renewed ENP, in order to accelerate political association and economic integration between the European Union and Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. It was launched in 2009 at the EU Prague Summit, aiming to bring the Eastern European partners closer to the EU, and to support and encourage reforms in the EaP countries.

For the time being, EaP offers two stages on liaisons amid UE and Eastern partners. The relations between the EU and Georgia, the Republic of Moldova and Ukraine have reached a major level, once The Association Agreements / Deep and Comprehensive Free Trade Areas (AA/DCFTAs) were concluded in 2014. These agreements compile a range of plans seeking to align partner countries with the EU, in terms of their legislation and standards, and to improve peoples' lives in a significant way.

In the same time, the EU develops a more differentiated and tailored approach to relations with Armenia, Azerbaijan and Belarus. *„Armenia's closer political association and economic cooperation with the EU will take account of Armenia's other international commitments. The EU is discussing a closer relationship with Azerbaijan, which reflects respective interests and values. The EU is also deepening, in carefully calibrated mutual steps, its critical engagement with Belarus."* [10]

Based on the already mentioned more-for-more concept, the EU proved to be the major source of funding the regional cooperation programs concerning these six Eastern countries. *„Overall, EUR 3.2 billion has been made available to the EaP countries since the launch of the Partnership up to now: nearly EUR 2.5 billion from the ENPI in 2010-2013 and EUR 730 million from the ENI in 2014."* [11]

Since 2014, the main effort of EU budgetary support has been directed to stabilize Ukraine's economy, which faces an unprecedented energy crisis and is confronted with a severely increased instability. In the same time, the EU focused its financial measures to realizing new investments in Georgia and the Republic of Moldova, in order to help small businesses grow and prepare for the market opportunities of the Deep and Comprehensive Free Trade Areas with the EU. In this respect, the EU collaborated with European banks and local financial institutions, offering private investors, including small businesses and families, an easy access and fair opportunities to make more accessible loan-financing.

Among multitudinous programmes developed by UE within the EaP, the most worthwhile could be empanelled from two UE official publications: *Panorama of EU Regional Programmes and Projects Eastern Partnership and Russia* [12] and *Projects in Action 3/ EU Eastern neighbourhood.* [13] (See annex 1). They cover various domains, as following:

- Democracy, good governance and stability:
- ✓ *Integrated border management,*
- ✓ *Justice and rule of law.*
- Social and human development:
- ✓ *Culture and Media,*
- ✓ *Youth,*
- ✓ *Civil society and local authorities,*
- ✓ *Education.*
- Economic integration and sustainable development
- ✓ *Economy,*
- ✓ *Environment and climate change,*
- ✓ *Civil protection,*
- ✓ *Energy,*
- ✓ *Transport.*

Beside the above mentioned programmes, the EU sustained as a main objective the freedom of movement within the European Union territory. Since April 2014, citizens of the Republic of Moldova possessing biometric passports are the beneficiaries of a visa-free regime in the EU. Implementation of similar visa liberalisation action plans is ongoing in Georgia and Ukraine, while visa facilitation agreements are developed with the other Eastern European partners, conducive to more affordable visas and simpler application process.

On the other hand, an essential element of the EU cooperation with the EaP countries is the improved energy infrastructure and the secure energy status of partner countries. Romania and the Republic of Moldova realised new electricity and gas connections, proving the significance in this regard. Another key development is the coaction of Azerbaijan and other countries for enabling the Southern Gas Corridor, a key project with foremost utility in the region.

Nevertheless, through the Eastern Partnership Transport Network, the transport links between the EU and partner countries are growing to be not only safer, but also more efficient, hence being a factor to increase both trade and economic prosperity for neighbourhood citizens.

All the above are to point up the EU enduring objective of avoiding the outgrowth of new dividing lines to its neighbours and of putting into effect values of democracy, rule of law and respect of human rights, as only way to bring the prosperity, stability and security of all.

3. THE EASTERN PARTNERSHIP PROJECT AND ITS CHALLENGES

3.1. Latest regional developments as reason for a new ENP

Over the past ten years, there have been significant political developments in the EU neighbourhood. *„Today's neighbourhood is less stable than it was ten years ago. For example, in the East, growing challenges to a number of Eastern Partnership countries, from the crisis in Georgia in 2008 to the on-going conflict in Ukraine, have been caused by an increasingly assertive Russian foreign policy, which has also resulted in exacerbating divisions between Russia and the EU."* [14]

The President of the European Commission Jean-Claude Juncker decided, in 2014, after consulting of the EU member states, that the European Neighbourhood Policy (ENP) should be reviewed. Consequently, the EU High Representative for Foreign Affairs and Security Policy and the European Commissioner for Neighbourhood Policy and Enlargement Negotiations started consultations in March 2015 to define the compulsory policy improvements by asking: *should the ENP be maintained?* In this regard, they called for consultations about the future shape of the ENP and issued a Joint Consultation Paper, entitled: *Towards a new European Neighbourhood Policy.*

The ongoing answer process has involved many institutions, organizations, think tanks etc, whose papers are trying to enclose the necessary approach of further neighbourhood policy regarding the eastern partners. [15]

But what are the reasons entailing such a large public debate expected to endow with decisive solutions meant to shape the EU foreign policy?

Especially in the Eastern part, the ENP copes with an environment that has severely depreciated, due to latest political events or, what is more, because ghosts of the past are dug up. Only Moldova, Georgia and in some way Ukraine can now be regarded as EU partners and

member states aspirants, once they signed the Association Agreements / Deep and Comprehensive Free Trade Areas (AA/DCFTAs) and completed considerable steps in implementing the necessary EU standards and requirements. On the other hand, Belarus and Armenia do not want any longer to develop a closer approach towards the EU. They dropped the developing association process and joined the Eurasian Custom Union, formed by Russia and Kazakhstan. In the same time, Azerbaijan decided 'to make no decision', balancing both the EU and Russia, and trying to get the most convenient opportunity, depending on regional economical and political evolution.

Actually, a lot of difficulties on the way to strengthen the relation between EU and its Eastern Neighbourhood outcome from unrest incited in the area, having Russia as a crucial originator. The list of such relevant conflicts should start with the outburst of the Russian - Georgian War in 2008, as a result of the involvement of Moscow with the breakaway regions South Ossetia and Abkhazia.

Following it, the most severe event having occurred since then is the Annexation of Crimea Region by the Russian Federation, in 2014, followed by heavy Russian military support provided to the separatist forces operating in Eastern part of Ukraine, which impaled Ukrainian authorities to offer wider autonomy to its Donetsk and Luhansk regions.

Nevertheless, the Eastern neighbourhood worseness is also a consequence of Russian strain to reclaim the influence on former Soviet Union states. The EaP frailty comes from frozen conflicts causing domestic vulnerabilities like in the Republic of Moldova (Transnistria), Georgia (South Ossetia and Abkhazia), Armenia and Azerbaijan (Nagorno Karabach), where Russian forceful action is to be considered beyond any doubts.

Furthermore, right there are countries with a large number of Russian speaking minorities, which enhance national disturbance and are linked to autonomist movement (Moldova, Ukraine, Georgia), or countries that still have Russian military presence on their territories (Moldova, in Transnistria region).

There shouldn't be neglected the compelling measures taken by Moscow regarding the strategic communication. Russian television consists of government - funded TV stations, broadcast in several important languages as English, German, French, Spanish or Arabic, with a firmly expansion of their operations. *„Russian disinformation targets not only the Russian population, but also Russian-speaking minorities in neighbouring countries and in the EU (the*

Baltic countries), as well as the wider audiences of neighbouring countries with historic sympathies for Russia (such as Bulgaria). And, finally, they are also aimed at Western audiences, which appear increasingly vulnerable to populism." [16]

3.2. The new ENP and Eastern Neighbourhood solutions

It has been considered that promoting a policy based on European standards, norms and reforms will undoubtedly work. After the Euromaidan movement, the Ukrainians' expressed and defended their right to build a less corrupt and better governed country, seeking an major EU's assistance in this attempt. In Georgia and Moldova, the prodemocracy way brought really peaceful transition of political power. Actually, the EU represents *„an important point of reference for prodemocracy advocates and the EaP today is an anchor for reform. The more consistent the EU is in taking a firm and principled approach in relations with partner governments, the more it strengthens these reform agents."* [17]

Let's try to outline, what is to be done by EU once Eastern neighbourhood conditions have become more difficult? First key issue is that the EU is a powerful political competitor because of the values and principles it promotes, and it should not backtrack on its aspiration. In addition, the EaP is essential to maintain its sustainment for the EU's commitment to the neighbours' sovereignty and the right to make their own foreign policy choices.

Certainly, the EU should develop and maintain two ways of approaching the Eastern Neighbours, according to their response to EaP policy.

First of all, it has to be taken into account that the implementation of the AA and the DCFTA is an enormous challenge, and the EU supports these efforts. The EU has to focus not only on providing technical assistance, but also on supporting the political processes in Ukraine, Moldova and Georgia.

Therefore, UE is to reaffirm and support those states' sovereign right to engage in closer relations, even the EU membership, under condition and at the moment they meet the criteria.

But beyond of political support offered, the *EU „should learn its lesson from "bad practice" cases such as Moldova, where a corrupt governmental coalition made an effort at pro-European window-dressing at the same time compromising the EU and its values in the eyes of society".* [18]

It is to be understood that a corrupted government system and a society lacking of rule of law will hamper the entire array of democratic reforms even in the countries which are applying EU agreements, as much as the Russian aggression actions in the region. The EU has to closely monitor the implementation of agreements with Georgia, Moldova and Ukraine, emphasising its concrete advantages and keeping on providing the necessary political and technical support.

Secondly, EU policy should not demote relations with Azerbaijan, Belarus and Armenia. In this respect, it should be maintained all proposals previously included in the earlier EaP: full association agreements, visa liberalisation and membership of the Energy Community.

The EU policy towards its neighbours should seriously take into account the influence of the third parties involved, namely Russia. It is known that Russia is attempting to influence the situation in the EaP countries by undermining the European security architecture. The EU response is defined by economic sanctions, which it should continue using more wisely.

Following Russia's illegal annexation of Crimea and Eastern Ukraine interfering, all talks on visas and a new EU-Russia agreement were suspended, as well as the most EU-Russia cooperation programmes.

However, if Russia proves to obey the rules set by international law, future cooperation is possible. EU is to go on developing programmes based on cooperation towards Russia, without compromising European values.

4. EU - NATO COOPERATION AND EASTERN ENP

The NATO Secretary General Jens Stoltenberg addressed on 30 March 2015 the European Parliament in Brussels, stressing the need for deeper *cooperation* between the NATO Alliance and the EU. This was an adding on a long list of declarations, initiatives and agreements, meant to improve the relationship between the two organisations, based on their strategic partnership. They started as early as 1991, *„when the Declaration on Peace and Cooperation adopted at NATO's Rome summit called for a framework of interlocking institutions with complementary roles of security organizations."* [19]

Although the EU and NATO policies are based on the same principles - freedom and democracy, human rights and the rule of law, they are organisations with different memberships, mandates and instruments. NATO remains a political and military organization, designed as a system of collective defence. It is an alliance of countries from Europe and North America,

providing consultation and cooperation in the domain of defence and security, and accomplishing multinational crisis-management operations.

On the other hand, the EU is a politico-economic union, which mainly operates on the field of diplomacy and seeks the regional integration and the general development of its members and neighbours. Nevertheless, the EU developed a security component which was independent from NATO's, The Common Security and Defence Policy (CSDP), an instrument designed to offer the union a military strength, and consisting of HQs, centres and agencies able to command armed forces in up-to-medium-sized military operations. But ESDP and NATO remain companions, not competitors, since a European army as a long-term project has not been built so far.

As o consequence of all these, why is to be now, after almost 25 years, a better moment for a real tightening up of the relations between NATO and EU? Is the always - claimed strategic partnership a stringent need in nowadays circumstances?

Actually, the current crises in our neighbourhood *„are likely to become more complex, less predictable and more susceptible to unconventional and asymmetric challenges such as hybrid and cyber warfare. With the changed security reality, brought about by instability in Europe's Eastern and Southern neighbourhoods, the strong transatlantic relationship, including through EU-NATO relations, also remains essential and represents now more than ever one of the key elements of the partnership.“* [20]

It was a certainty that Moscow would struggle against Western liberal democracy accessing the old USSR Empire, attempting to re-establish a Soviet-era sphere of influence. While the EU was strengthening the efforts to bring closer the EaP partners, NATO was doing little in Eastern Europe. Moreover, NATO decided in 2008, at the Bucharest summit, against an outline of Ukraine and Georgia truthful roadmap to their membership. That happened just after the previous NATO ministerial meeting concluded that both countries should have become full members on some future day.

In the last years, Russia increased its military influence in Eastern Europe. This was revealed mainly by annexation of Crimea and by supporting the separatist forces in Eastern Ukraine. Previously, Moscow had enhanced its presence in Abkhazia and South Ossetia, the territories of Georgia occupied in 2008. In addition, Russia's interfering in Moldova extended even beyond the breakaway region of Transnistria.

Meanwhile, there were no talks about bringing the EaP countries closer to the alliance. *„Any mention of opening the door to membership is out of the question. As in the European Union, which is unlikely to admit any new members in the foreseeable future, it's as if NATO enlargement is taboo. "*[21]

There were several reasons for NATO playing down its relationships with Eastern Europe. Maybe the most important one was the urge of the principal European members of the alliance to not alienate Russia in any way. Thus, NATO forfeited its spheres of influence in this part of Europe, allowing Kremlin to undisturbedly play its role.

But the severe Ukraine crisis brought a strong need for responding to Russian aggressions. The EU answer was focused on constant economic sanctions and obstinate diplomatic measures. NATO hade to switch on thoroughly reconsidering its attitude and bringing up significant decisions, based on alliance military instruments, in order to increase conventional military measures to demonstrate readiness and reassurance for the Allies. *„The backbone of NATO's response is the so-called Readiness Action Plan (RAP) and within this framework a Very High Readiness Joint Task Force (VJTF) has been created. Several European Allies will assume the rotating responsibility for this 'spearhead force', acknowledging that Europe's defence needs have been altered significantly. "*[22]

What is to acutely be taken into account by NATO is its response against Kremlin's activist hybrid threat, *„using all available means, from hard power to soft force and from overtly demonstrating with armed forces to covertly using military means. "*[23]

However, the EU and NATO should entirely harmonize the timing and the nature of actions to be taken. *„Such close coordination will transmit the signal of a unified stance and optimise the chances of a real impact. To facilitate such coordination all members of the two organisations should try to agree on a set of common criteria for escalatory and de-escalatory steps. The EU High Representative and the NATO Secretary-General could propose a first draft of such a set of criteria, related to the different and complementary sectors of responsibility of both organisations "*[24]

CONCLUSIONS

The European Neighbourhood Policy (ENP) is a foreign affairs tool developed by the EU, aiming to bring closer those states to the East and South of the European territory to the

Union. These states are basically developing countries, and some of them seek either to turn into a member state or to be closely integrated with the European Union.

As a part of ENP, the Eastern Partnership (EaP) is governing the EU liaison with thepost-Soviet states of Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine, designed to make available the appropriate means for dialogue regarding democracy, rules of law and citizen freedom, and other issues supporting countries development, as trade, economic strategy, travel agreements etc.

With the new security challenges recently perceived, for instance those caused by Russia in the East and the spread of extremist movements in the South, the EU member states have come to a decision to reconsider and improve the neighbourhood policy as it used to be. They started consultations to define the compulsory policy improvements by asking*: should the ENP be maintained?* The large consultation process is aimed to shape a new ENP and respond to a dramatically changed situation to that existing at the initiation of the European Neighbourhood Policy or Eastern Partnership.

Nevertheless, both the EU and NATO should adjust not only the approach regarding their relationship with Eastern neighbours, but also the attitude against Russian aggression in the region. Essential steps have been made, and especially NATO efforts are visible. But, moreover, there is a need for the UE and NATO to ensure a precisely coordinated and well timed action, as the only way to become a powerful and overwhelming force. It is the main responsibility of all member states of both organisations to bring this to pass, by leaving behind the ghosts of the past and by concentrating on the worldwide highly important requirements of today and tomorrow.

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- Centre for European Policy Studies, Brussels, Belgium
- Swedish International Development Cooperation Agency, Stockholm, Sweden

- European Council on Foreign Relations / ecfr.eu
- Global Europe Centre – University of Kent, CanterburyEngland,
- Fondation Robert Schuman, Paris / Brussels
- Friedrich-Ebert-Stiftung Institut, Berlin, Germany,
- Stefan Batory Foundation, Warsaw, Poland,
- Institut für Europäische Politik (IEP), Berlin, Germany,
- Romanian Center for European Policies (CRPE), Bucharest,
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THE ROLE OF THE EDA IN THE EU DEFENSE COOPERATION PLANNING FOR AN EFFECTIVE COMMUNICATION. THE NATO PERSPECTIVE

LTC. Adrian Gheorghe BOCHIS

No matter what domain you choose nowadays, business, politics, sports or the military, the key to succes has something to do with communication. Greatest leaders of the world were first rate communicators, and now, at the wake of 21st century that iphothesis is more than ever valid.

So, how to be an effective communicator? Basically, is not a big deal: plan and prepare very well how your communication will stand, deliver the message in the best manner possible, and be ready to receive the feedback. Unfortunately that is another big and fatal mistake many leaders do: they use to forget communication is a two ways process. They to often forget that it is not enough to speak clearly; you have to make sure you're being heard and understood. Those are conditions at a first glance. To handle all in the real life, is not so easy. As all domains in which a mix of modern concepts and ideas are present, PR, or PA (Public Affairs) need systematization.

First of all, let's see what is the difference between PR and PA, because, both dealing with the public, there are some confusions regarding their functions.

Looking for a definition to best match both concepts, maybe that one offer by Cutlip, Center, and Broom (2006) id the most appropriate: *Public Relations represent a management function that identifies, evaluates and maintains mutual benefits between an organization and the publics on whom its success or failure depends.*[1]

So booth is building relationships with the public, and are using different panels of strategies, but their approach differ.

Public Affairs relates to matters that concern the public directly. From this point of view is strongly public orientated, in terms of legislation, policies applied in various public sectors (including military) and many other elements.

Regarding from the same angle, Public Relations, put at the core of its function the link between the organization and the public. Connection is the key word of public relations firms could enhance and strengthen that relationship by implementing marketing and campaigning policies or through other dynamic means, especially media. Therefore, some specialists often declare PR is a kind of extension of the advertising department.

PUBLIC AFFAIRS IN NATO

As Admiral Giampaolo di Paola, Chairman of NATO's Military Committee stated in 2011, when NATO Military Policy on Public Affairs was approved, the Alliance's public *have the democratic right to know what the Alliance is doing on their behalf and why. NATO therefore has an obligation to inform about its policies and activities, and especially about its operations. At the same time, information is only credible if it is accurate and timely. Providing this information is the role of the NATO military Public Affairs Officer. It requires high professionalism, an analytical mind, and strong commitment.*[2]

The information environment is changing drastically at an incredible rate. Probably is the most rapid change in all human history. Especially in communications technology, a continuous flow of information of all kinds, some accurate, some less are flooding the peoples minds, through media or internet. How do people can differentiate what is true and what is not? Who can they trust in seeking answers to their questions? Today we can say no more someone has the monopol of information. Neither the truth, because every entity will claim the single truth is on its side. A vast web of social networks now reach out even to the most remote populations. Quantity and diversity of information, however, represent in the same the vulnerabilities of information environment, and definitely neither the huge quantity neither the vast diversity of news cannot be considered a sure roadmap to the truth.

To demonstrate its credibility and relevance NATO must disseminate accurate information in a coherent and coordinated manner. And in thet matter, Military Public Affairs plays a central role.

Mission

The mission of NATO military PA is to support commanders by communicating accurate information in a timely manner to audiences to improve public awareness and understanding of the military aspects of the Alliance's role, aims, operations, missions, activities and issues. In other terms, public affairs are to enhance the credibility of NATO as an organization. Audiences can be allied, international, regional, local or internal, depending on the issue or activity.[3]

Functions

The three basic functions of NATO military Public Affairs are:

a. External Communications – the most important util to performe an efficient external communication is that through Media Relations activities, wich are designed to provide information through all mass communication means to NATO audiences. Technically, NATO's designated staff , under PAO guidance respond to media inquiries; issue statements; conduct briefings and interviews; arrange for access to permanent and operational units; and distribute information including imagery, all as a means to develop relations with the journalists and the consumers of news.

NATO organise also outreach activities in order to foster strategic relations with key external stakeholders, who have an interest in military issues and activities. They are often invited to comment as unbiased subject matter experts in the field of security and defence policy, and more specifically on NATO policy, decisions and actions, and can therefore provide a sustainable "force multiplier" effect.

b. Internal Communications efforts facilitate communication with and among NATO military and civilian personnel and their families. Its purpose is to inform about the command or HQ, its people and its activities, and is distinct from administrative information or direction from the chain of command that is normally found in administrative or routine orders. Effective programs to keep internal audiences informed about significant developments that affect them and the work of their HQ creates an awareness of the organisation's goals and activities, improves work quality, and makes command personnel more effective representatives of the organisation.

c. Community Relations in other words the interaction between NATO military installations in NATO member states and their surrounding civilian communities. These programs can take the form of addressing issues of interest to and fostering relations with the general public.

Responsabilities

Like other vital elements of the military system, NATO military PA is a command responsibility at all levels. Practitioners are directly responsible to their respective commanders for the conduct of PA activities, and responsive to guidance from the PA function at higher HQs.

PA GUIDANCE, STRUCTURE AND RESOURCING

The North Atlantic Council provides overall guidance and direction for Strategic Communications which include NATO public diplomacy efforts, military Public Affairs, as well as mission-specific strategic and political guidance for NATO military information activities . According to the NATO StratCom Policy, the Assistant Secretary General for Public Diplomacy (ASG/PDD) is responsible for the coordination of StratCom activities across all NATO civilian and military bodies and commands, and also directs all public diplomacy activities except press and media. Detailed day-to-day media relations and messaging guidance to NATO military PA through the chain of command, either to SHAPE for operational matters or to ACT for transformation issues, are directed by the NATO Spokesperson on behalf of the Secretary General.[4]

The Military Committee establishes overall policy for NATO military PA. The Chairman of the Military Committee is the principal military spokesperson for the Alliance on all military issues.

The Strategic Commanders provide overall guidance and direction on military PA within their respective areas of responsibility. Supreme Allied Commander Europe is the principal military spokesperson for NATO operations. Supreme Allied Commander Transformation is the principal military spokesperson for NATO transformation.

NATO military PA works on behalf of all member nations to promote public awareness of the Alliance, as well as to inform internal NATO audiences. NATO’s Chiefs Public Affairs Officers may develop and promulgate Public Affairs Guidance (PAG) to address issues not described or forecast in existing operational plans or strategies. Usually, PAGs will recommend the approach, summarize the issue, identify the lead organisation(s), identify spokespersons, list messages and provide coordinating instructions.

All NATO HQs have a PA function, but personnel and financial requirements can vary. The PA function needs to be sufficiently staffed with trained and experienced personnel and resourced to meet the operational and policy issue tempo of the headquarters and its activities.

The minimum capability requirement includes:

- PA plans and policies
- Media operations
- Media monitoring and analysis
- Production (writing, imagery, and web services).

Nowadays media environment is one of the most complex and sensitive, therefore operating successfully in it requires specialised training and finest communication skills. Public Affairs Officers serving for NATO have to be able work in many cases at the strategic, operational, and tactical levels. Allied nations are encouraged therefore to develop national military PA capability and to recruit, educate, train, employ and promote within the profession in order to build the experienced capability required for this specialised discipline. Training should recognise the high potential for employment in operations in a joint, multinational environment. At the same time, shortfalls should be constantly monitored in NATO HQs and in operational theatres, both in quality and quantity.

The Chief PAO, as the principal advisor on PA matters and official spokesperson reports directly to the commander. All supporting PA activities should be organised under the PAO and as a general rule, cannot be further delegated or subordinated to other staff functions.

MILITARY PA PLANNING

Planning and preparation are key to success in any military operation. This is likewise true with Military PA. PAOs must develop detailed, easily understood plans in order to be effective.

NATO policy is to release accurate information with the minimum of delay that is consistent with operational security and propriety. The PA approach for each activity or situation needs to be assessed on a case-by-case basis, being attentive to the public and external/internal audience interest, and is informed by PA considerations of good issue management and security.

Military Public Affairs strategies and plans are designed and developed in support of organisational objectives, consistent with the StratCom policy for the HQ, command or operation. It is of major importance that planning to be effective at the earliest possible stages.

The most important products of Military PA are PA Strategy, PA Guidance (PAG) and PA Plan

- PA Strategy –a document wich provides a broad approach that sets overall themes and goals, usually for long term. The strategy should include enduring themes and overarching messages. Action-oriented PA plans derive their guidance from PA strategies approved by higher authorities.
- PA Guidance (PAG) represents a brief package of information provided as

guidance to support the public discussion of organisational issues and events. Such guidance can range from a prescribed response to a specific question to a more comprehensive package. Included could be an approved Military PA policy, news statements, answers to anticipated media questions, and community relations guidance. The PAG also addresses the method(s), timing, location, and other details governing the release of information to the public.

- Messaging Products. Frequently, situations will dictate an immediate need for media response lines (MRLs), talking points (TPs), or lines to take (LTTs). These products do not constitute PA plans or PAG in that they do not address issues such as timings, coordination measures or provide issue context to the PA practitioner.

PUBLIC AFFAIRS PLANS

PA plans consit of the details relating to the planning and conduct of a Military PA-related activity; in other words the ‘execution’ guidance detailing the “why, what, where, when, how and by whom”..

Plans should clearly identify:

- key themes,
- messages,
- objectives,
- responsibilities
- resources required.

Before elaborating a strategy, the PAO will conduct a serious analysis of the PA environment from the perspective of both internal and external communication. As a standard procedure, master messages coming from higher NATO political and military authorities will be included and used in subordinate PA strategies and plans. Furthermore, PA activities should be regularly evaluated for effectiveness, reporting status to the higher echelon and adjusted as required to meet evolving circumstances.

PA planning work must be integrated with the command's staff as well as the higher and subordinate headquarters. In order to achieve this, PA section must maintain an active presence in the various planning cells and working groups within the headquarters to ensure that PA is planned and integrated into all ongoing and future operations. For the succes of the plannig work, that stage of ntegration should be considered as critical.

Every NATO operation and important activity have a PA plan detailing the objectives of the Military PA activity, the intent of the programmed activities, the Military PA approach to be taken, and the tools and resources needed to communicate. The general goal of the PA plan is to support the overall mission. Therefore all NATO plans and their respectively products (namely warning orders, OPLANs, OPORDs or fragmentary orders, FRAGOs) are having a special annex dedicated to Military PA.At strategic level, the PA annex will be put forward to the NAC for approval and at tactical level it is required a formal approval from the next-superior level of command.

Military PA planning process is a cycle just like other commonly used targeting models. Changes can only be made through critical feedback and analysis. Plans readjusting are to be made just after that kind of analysyis. Key to the success of PA planning is to ensure that the Military PA aspects are integrated and synchronised with the larger plan and that the PA plan is signed and issued through both the Operations and Command groups.

Regardless of the model, the following key questions guide all Military PA planning:

- Who is your audience?
- Why are you communicating? – what effect is sought?
- What is the overall environment into which you are communicating?
- What is your message?
- How are you going to tell it?
- When are you going to tell it?

- How do you measure progress or success?
- Are there security, privacy or other limiting factors?
- How does this fit into the overall NATO picture, the StratCom framework. [5]

Communication during crisis

World is under continuos change and not everytime those changes are smooth. Unforeseen events occur even when there is a very small probability to do that. Sometimes these events are so serious or severe that they challenge the future or legitimacy of an organisation. For these circumstances, there is a need for managing the crisis before it becomes overwhelming.

PLANNING FOR THE WORST

Contingency planning is necessary in order to adress to anticipate potential events. If for instance, an operation is conducted in an area known for natural disasters, the planners will develop contingency plans to deal with this event, should it happen. The importance resides in the rapidity to act and to keep such emergencies from developing into a crisis. Contingencies should be rank ordered by probability and by severity. From a Military PA standpoint, an event which has a very high likelihood of occurring but little to no impact on the operation or public opinion should be ranked as a low priority for planning. Conversely, high probability, severe events should get the immediate attention of the planners, including Military PAOs.

HANDLE THE CRISIS

Issue and crisis management is a significant part of the PA planning process. Every issue or event, if not managed properly, could potentiallyescalate into a crisis. Issues and crisis management is a process of identifying a potential issue or crisis and co-ordinating an organisation's response.

Bearing in mind that, with al prevoious planning and preparation issues and crises will always occur, the solution is to be ready to reduce the pressure. Therefore, the key is to mitigate the negative impact and to make all efforts possible to solve the problem. Mitigation has to be accompagned by the communication of the organisation's actions effectively and in the most transparent way possible. Addressing the issue or problem is the commander's responsibility with the PAO acting in a supporting role to communicate to the public. A strong and commited

management of the central issue is crucial at this point. Whithout it any PA activity during a crisis cannot be effective and the organisation will eventually lose credibility.

When a crisis erupts, there si a list of mandatory activities which have to be put in place immediately. Responsibles for those actions are all persons which comprises the issue management team, including Commander Officer, PAO, Legal Advisor or respectively Subject Matter Expert (SME).

- Find out what happened.
- Assemble the issues management team
- Define the issue and the organisation's position.
- Determine whether or not there are any legal implications.
- Identify the SME.
- Identify the spokesperson(s); should be the SME.
- Continue to gather information.
- Deploy assets as required and feasible. Ensure assets are briefed on their requirements, are properly resources and have a clear understanding of their purpose. Planning for rapid product return and release is critical.
- Log everything that happens. PAO records are essential in the matter.
- Lateral coordination up the chain of command.
- Develop initial statement.
- Develop any other required PA products such as talking points, news release, backgrounder, etc
- Hold news conference if appropriate.
- Conduct regular briefings to the media
- Call in other resources if the existing team becomes overwhelmed or activate crisis PA planAssign someone as the anticipator to forecast crisis evolution and begin preparations
- Monitor/Analyse media coverage and take corrective action as required.
- Conduct comprehensive After Action Review – Implement lessons learned.[6]

EFFECTIVENESS AND WAY AHEAD

We are living in an unpredictable word, in which the challenges and the threats are more present and divers than any time. Despite this, NATO is now more effective and efficient than at any time in its history [7], due to its continuous strive to transform, to change, to adapt and to incorporate the new realities.

From this regard, NATO Military Public Affairs has been obliged to modernise and to keep the pace with the new technology era, with all its challenges.

So, why NATO proved to be a very efficient and effective Public Affairs machine during past years?

First of all, because top decision makers understood that all NATO activities have a critical information and communications component. From this perspective started the way to improve all aspects of relating with the world in terms of communication, that eventually lead to what nowadays are, in my opinion, NATO's six strong points in communication:

- Clear guidance
- Solid strategies
- Coherent planning
- Adequate resourcing
- Integration
- Dissemination of accurate information in a coherent and coordinated manner.

Now, in the year 2015 NATO is again at a strategic crossroad. For the first time in decades, real debates started about the Alliance's doctrines regarding capabilities. The stabilization operations phase seems to be overpassed by NATO's strategic return and re-focus on collective defence. Are military Public Affairs able to change compass on this issue? As for me, there is only one answer: Affirmative!

CONCLUSIONS

Definitely this area of communication is a very sensitive one. In the modern world of today, it will not be enough to handle the art of mastering words for conveying messages. Effective communication is a combination of various skills, including non-verbals, self-control, team work, problem solving abilities and decision making commitment.

And of course, above all, to be effective means to plan, to be ready to convey the right message of your organisation.

From this regard, NATO is one of the best professionals on the market. Having a strong military background, alongside of course with its political side, as a organization is rather conservative than liberal, NATO learnt how to handle the challenges of global information era. Today the Alliance addresses the challenges with the various information disciplines under the umbrella of Strategic Communication, Public Affairs having a central role in it.

Can be evaluate the effectiveness of NATO communication? It is well known, non lethal effects are not easy to evaluate. However, as long as NATO maintains its credibility as the biggest security system in the world, the mission can be presumed as being accomplished.

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THE NECESSITY OF COST ESTIMATION FOR LIFE CYCLE OF EQUIPMENTS

LTC eng. Petrica Iulian BUZULICA

Military capabilities are inextricably linked to critical equipment that is purchased in the integrated management of defence procurement.

Management of military equipment lifecycle is achieved through a multi-criteria approach, one that allows the optimization of military capabilities. Multi-criteria optimization capabilities is done throughout the lifecycle design of equipment, taking into account: the evolution of operational requirements, costs, deadlines, deadlines for the disposal of bodies to which these capabilities were committed, quality assurance, logistics integrated and sustainable. To ensure multi-criteria optimization of long-term military capabilities, military equipment that underlies these capabilities must be effective, deployable, and capable of operating in the operational environment, reliable, maintainable and interoperable. Any deficiency related to military equipment appeared at one time in one of the areas of interest mentioned can significantly affect military capabilities as a whole and, therefore, the management of equipment life cycle, currently a special meaning to maintain the viability of long-term military capabilities.

Two characteristics are truly essential for military equipment to ensure, on a continuing basis, the sustainability of military capabilities:

a) sustainability including the operation of equipment, integrated logistic support;
b) associated costs that support equipment life-cycle / LCC[1].

Taken together, into account, the interdependencies between them, sustainability of the actionable structure and cost of life cycle, associated with the generation and operating them, define, in an integrated manner, the effectiveness of military capabilities. If a device can be used throughout the life cycle, according to a profile permanently adapted to the operational budget limits, capability or its support can be maintained within certain limits, in the long term.

[1]LCC - life-cycle cost

Experience shows that in terms of budgetary austerity, the planned military capabilities are inevitably competing in the plan to ensure financial resources. If is created the necessary conditions to achieve a planning resource allocation documented, based, coherent and, if possible, more relaxed in terms of the requirements of competition, the main objective of assessment of the costs during the life cycle of equipment is have a long term control, the scale and trends of variation in costs of procurement, operationalization, operation, modernization and recovery.

Continuous development of projects for achieving military equipment, according with levels of defined capability, is the practice most effective for controlling the associated costs, because it allows the required capabilities in step with the most efficient technology and based on the actual amount of available financial resources.

Military equipment costs in the lifecycle / LCC is along with integrated logistics support / ILS[2], an essential component of NATO concept management life cycle equipments / SLCM[3]. SLCM represents all activities throughout the life cycle of military equipment to optimize defence capabilities built on them. ILS is the technical and management process by which financial and logistical support needs of military equipment are identified for the entire life cycle and integrated procurement program content, from its inception until the removal from service of the equipment. The main objective of ILS is to obtain necessary availability, with a minimum life-cycle cost.

ILS is composed of nine elements:

a) maintenance planning;

b) supply;

c) personnel;

d) test and support equipment;

e) configuration management;

f) information and technical data;

g) training and training support;

h) facilities and infrastructure;

i) packing, handling, palletizing, storage and transport.

[2] ILS - integrated logistics support

3 SLCM - System Life Cycle Management

To avoid ambiguities in the interpretation of concepts for domain LCC currently are used a unified terminology. Unified terminology defines the following types of costs:

a) cost dependent of the system / product;

b) costs independent of the system / product;

c) direct costs;

d) indirect costs;

e) variable costs;

f) fixed costs.

Based on the types of costs are defined the following categories of costs:

a) life-cycle cost, LCC;

b) total ownership cost of the holder, TOC[4];

c) whole life cost of the equipment, WLC[5].

The costs of the equipment life cycle, LCC:

LCC = direct costs + indirect costs dependent variables

Indirect costs are independent costs, such as those relating to additional support equipment for general use by staff or additional administrative costs. All indirect costs of activities or resources that are not influenced by the introduction not taken into account when calculating the LCC. LCC includes only costs and introducing new capabilities must form the basis of any analysis of alternatives.

Total Ownership Cost of the equipment owner, TOC:

TOC = LCC + indirect dependent fixed costs

Indirect dependent fixed costs may include: support common equipment costs, administrative staff costs, costs of supplies and ammunition and fuel storage and so on. TOC is used in budgeting activities in comparative analyses carried out on the systems, for optimization and financial analyses.

Whole Life Costing of the equipment, WLC:

WLC = TOC + indirect independent fixed costs

In the WLC, all costs and expenses incurred / made by the organization are assigned to the system in question or the effects produce. WLC represents necessary budgetary allocations for whole system / product and, therefore, enables visibility funding and is used generally to

[4] TOC - total ownership cost of the holder

5 WLC - whole life cost of the equipment

form the strategic vision on the financial implications of a system / product within the organization.

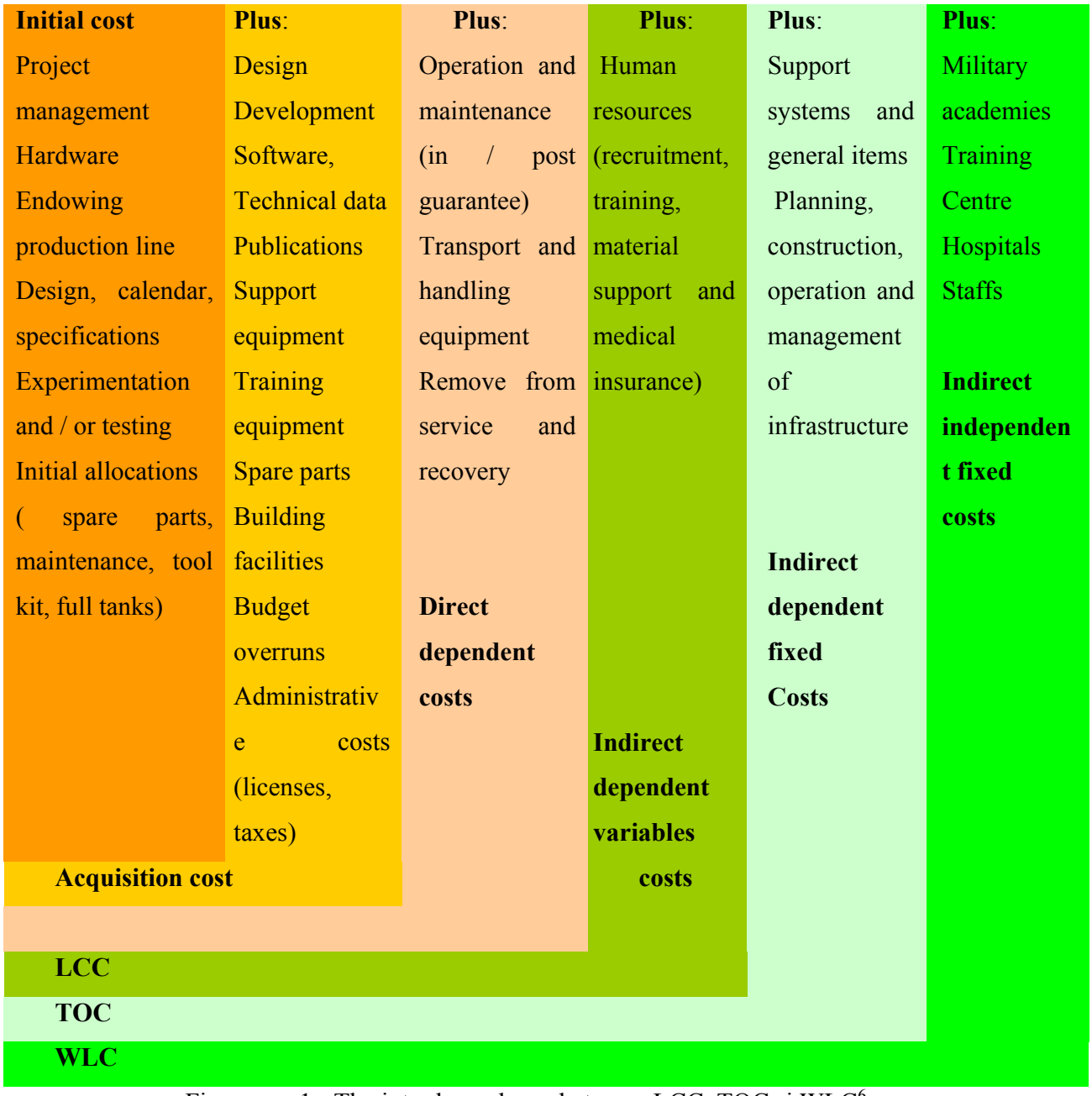

Figure no. 1 - The interdependence between LCC, TOC şi WLC[6]

[6] Adapted from RTO-TR-SAS-054 - *Methods and Models for Life Cycle Costing*

LCC values are used for both analytical work and for forecasting and planning. LCC exact values can be determined only retrospectively after those costs were actually recorded, basis of developments and evaluating activities to which they relate. Especially in the early stages of the program, LCC values must be known before as such activities in order to plan the necessary funds for their support. For this purpose, the costs of future activities may not be known actually, but only predicted / expected. The LCC estimate means the process of assessment by approximating the real value of LCC, based on incomplete data, with the application of specific mathematical procedures.

LCC includes all estimated costs of resources needed to conduct a program of acquisitions following the sequence of specific phases:

a) concept selection study;
b) definition of program / project;
c) technology development;
d) production and installation;
e) operation and support;
f) decommissioning and recovery.

For military equipment, LCC is expected to assist decision-makers involved in the procurement and planning, based on real financial resources, for operation and maintenance once the equipment has already been purchased and placed in the endowment. The estimate LCC can be used to assist in planning decisions on procurement and financial resources, but must be credible. For whatever reason, obtaining an estimated LCC, its purpose that must be taken into account the tasks of organizational entity and strategic goals, as well as the expected benefits through the program development or performance indicators, in order to allow evaluation of the performance / cost of the product / program.

For the estimation of LCC is adopted a sequential procedure, which takes account of the time sequences of the phases of the program.

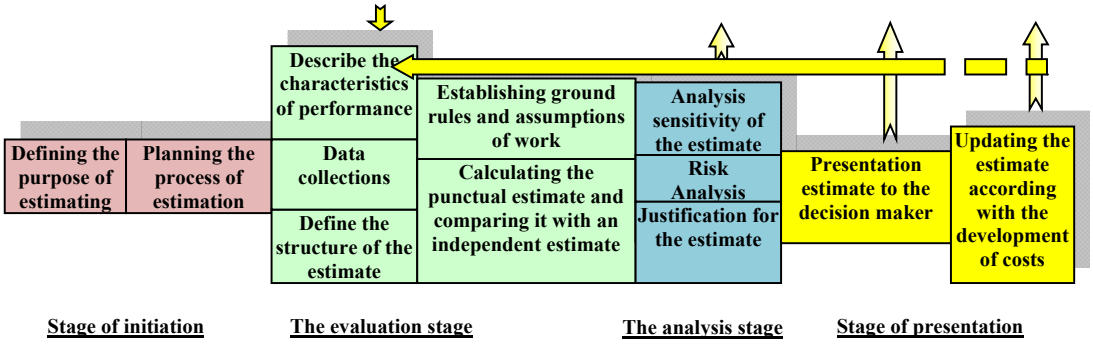

Figure no. 2 - The process for estimating LCC[7]

PREPARATIONS FOR ESTIMATE LIFE-CYCLE COSTS

I.1 SETTING THE DEFINING ELEMENTS OF THE PROCESS OF ESTIMATING LCC

An estimated LCC is an algebraic combination of several expected lower level, which provides a prognosis of the costs on horizon a few years. To obtain a credible estimate, it is necessary that the starting point in the estimation process to be a descriptive documentation, containing at least:

a) the purpose and objectives of the estimation process;

b) description of the system as a set of basic technical and operational data relevant to reference program;

c) the schedule for implementation of the program;

d) the basic rules and assumptions of the estimation process;

e) a statement of the level of detail required: that will contain estimates and that will not contain, how long will be each stage;

f) sources of information that will be used;

g) estimation methodology and justification of choice it;

The level of detail of the estimate LCC must be consistent with the needs of the beneficiary, if by the laws or regulations unless otherwise stated. Accuracy of estimates for all embodiments of the program should be equal / similar in order to facilitate a comparison as unequivocal between them.

[7] Adapted from Instrucţiunea I.1000.2-01 privind Managementul Achiziţiilor pentru Apărare

Process for the estimation LCC had to develop by the program director, with an integrated program support team. In deciding on the level of detail of the estimate LCC should be considered that in most cases, a higher level of detail of the estimate does not necessarily mean a greater accuracy of the estimate LCC. Especially in the early stages of the program, the approach of estimate LCC at too high a level of detail requires the extensive use of the working hypotheses for replace the missing data and information about the characteristics of functional configuration, leading to deterioration of accuracy estimates.

To obtain the estimate LCC they can use the data and information obtained from the producers identified in the market and from databases that contain information about programs or previous contracts. By developing number addictions between functional and cost parameters of the analyzed system and operational and physical parameters of known equipment in the same category, but of a similar complexity, it can aggregate the estimates LCC even without knowing in detail the final operational configuration of equipment.

In the process of defining the scope and level of detail of the estimate, the time allocated for conducting the estimation process is a key factor.

For the time dedicated to estimate, are taken into consideration the following criteria analysis:

a) how to use estimates,
b) who should use
c) who formulated requirement
d) if it is a new estimated or updated one.

For a good management of available time, the team, with the approval of the program manager must develop a plan of activities that include a detailed work graphic, flexible enough so as to create certain time reserves for contingencies.

I.2 SETTING AN INTEGRATED PROGRAM TEAM

In the early stages of acquisition program an estimated LCC is calculated by parametric methods, without knowing the exact physical and final functional configuration for equipment. This induces a high level of uncertainty in the program, especially if it is very complex or if appeals to the latest technologies.

As the estimation of LCC must, ultimately, provide a numerical value that quantifies the actual cost of the equipment in the long term, it becomes tributary to:

a) large quantities of hypotheses;

b) the way in which they are interpreted, in a manner more or less subjective, historical data available;

c) judgment LCC analyst involved in developing of the estimate.

Specialists who are involved in analysing and estimating LCC are established from current staff of the beneficiary unit and constitute integrated program team for costs. Integrated program team is a multidisciplinary team functionally subordinate to the program manager, as far as possible, it is composed of experts with extensive knowledge in the following areas:

a) financial and economic management;
b) technological design;
c) acquisitions;
d) logistics;
e) mathematics / statistics;
f) communications and information;
g) juridical.

It is recommended that at least on line of logistics, procurement, legal and financial expertise, ILS team members for equipment, corresponding domains nominated, have to be appointed to sit also in integrated program team for a consistence approaches into a unified vision. A particular importance for informational management of the process of estimating LCC are cost databases. Their management during the program are set by a chief information officer which will be mandatory part from integrated program team. Integrated program team estimates LCC, based on data and information available.

Estimated thus obtained is then submitted for analysis and review by all entities involved functional:

a) command structure of the beneficiary / operator;
b) economic operators that provide outsourced integrated logistic support packages;
c) execution structure of maintenance beneficiary;
d) structures that will operate the equipment in question.

A high level of confidence of the estimate LCC is obtained if, by conducting the estimation process independently, by two different functional entities and a identical/ close results are obtained. In the operating and support phase the accuracy of the estimate LCC is obtain by the estimation method for design data,, where information about program costs are known and can be discretized until the lowest hierarchical level of elements.

The integrated program team must be able to obtain the estimates LCC on their own, without the involvement of suppliers / contractors in their methods of estimation, algorithms or working hypotheses - the role of contractors is limited, usually, in providing costs.

In selecting the most effective methods of training of the members of the integrated program team, in order to achieve specific tasks, they have taken into account the needs of training in the field of automatic processing of cost information, according with options of beneficiary structures, for the acquisition / development of software tools dedicated estimating LCC.

I.3 DETAILING THE COST STRUCTURE[8]

Defining the cost elements taken into account when a integrated program team analyze an endowment program is made using a cost breakdown structure / CBS[9]. CBS breaks down a program on successive levels of detail until granular structure obtained becomes a useful tool for management control processes. By breaking the program into smaller, simpler elements are facilitated planning and programming activities and allocating resources to achieve it.

LCC may be divided having regard to several criteria. In common, LCC can be divided according to:

a) products / subsystems equipment;

[8] Adapted from Instrucţiunea I.1000.2-01 privind Managementul Achiziţiilor pentru Apărare

[9] CBS - cost breakdown structure

b) activities required to be implemented to develop and operate the system / equipment in the various phases of the program;

c) the resources that support implementation of one or more activities;

d) phases of the program.

CBS specialist recommendation leans towards a structure for product / subsystems equipment, which has proven over the years the most viable and easier to use, fits into the category of good practices.

General activities that are used for the development of CBS are:

a) management;

b) studies and analysis;

c) simulation;

a) systems engineering;

e) design and development;

f) redesign;

g) the acquisition of a shelf product, military and commercial;

h) endowment with capital goods;

i) creating facilities;

j) endowment tools and check devices;

k) manufacture;

l) integration of systems;

m) testing, evaluation, functional tests and acceptance testing of the manufacturer;

n) supply, including packaging, handling, storage and transport;

a) training;

p) installation;

q) receptor activity and operational testing performed by the beneficiary;

r) operation;

s) support missions;

t) maintenance;

u) further training;

v) corrective repair of highly complex, with or without modernization

w) withdrawal from service;

The generic resources that are used for the development of CBS are the following:

a) personnel;

b) equipment;

c) supplies;

a) infrastructure;

e) services;

f) information.

CBS can be structured according to the subsystems of equipments and can be represented as an organizational chart and includes activities and resources in a hierarchical structure, as in the following example:

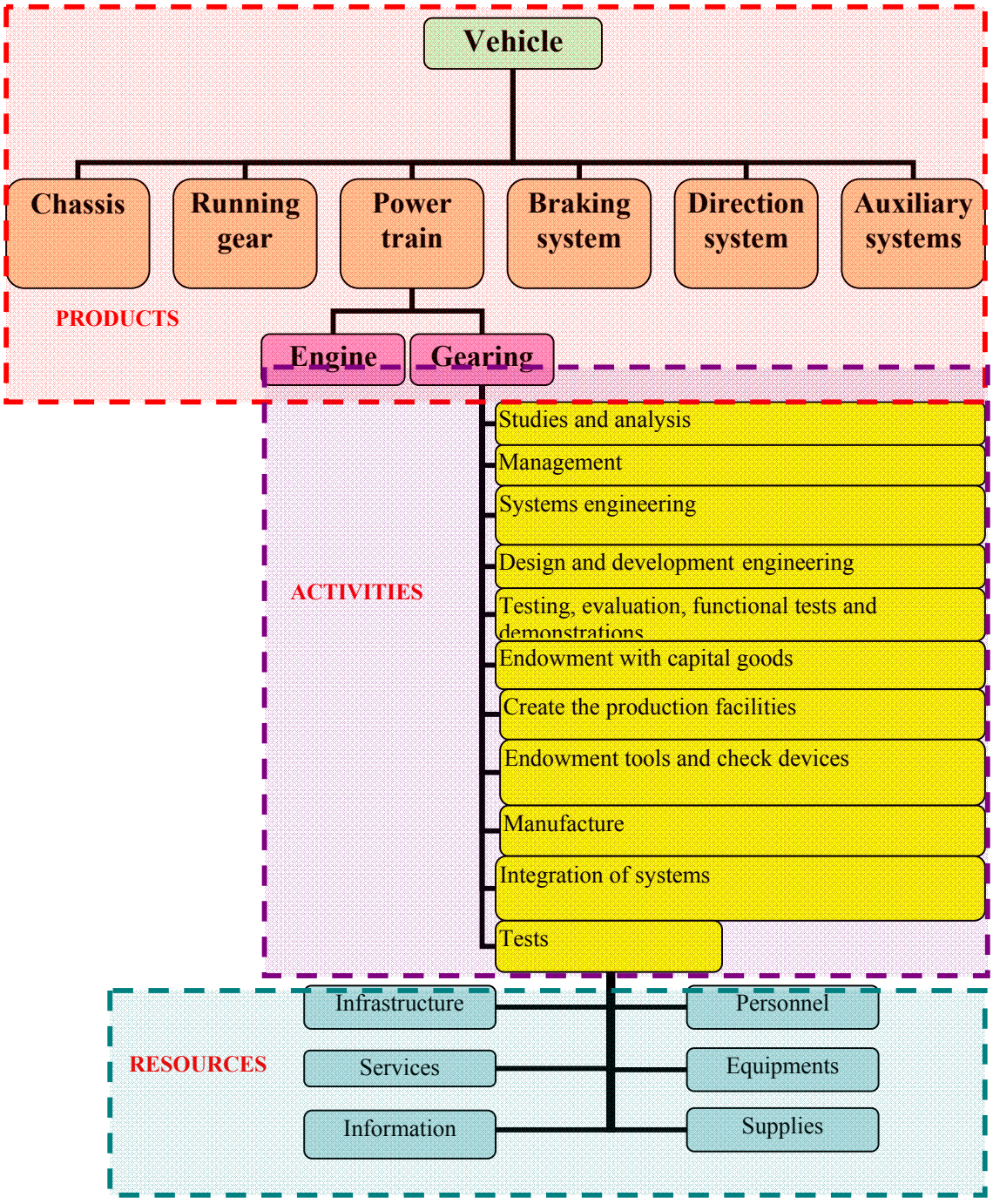

Figure no. 3 - CBS for estimating LCC in phase of technological development[10]

[10] RTO-TR-SAS-076 – *Independent Cost Estimating and the Role of LCC in Capability Portfolio Analysis*, NATO RTO Technical Report

I.4 SETTING GROUND RULES AND ASSUMPTIONS OF WORK

LCC estimates are built, particularly in the initial stages of the program, based on a limited quantity of information. To compensate in these situations, the lack of essential information for conducting the estimation process, it is necessary to formulate such a set of rules to make the connection between the information available and a number of assumptions which provides the basic premise for the estimate LCC building. The ground rules are distinct from assumptions.

The purpose of establishing the ground rules and assumptions is to:

a) make possible to meet the specific requirements of the program decision points;

b) possible answer specific questions for surveillance program team;

c) whole range of initial information available within the estimation process so that the estimates LCC can be built with precision and a high degree of confidence;

d) justify, in a consistent manner the calculations in the estimation process;

e) build a base for future documentation processes for estimating LCC;

f) permit recovery of the estimate CC process, independently, but starting from the same initial data;

g) build a base of justification for risk reduction measures that can be identified and implemented.

The ground rules and assumptions for each program are adapted according to specific determinations that operate in the programs and include:

a) life cycle stages and concept of operation;

b) the concept of execution of the maintenance;

c) acquisition strategy;

d) inherent potential of the industrial base;

e) quantities of experimental models, prototypes, initial production, series production, spare parts;

f) operating and infrastructure support;

g) the existence of identical appearance with elements of design / operation;

h) the availability and maturity of necessary technologies;

i) considerations that were excluded from the estimation process structure.

II. METHODS FOR ESTIMATING THE LIFE CYCLE COSTS

II.1 GENERAL OVERVIEW OF ESTIMATION METHODS

Estimated LCC provided to the decision-maker, is in essence a numerical value that is framed in a range of possible entries and which is characterized by a certain probability of realization. LCC punctual estimator is obtained between the minimum and maximum interval of his possible variation.

To achieve a punctual estimate of LCC, the integrated program team have to do a set of specific activities, as follows:

a) development of the cost model of the equipment,

b) inclusion of all working hypotheses of the cost model;

c) the alignment of estimated costs of CBS elements to a common reference and to the approved program implementation schedule;

d) collection of all the elements CBS estimates for to obtain the LCC estimates.

With punctual LCC estimator developed, integrated program team perform the following activities:

a) verify the LCC estimates, to not hide errors in the calculation algorithm, such as double counting of elements of CBS or omission of others;

b) ensure that the estimates obtained took into account all the essentials elements, if are precise, properly documented and credible;

c) comparing the LCC estimates results with an independent estimates and identify differences;

d) conduct cross-checks of CBS elements that have the most significant influence on LCC values;

e) updates the CBS and document changes from previous estimates results;

After preparing the estimation process the integrated program team selects a method for the development of LCC estimates with the three main methods of estimation:

a) estimation by analogy;
b) parameter estimation;
c) estimates based on design data;

The estimation method is according to the life cycle stage of the program developed.

II.2 ESTIMATION BY ANALOGY METHOD

The estimation by analogy method starts from the assumption that no new program, no matter how advanced as concept and technologically, does not represent a totally different program than those that had preceded it. The estimation method by analogy is using a similar known program costs for to estimate the cost of new components, subsystems or procurement programs in their entirety. The method of estimating by analogy is used in initial stages / phases of endowment programs when not much is known about cost of programs, but the requirements on technical lines and schedule are already defined with sufficient precision to enable necessary adjustments. Adjustments are made as objectively as possible by using scaling factors which take into account differences in size, in operational performance on the line the complexity of the technologies used or the complexity of the equipment.

II.3 PARAMETER ESTIMATION METHOD

Parameter estimation method using regression methods to develop relationships or parametric models for estimation of costs. Relationships and parameter estimation models of costs are equations or systems of equations that are used to estimate the cost of an element of the CBS.

The main advantages of parameter estimation are:

a) capture accurately and fast the value for respectively cost element, on the basis of a limited quantity of information;
b) is a method of objective estimation, based on consistent input data;
c) include standard procedures for checking the validity of the estimate;

II.4 ESTIMATES BASED ON DESIGN DATA METHOD

The estimation method based on design data builds the LCC estimates obtained by summing the partial estimates for CBS elements and sub-elements, as their values come to be known.

Because cost estimates CBS elements and sub elements are obtained by summing the cost materials, workmanship and indirect costs recorded for their achievement, they are strictly dependent on technical-tactical parameters of finished products and reflects a significant measure:

a) economic and financial context of the the relevant time of production / manufacturing, especially on the fiscal line;
b) the principles and procedures followed for the organization of production;
c) the technological level of the products and particularities of concrete design solutions;
d) quantities / series of products manufactured, constructive variants addressed and production schedules that have been imposed.

Estimation method based on design data is predominantly used in the phase of technological development of the finished product to validate constructive solutions on the basis of economic efficiency or the production stage, to frame strict delivery schedule and budget assigned to support production.

III. COMPLETING THE ESTIMATION OF COSTS LIFECYCLE

III.1 VALIDATION OF THE ESTIMATE LCC

A quality estimated of LCC has four characteristics:

a) is comprehensivel;
b) is accurate;
c) is fully justified and reproducible;
d) is credible.

Validation of the estimate LCC for comprehensiveness refers to the following checks:

a) if the manner of approach to the estimation process is consistent in relation to its objectives;
b) if the results of the estimation process are realistic in relation to records of historical data available and prices on the goods and / or services;
c) if all costs involved in the life cycle have been taken into account;
d) if the ground rules and assumptions have justified technical and / or rational;
e) if in the estimate process were eliminated all the prerequisites for multiplication, taking account of costs, especially for elements of the product / system in particular who perform functions in common.

Checking the accuracy of the estimate LCC is the most important step of the validation process. The estimate LCC is accurate when:

a) is not under / over evaluated;

b) is rigorously and take into account the effects of inflation;
c) reflects with accurately the scoreboard resulting from the production and its operational profile;
d) in the estimation process did not crept systematic / random errors;
e) estimation relations used were initially calibrated to at availeble database;
f) cost models used for CBS elements took into consideration in the right way influences of indirect costs;

Validation of the estimate LCC for justifiable and reproducible character has consider the following issues:

a) checking of the estimate algorithm and justification of its steps;
b) approach of mathematical process, with reference to the selected estimation methods.

Validation of the estimate LCC for the credible character includes:

a) identification and explanation of the limitations of the results;
b) the justification of the required / recommended measures to limit the sensitivity of the estimate LCC;
c) the justification for the level of confidence that have be insure for estimate LCC values;

III.2 PRESENTATION OF THE ESTIMATE LCC

Presenting the results of the estimation process of LCC to the management structure of the program provide it the tools of decision on both the opportunities identified in line with development / acquisition of the desired product and of the operational utility, in terms of economic efficiency of its use in accordance with established operational profile.

The results of the estimation of LCC are used for developing and updating successively for the following documents important in running the program:

a) The Mission Needs Paper;
b) The Study of Concept;
c) The Operational Requirements Paper;
d) The Base of Acquisition Program;
e) The Acquisition Strategy;
f) The Logistics Support Analysis;
g) Integrated Logistics Support Plan;

CONCLUSIONS

There are many factors that should be taken into consideration when budgeting for a new system. A life-cycle cost analysis is a great way to account for these factors in a manner that presents the true cost of different options, which will ultimately help you decide which option is best for your organization.

A life-cycle cost analysis is a methodology that allows us to analyze multiple options with different initial costs, yearly maintenance requirements, and expected service lives to compare their initial costs to the total costs of ownership. The intent of a life-cycle analysis is to estimate all of the expected cash flows associated with different options and discount the future expenditures back to what it would cost today.

Life Cycle Cost (as a generic expression) covers in fact several concepts that may be used for different purposes. The differences between those concepts lay on the way categories of costs such as direct, indirect, fixed, variable, linked and non linked are to be included or not in the analysis.

Life cycle cost (LCC) represents all the costs that will be borne during the life of a system (main system and support system) to acquire, operate, support it and eventually dispose of it. The list of costs items to be considered in a project is defined and organised in a Life Cycle Cost Breakdown Structure also referred to as a cost breakdown structure (CBS).

In system analysis, a CBS may be considered as a tool that enables analysts to define and compute LCC and decision makers to take decisions. The way analysts and decision makers use LCC has necessarily an important impact.

In the world of finance, this is the recognized way to bring all future cash flows back to today's dollars. Once each future expense has been converted back to its present value today, all the future expenses are added up for each option and compared against each other. At this point, a fair comparison can be made across all options to see what the actual cost of each system would be today.

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THE DEVELOPING OF CAPABILITIES FOR COMMON SECURITY AND DEFENSE POLICY AND FOR THE NATO - COMPLEMENTARITY OR COMPETITION

LTC Emilian CHIREA

In a rapidly changing world, both NATO and the EU are faced with security challenges in theirs immediate neighbourhoods and further afield, where strategic interests, on land, air or maritime borders are jeopardised by different actors.

In such a complex environment the military capabilities required for NATO and EU military missions and operations should be planned and executed as part of a comprehensive approach to conflicts and crises. In order to be able to conduct the full spectrum of missions and operations provided in the NATO Treaty and within Treaty on European Union (TEU), a diversity of capabilities is required. Therefore, the development of modern and efficient military capabilities has always been main concern of NATO defence planning process and one of the areas of focus of the Common Security and Defence Policy (CSDP).

The good relationships between EU and NATO are always on the agenda of highest level meeting. So, at the most recent summit, the Wales NATO Summit (September 2014), Allied Heads of State and Government Acknowledged the EU as a unique and essential partner for NATO. Furthermore, in June 2015, the European Council's conclusions highlighted the need for intensifying the partnership with NATO, taking into consideration the dramatic changes in the Europe's security environments. Moreover we should keep in the loop the most obvious thing regarding NATO and EU, 22 out of 28 NATO Allies are also EU members.

Moreover, the EU – NATO cooperation requires a more systematic approach, including in capability development areas, in theirs efforts to work out shared strategic interests and better translate them tangible actions. [1]

Capability development processes should be conducted in a coordinated manner to provide firstly the right orientations for the national processes, to maximize use of existing military assets and to better integrate the new cutting edge technologies for communications, surveillance, air lift, precise guided ammunition. The military capabilities should be developed

and used in the new combat environment, were supposed to encounter hybrid treats and unconventional enemy actions, even for non traditional domains for military actions such as space or cyber space.

THE DEVELOPMENT OF CAPABILITIES FOR COMMON SECURITY AND DEFENCE POLICY - CSDP

The European Union has, along many institutions, committees, bodies and policies several that directly address the military domain and solutions - Common Security and Defence Policy (CSDP). CSDP is part of the larger EU policy on Common Foreign and Security Policy.

1.1 Common Foreign and Security Policy

In accordance with the treaty of European Union (TEU) provisions the Union's competence in domain of common foreign and security policy shall address all areas of foreign policy and all issues relating to the Union's security. All the efforts and defining the progressive framing of a common defence policy that might lead to a common defence in accordance with provisions of art 24 TEU [2]. Either the final goal is far to be completed a lot of steps were made so far, with some powerful EU member states in a leading role.

In term or governance, the common foreign and security policy shall be put into practice by the High Representative of the Union for Foreign Affairs and Security Policy and by Member States, in accordance with the Treaties.

The High Representative of the Union for Foreign Affairs and Security Policy, chair the Foreign Affairs Council consists of EU defence or foreign ministers. He/she should contribute to the development of the common foreign and security policy and shall ensure implementation of the decisions adopted by the European Council and the Council [art 27 TEU].

The newly appointed, in 2014, High Representative of the Union for Foreign Affairs and Security Policy (HR) is the chief co-ordinator and representative of the Common Foreign and Security Policy (CFSP) within the European Union (EU). The position is currently held by Federica Mogherini. During the next months she should lead the European External Action Service during a very important period, when the new Global European Security Strategy should be renew, after more then 12 years, following the 2015 European Council decision. Furthermore, a European White Book on Defence is likely to be elaborated soon, as the incoming Dutch presidency for European Council intended.

a. The common security and defence policy

This important European policy shall be an integral part, in accordance with TEU provision in the common foreign and security policy. Within this framework should provide operational capacities on civilian and military assets for the Union.

These capabilities may be used on missions outside the Union for peace-keeping, conflict prevention and strengthening international security in accordance with the principles of the United Nations Charter. The Member States have to provide capabilities for CSDP, in this respect a capability development process had been put in place beside of already existing processes, national ones and those belong from other organisation such as NATO.

In this field, the policy of the Union shall not prejudice the specific character of the security and defence policy of certain Member States and shall respect the obligations of certain Member States, which see their common defence realised in the North Atlantic Treaty Organisation (NATO), under the North Atlantic Treaty.

The capability development process should allow the Member States to make civilian and military capabilities available to the EU for the implementation of the common security and defence policy, to contribute to the commonly defined objectives.

The Common Security and Defence Policy (CSDP) enables the European Union to take a leading role in peace-keeping operations, conflict prevention and in the strengthening of the international security. It is an integral part of the EU's comprehensive approach towards crisis management, drawing on civilian and military assets.

Since 2003 the EU has launched some 30 peace missions and operations contributing to stabilisation and security in Europe and beyond, some 150 000 personnel have been deployed, serving under the European banner.. In a time of limited resources Europe also needs to do better with less. The CSDP allows EU Member States to pool their resources and to build stronger defence capabilities to act rapidly and effectively.

The CSDP and the other EU crisis management instruments have a crucial role to play in tackling crises and conflicts; together they can provide the key, in the context of the EU’s long-term endeavour to promote peace, stability and security, to finding solutions in a way that is collaborative, fitted to the circumstances and comprehensive[1].

The best way to describe the relationship between EU’s autonomous military capabilities and NATO’s crisis management ambitions concluded “where NATO as a whole is not engaged”.

But to date, cooperation between the CSDP and NATO structures has been limited – although not so much between their respective staff, but more on a political level.

1.3 The Permanent Structured Cooperation

A special attention should be given to the permanent structured cooperation, it is a unique tool in the EU framework for CSDP. So far It was not very much used, due to a sensitive position of several EU states. It allows of those Member States whose military capabilities fulfil higher criteria and which have made more binding commitments to one another in this area with a view to the most demanding missions shall establish within the Union framework. But, a future approach could be to take into consideration this way, unless the European ambitions in defence areas will be not changed.

1.4 The basic principles

In accordance with EU Security Strategy in place, a strong Europe needs a common identity. In order to strengthen this identity in the area of CSDP, a common security culture and minds changing are needed. This includes developing a common perception of threats, a common approach to solving conflicts, and a common understanding of solidarity. It therefore requires a "European mind-set", which can only be achieved through education and training and which, once established, will guarantee the efficient implementation of CSDP tasks and challenges [1].

On 11 December 1999, the European Council in Helsinki underlined the – still valid – basic principles underpinning the European understanding of an autonomous security and defence policy for the EU:

• comprehensive: "military and non-military crisis management capability";

• based on the principles of the United Nations Charter and recognising the primary responsibility of the United Nations Security Council;

• autonomous capacity to take decisions and to launch and conduct EU-led military operations in response to international crises.

1.5 Headline Goal & Level of Ambition

Since the inception of CSDP, the scope of the role that the EU wanted to play under this policy has framed its capability requirements. Drawing on the definition of the Petersberg tasks (initially defined in 1992 for the Western European Union), EU Member States established a capacity objective, the Headline Goal.

- *60 000 troops within 60 days* for a major operation or planning and conducting simultaneously a series of operations and missions of varying scope;
- *two major stabilisation and reconstruction operations* supported by up to 10 000 troops for at last two years;
- *two rapid response operations* of limited duration using inter alia EU battlegroups;
- *an emergency operation* for the evacuation of European nationals;
- *a maritime or air interdiction operation;*
- *a civ-mil humanitarian assistance operation lasting up to 90 days*
- *around a dozen CSDP* civilian missions of varying formats together with a major mission (up to 3 000 experts) lasting for several years.

These activities must be possible to be carried out at thousands of kilometres away from Europe and for a period of at least one year.

1.6 The illustrative scenarios

In answering the question 'what capacities do we need to fulfil this Level of Ambition?', it is important to understand the types of situations in which European troops on CSDP missions and operations could be deployed. For this purpose five 'illustrative scenarios' were defined in Requirement Catalogue, as follows:

- *Separation of Parties by Force* (SOPF): tasks of combat forces in crisis management; Peacemaking; Secure Lines of Communications
- *Stabilisation, Reconstruction* and Military Advice to 3rd Countries (SR): peacekeeping; election monitoring; institution building; Security Sector Reform; support 3rd countries in fight against terrorism
- *Conflict Prevention* (CP): preventive engagement; preventive deployment; joint disarmament operations; embargo operations; counter proliferation
- *Evacuation Operation* in a non-permissive environment (EO): Non-combatant Evacuation Operation
- *Assistance to Humanitarian Operations* (HA): Prevent; Atrocities; Consequence Management

They should be elaborated, in combination with different Strategic Planning Assumptions (SPA) – including reaction time, distance from Europe, the need for rotations, and the hypothesis

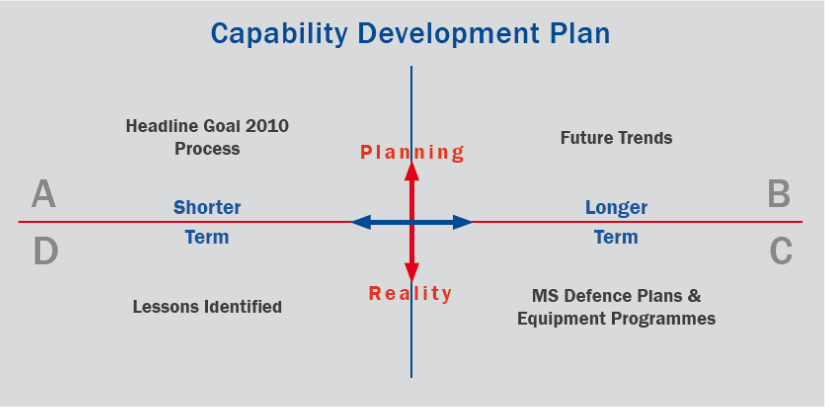
according to which several operations are ongoing at the same time. This led to an extensive list of military requirements in terms of equipment and personnel.

1.7 The European Defence Agency

Along of important players in the capability development field, the European Defence Agency (EDA) plays a crucial role in the whole process of Capability Development. The Agency acts in the field of defence capabilities development, research, acquisition and armaments. It shall identify operational requirements, shall promote measures to satisfy those requirements, shall contribute to identifying and, where appropriate, implementing any measure needed to strengthen the industrial and technological base of the defence sector, shall participate in defining a European capabilities and armaments policy, and shall assist the Council in evaluating the improvement of military capabilities.

1.8 The Capability Development Plan (CDP)

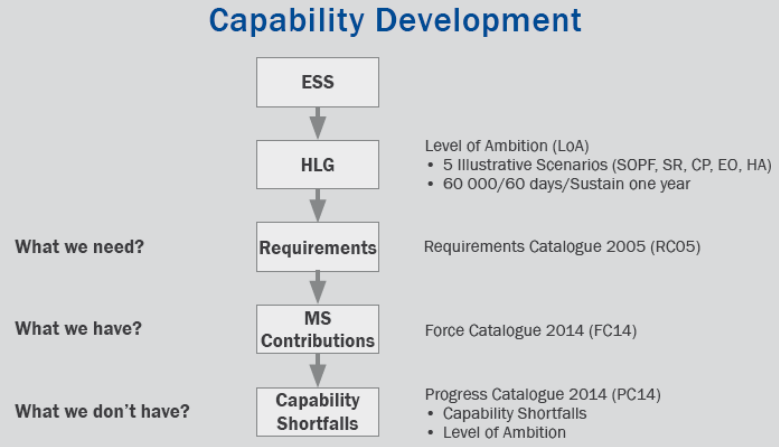
The EDA is the EU responsible structure for elaborate and update the Capability Development Plan. It has four strands: Strand A - the EUMC input is the result of the Headline Goal process (the prioritised capability shortfalls); Strand B - covers future requirements, in the long term (e.g. *Air-to-Air Refuelling; Cyber Defence; Government SatCom; Remotely- Piloted Aircraft Systems*); Strand C - covers the Defence Plans of individual Member States (here the Member States can see what others have in their Plans, which could create opportunities for pooling and sharing of – future – capabilities); Strand D - deals with lessons identified during missions and operations.



Picture no 1. The strands of the EU Capability Development Plan [5]

1.9 The three Catalogues

With a view to capacity development, Member States were asked what they could potentially make available for the specific capability provided in *Requirement Catalogue*. Their contributions are voluntary and non-binding and cannot be used for Force Generation processes.



Picture no 2. The EU Capability Development process [5]

These voluntary contributions (the answer to the '*What-do-we-have question'*) are laid down in the *Force Catalogue (FC).* The FC is regularly updated; the latest update at the time of writing was agreed upon by the EU Military Committee (EUMC) in 2014 (FC14). The EUMC is supported in this respect by the EUMC Working Group/Headline Goal Task Force (HTF), in which all Member States have their subject-matter experts represented.

Unfortunately, there are still differences between the requirement catalogue, the RC05, and the Force Catalogue, the FC14 (i.e. differences between the 'what we need' and 'what we have'; let's then call this question: '*what are we still lacking*?'). These capabilities, which are not potentially made available to achieve the total requirements as defined in the EU Level of Ambition, are called 'shortfalls'. All shortfalls are mentioned in the *Progress Catalogue* (PC), which was lastly updated in 2014 (PC-14) and agreed upon by the EUMC.

5. The NATO Defence Planning Process

For developing the military capabilities NATO necessary to meet its security and defence goals all NATO Member State decided to provide, individually or together, the forces and needed for. For conducting such a complex and comprehensive endeavour it was designed the

NATO Defence Planning Process (NDPP). It is the main tool to identify the required capabilities and support their timely and coherent development of capabilities by Allies [5].

The NDPP is based by voluntarily participation of the Allies. Here they can harmonise their national defence plans with those of NATO. The NDPP is designed to influence national defence planning efforts and prioritises NATO's future capability requirements, apportions those requirements to each Ally as targets, facilitates their implementation and regularly assesses progress. NATO defence planning encompasses different domains: force, resource, armaments, logistics, C3 (consultation, command and control), civil emergency, air and missile defence, air traffic management, standardization, intelligence, military medical support, science and technology, and cyber.

In order to be effective, the defence planning process is essential to deliver the collective political, military and resource advantages expected by NATO members. NDPP provides a framework for the harmonisation of national and Alliance defence planning activities aimed at the timely development and delivery of all the capabilities, military and non-military, needed to meet the agreed security and defence objectives inherent to the Strategic Concept.

The Defence Policy and Planning Committee (DPPC) is responsible for the development of policy and overall coordination and direction of activities related to defence planning.

2.1 The key characteristics of the NDPP

The NDPP is fist and foremost a *sound and comprehensive* process in which member states choose to contribute, on a voluntary basis, to deliver the required capabilities in the short, medium and long term.

Then, the defence planning with its a *capability-based approach* that provides sufficient detail to assist member states and NATO to increase the forces needed to assume the full range of NATO missions.

Furthermore, NDPP is *enough adaptable* to react to the needs of both individual Allies and the Alliance, informs and guides national defence plans, provides transparency, promotes multinational approaches and offers opportunities to capitalise on best practices [6].

2.2 The enhancement of the NDPP

In the NATO responsible committees it is a continue efforts to enhance the NDPP in order to make it more flexible and responsive. In 2009, works were conducted to improve the

harmonisation of the planning domains and Allies were encouraged to integrate their national defence planning activities to complement NATO efforts.

Initial Alliance's engagement was referring mainly to the in Article 5 operations, members were expected to assign and employ the requested forces practically without question. The non-Article 5 operations Allies have conducted since 1990, by agreement, on a case-by-case and the provision of national forces is optional. As such, the automaticity associated with force planning during the Cold War period was lost. This led to the need for "force generation conferences" to solicit the relevant forces and "operational planning" to develop the plans.

2.3 The steps of the NDPP

The NATO Defence Planning Process (NDPP) consists of five steps conducted over a period of four years.

Picture no 3. The Steps of NDPP [6]

Step 1 - Establish political guidance

Political guidance is the highest strategic document design to start up the process. A distinct, integrated political guidance for defence planning sets out the generally aims and objectives to be met by the Alliance. Political guidance aims at defining the number, scale and nature of the operations the Alliance should be able to conduct in the future (commonly referred to as NATO's Level of Ambition). It also defines the qualitative capability requirements to support this ambition. By doing so, it steers capability development efforts within the Allies and

NATO. It defines associated priorities and timelines for use by the planning domains. Political guidance is normally reviewed every four years. The most recent was published in June 2015. [3]

Step 2 - Determine requirements

Within this step the NATO's capability requirements are consolidated into a single list called the Minimum Capability Requirements. These requirements are identified by the planning domains and the two Strategic Commands, Allied Command Operations and Allied Command Transformation(ACT). ACT has the lead in determining the requirements. The process is structured, comprehensive, transparent and traceable and uses analytical tools coupled with relevant NATO expert analysis. This is done once every four years, although for particular capabilities can be undertaken as circumstances dictate.

Step 3 - Apportion requirements and set targets

This step is one of the most complex and challenging one from entire process. Target setting apportions the Minimum Capability Requirements to the Allies (individually or multinational undertaking) and NATO entities in the form of target packages. Firstly, the Strategic Commands develop a target package for each Ally for existing and future capabilities, with associated priorities and timelines.

After member states consultation, the International Staff take the leading role for the process. In this stage, the Target packages are forwarded to states with a recommendation of which targets should be retained or removed. Allies reassess these proposals during a series of multilateral examinations and agree a target package for each Ally on the basis of "consensus minus one", meaning that a single Ally cannot veto what otherwise would be a unanimous decision on its own target package. Then, the agreed target packages are subsequently forwarded to Allies for submission to defence ministers for adoption. [3]

Step 4 - Facilitate implementation

Within this stage the Smart Defence that take forward specific multinational projects, including for better protection of our forces, better surveillance and better training could be seen as a appropriate solution. Its projects will deliver improved operational effectiveness, economies of scale, and closer connections between our forces. Smart Defence is more than this. It represents a changed outlook, the opportunity for a renewed culture of cooperation in which multinational collaboration is given new prominence as an effective and efficient option for developing critical capabilities. [7]

Moreover, the Connected Forces Initiative, it helps this fourth stage of NDPP. It expands education and training of our personnel, complementing in this way essential national efforts. In this way it is strengthen the bonds between NATO Command Structure, the NATO Force Structure, and national headquarters. It strengths the use of the NATO Response Force, so that it can play a greater role in enhancing the ability of Alliance forces to operate together and to contribute to our deterrence and defence posture.

Framework Nations Concept (NATO) it is a new initiative launched by Germany in 2013 and endorsed at NATO Wales Summit in September 2014. Its main goals address the following: transatlantic burden sharing, development of multinational units in order to increase sustainability and help preserve military key capabilities. Until now three groups have been formed:

- with Germany as lead nation, the most active, initial ten Allies, and afterwards 16, from June 2015, will cooperate on logistics support, CBRN protection, fire-power from air, land and sea, deployable headquarters and on setting up larger formations;
- Under UK as lead nation, seven Allies will create a rapidly deployable force, capable of conducting the full spectrum of operation. The Joint Expeditionary Force (JEF) can be employed as part of a coalition or on behalf of international organisations such as NATO or the UN. FOC is to be reached by 2018. The lead commando, airborne, aviation, armoured, air and maritime tasks are carried out by UK units. The other nations provide special units and troops, if need be;
- The third group of six Allies, under Italy's lead will improve stabilisation and reconstruction capabilities, provision of enablers, usability of land formation, and command and control. [8]

Step 5 - Review results

This last step seeks to examine the degree to which NATO's political objectives, ambitions and associated targets have been met and to offer feedback and direction for the next cycle of the defence planning process. It is carried out by a Defence Planning Capability Review which scrutinises and assesses Allies' defence and financial plans.

In this process, every two years, member states fill a Defence Planning Capability Survey with data on Allies' national plans and policies, including efforts to address their capability targets. The survey also seeks information on the national inventory of military forces and

associated capabilities, any relevant non-military capabilities potentially available for Alliance operations and national financial plans.

NATO evaluates each member states for national plans and capabilities, including force structures, specific circumstances and priorities. These assessments also include a statement by the Strategic Commands regarding the impact each country's plans have on the ability of ACO to conduct missions. They may also include recommendations which seek to redirect resources from areas where the Alliance has a surplus of capability, to deficiencies areas.

The assessments are submitted for examination to the Defence Policy and Planning Committee (DPPC) for review and approval during a series of multilateral examinations. In parallel with and based on the Strategic Commands' Suitability and Risk Assessment, the Military Committee develops a Suitability and Risk Assessment. It effectively provides a risk assessment on the military suitability of the plans and the degree of military risk associated with them in relation to political guidance for defence planning. Then, the DPPC prepares a NATO Capabilities Report, highlighting individual and collective progress on capability development as it relates to NATO's Level of Ambition.

2.4 The support structures

The senior committee for defence planning is the DPPC. It is in charge for the development of defence planning-related policy and the overall coordination and direction of NDPP activities, on behalf of the North Atlantic Council (NAC). It can provide advice and defence planning process-related direction to them. The DPPC will often meet with appropriate subject-matter experts invited to "reinforce" the regular representatives- DPPC(R) [4].

Capability Development Executive Board provides unity of supervision, policy, direction and guidance and enforces authority and accountability throughout NATO capability development. It brings together the senior leadership of the relevant civil and military capability development stakeholders in the NATO staffs and acts as a steering board to direct staff efforts associated with NATO capability development in accordance with the guidance provided by Allies through the relevant committees.

Defence Planning staff comprises civil and military expertise resident within the various NATO HQ staffs and Strategic Commands, and supports the NDPP throughout its steps.

2.5 Planning domains and related committees

NATO Defence Planning encompasses many different domains: force, resource, armaments, logistics, C3 (consultation, command and control), civil emergency, air and missile defence, air traffic management, standardization, intelligence, military medical support and science and technology. In addition since April 2012, the integration of cyber defence into the NDPP has begun.

Force planning aims to promote the availability of national forces and capabilities for the full range of NATO missions. The states have to develop modern, deployable, sustainable and interoperable forces and capabilities, which can assume challenging operations where on earth, are required, able to operate abroad with limited or no support from the host nation.

Resource planning focuses on the financing of capabilities that are jointly or commonly funded, where members pool resources within a NATO framework. The joint funding covers activities managed by NATO agencies, such as the NATO Airborne Warning and Control System (AWACS) and NATO pipelines; common funding involves three different budgets; the civil budget, the military budget, and the NATO Security Investment Programme.

Armaments planning aim on the development of multinational (but not common-funded) armaments programmes. It promotes cost-effective acquisition, cooperative development and production of armaments. It also encourages interoperability, and technological and industrial cooperation among Allies and partners. The Conference of National Armaments Directors (CNAD) is the senior NATO committee responsible for this strand.

Logistics planning focuses on ensuring responsive and usable logistics support to NATO operations. This is achieved by promoting the development of military and civil logistics capabilities and multinational logistic cooperation. The Logistics Committee is the senior advisory body on logistics at NATO. It address consumer logistics matters and coordinates authority across the NATO logistics spectrum.

C3 planning NATO's political and military functions require the use of NATO and national consultation, command and control (C3) systems, services and facilities, supported by personnel and NATO-agreed doctrine, organisations and procedures. C3 systems include communications, information, navigation and identification systems as well as sensor and warning installation systems. The Consultation, Command and Control Board is responsible on all matters relating to this field, including interoperability of NATO and national C3 systems, and advising the CNAD on C3 cooperative programs.

Civil emergency planning aims to collect, analyse and share information on national planning activity to ensure the most effective use of civil resources for use during emergency situations, in accordance with NATO objectives. It enables member states and partners to mutually assist in preparing for and dealing with the consequences of crisis, disaster or conflict. The Civil Emergency Planning Committee is responsible for the protection of civilian populations and the use of civil resources in support of NATO's objectives.

Air and missile defence planning seeks to harmonise national efforts with international planning related to air command and control and air and missile defence weapons. The NATO Integrated Air and Missile Defence System (NATINAMDS) comprise sensors, command and control facilities and weapons systems, such as surface-based air defence and fighter aircraft. The Air and Missile Defence Committee is the coordinating body regarding all elements of NATO's integrated air and missile defence and relevant air power aspects in a joint approach.

Air traffic management NATO's role in civil-military air traffic management is to provide, safe access to airspace, effective delivery of services and civil-military interoperability for air operations performed in support of the Alliance's security tasks and missions. The Air Traffic Management Committee is the body responsible.

*Standardizatio*n is the process of developing shared concepts, doctrines, procedures and designs to achieve and maintain the most effective levels of "compatibility, interchangeability and commonality" in operations, procedures, materials, technology and administration. The primary products of this process are Standardization Agreements (STANAGS) between member countries. The Committee for Standardization provide coordinated advice to the NAC on overall standardization issues.

Intelligence has a relevant role in NDPP, especially with the emergence of multidirectional and multidimensional security challenges such as terrorism and the proliferation of weapons of mass destruction. The Intelligence Steering Board is responsible for coordination of the intelligence activities and for providing effective support to the decision-making process.

Military medical support even if it is a national responsibility, planning needs to be flexible to consider multinational approaches. The degree of multi-nationality varies according to the circumstances of the mission and the participation of Allies. The Committee of the Chiefs of Military Medical Services in NATO acts as the central point for the development and

coordination of military medical matters and for providing medical advice to the Military Committee.

Regarding *Science and technology N*ATO promotes and conducts cooperative research and information exchange to support the effective use of national defence science and technology and further the military needs of the Alliance. The NATO Science and Technology Organization acts as NATO's principal organisation for science and technology research.

3. Complementarities between development of capabilities for the EU and NATO

Developing greater European military capabilities will strengthen the transatlantic link, enhance the security of all Allies and foster an equitable sharing of the burdens, benefits and responsibilities of Alliance membership. In this context, NATO will work closely with the European Union, as agreed, to ensure that Smart Defence and the EU's Pooling and Sharing initiatives are complementary and mutually reinforcing. In a formal way NATO welcomes the efforts of the EU, in particular in the areas of air-to-air refuelling, medical support, maritime surveillance and training. The cooperation between the two organisations will continue to depend on mutual transparency and openness [7].

The NDPP appears to be a mature defence-planning tool, the NDPP is modelled along what is available on the national levels, i.e. the national requirements, defence plans and procedures. Hence, the NDPP is talking about their problems and requirements. The experience has led NATO to adapt more to the conditions defined by the Member States than that the NDPP has driven national defence planning. Moreover, the new NATO allies in the East take the process maybe more seriously.

The successful implementation of NDPP, as a reliable process is used by EU by adopted of common calendars and using the same replies from member states. In addition the EU planning experts attend, base on invitation, at the NATO – member states bilateral talks. Some countries, like the Czech Republic, have modelled their own defence planning process along the NATO model. Moreover, to achieve results, the combination of NDPP and summit has been helpful to get projects at least started. Member States increasingly use the tools NATO offers, especially; they begin to discuss their plans. However, the NDPP has no influence on multilateral procurement in line with the smart defence initiative, these take place outside the NDPP context

on an ad-hoc basis, managed by NATO agencies but not under control of the international staff of NATO[8].

3.1 Using the same set of forces

During the periodical development of the national replies to the NATO Defence Planning and Capability Survey and to the European Union Military Capability Questionnaire, the majority of the member states provide the same structure of forces and information about plans and programmes. This is a common approach, very often political assumed, but it helps organisation, at least European Union to receive the extended information about forces, which allow carrying out its capability development process. In fact the both questionnaires are mainly the same; the EU one is based on the NATO one, without some specific questions related with capabilities targets. These approaches could be use as a direct explanation why the NATO and UE had or found sometimes the similar priorities for their capability development processes.

3.2 Using the similar tool for the national replies

For the member states, being them NATO or EU or either partners of these organisations, it is obviously benefices to avoid duplication of work by filling only ones the capability questionnaires. For developing the process the North Alliance uses NATO Defense Planning Automated Support System – NDPASS and EU uses Information Gathering Tool, which is based on the NATO tool. The similarities between the instruments allow the Capitals to elaborate the same reply for both entities. This is vey much appreciate by the all bodies involved in these processes.

For filling NATO and EU questionnaires, nations taking into consideration, inter alia the fact that in general terms, the capability includes four major components: force structure (in terms of numbers, size and composition of the units); modernization (that refers at the technological level of the forces and weapon systems); unit readiness (the ability of the units to deliver the outputs for which it was designed); and sustainability (the ability to maintain the necessary level and duration of operational activity to achieve military objectives). [12]

3.3 Common calendars

The third element for a significant communality between capability development process in EU and defence planning process in NATO is the establishment of the common timelines for the receiving the member states contributions. Usually the EU decided the timelines earlier but

not with a period larger then a month. In this way is avoiding again duplication of work, either if the national replies are used for different stages of process in NATO and EU.

3.4 Linking the processes

Since, nowdays the 22 member states are members both of EU and NATO, the proposal to link up EU and NATO defence planning is getting more support because it has become more important as a means to identify cooperation opportunities. However, there is no consensus, either at political level, due to some traditional rivality, on how this link should look like. Many Member States prioritise NATO and argue against duplicating defence planning within the EU as this would further complicate their daily work. They may not be willing to report to two organisations and thus choose a preferred framework instead – which for many could well be NATO.

3.5 Sovereignty – The future between autonomy, dependency and capability

Applying for both organisation, the conception of sovereignty is key to the current problems: Austerity increases intra-European defence dependence. Yet, the conception of sovereignty that Member States still maintain does not allow them to recognise these dependencies and thus hinders the Europeans from managing them. For some member states, sovereignty is not about being capable to act effectively in order to solve problems of their societies. Rather, for them it means to remain the master of the final decision, even if this prevents or diminishes the development of a (European) capability that could tackle their own problems. Therefore, member states prefer autonomy to capability, By doing so, whether consciously or not, they actually pretend to be individually able to deal with security risks and threats, and keep them away from their territory, people and political system. It is thus only logical that with such a sovereignty conception in mind, EU members avoid talking about and engaging in cooperation and specialisation.

However, over 20 years of experience in NATO- and EU-operation invalidates the fear of these traps: sharing has been a daily business from Bosnia to Afghanistan and Libya, and NATO and EU have gathered experience in managing the political and military caveats. No state would have been able to carry out these operations alone.

4. Competition between developing of capabilities for the EU the NATO

The main differences between the two organizations, the North Atlantic Treaty Organization and European Union in the capability development domains are more clearly emphasized by several aspects related with: the nature and main missions of them; the degree of commitments and the capabilities available.

4.1 Characteristics, nature, and main missions

Regarding of the main **characteristics, nature, and main missions**, the NATO is set up around main provisions of its treaty, the Article 5 were the collective defense is provided. In order to meet this core aim, all Alliance's efforts is oriented to develop the combat capabilities. In this respect NDPP is designed to identify and develop the required capabilities to form the sufficient pool of forces.

The EU designed its capability development process mainly to accomplish the five basic scenarios (humanitarian assistance, conflict prevention, separation of parties by force, evacuation operation and Stabilisation, Reconstruction and Military Advice) requirements. The EU actions are oriented to provide capabilities for Common Security and Defence missions and operation. The CSDP activities are mainly set up for defending the EU interested outer the EU borders.[9]

4.2 The degree of commitment of members

From the point of view of the degree of commitment of member states it is assessed that a more relevance is accorded to identify and developed the capabilities for NATO, in this respect the NDPP is designed. The capability targets allocation for the member states it is view as a very powerful commitment. In the same time, for the EU, even if the capability development process is using the same replies from member states with the same set of capabilities, the lack of the capability targets apportion leads to a more permissive approach, and the involvement of the member states are rather consultative than mandatory. However, from the political perspective, the EU process is taken into consideration, every member states contribute with their capabilities at EU process.

Moreover, the CDP has less binding power to Member States, compared to the NATO NDPP. This may be partly because of the routine and because of historical reasons. NATO defines targets of individual countries where the EU only notices shortfalls on the collective level.

From the other point of view, the CDP also has advantages compared to the NDPP. The CDP reflects more those issues the EU Member States struggle with – while in the NDPP the US contributions influence the picture. The CDP's different tracks allow integrating different strands of work, which in NATO are developed in different branches and thus subject to typical rivalry. While SHAPE is responsible for the actual capability picture, ACT is responsible for the future picture. The NDPP however, does not take finally on board the ACT findings in the structured ways[8].

4.3 The level of responsibilities and defining policy

Regarding the **level of responsibilities and defining** of the two processes for defence planning and capabilities development, for NATO and EU, the stakeholders are different. From EU perspectives the process is shared between the European Union Military Committee and European Defence Agency. On the other side, from NATO perspective the responsible structure is Defence Planning Committee, a more concentrated body with higher degree of representation, specific more to the political military level.

4.4 The EU comprehensive approach

*The EU comprehensive approach i*s a specific way of understanding the requirements of fragile countries, crises and conflicts, proposing realistic solutions and coordinating actions for better results. The large number of European instruments and actors make this synchronisation a complex exercise, but it is also a opportunity for the development of synergies and innovative solutions. In terms of policy, the basic principles of the *comprehensive approach* remain clear – it is about working better together, and enhancing the coherence, effectiveness and impact of the EU's policy and external action, in particular in crisis and conflict situations. However it does not dictate any particular approach for specific areas or regions, and respects the methodology and imperatives of the different actors.

The EU instruments have been improving over the years with just one objective: doing more, doing it right, and doing it better. In practice this effort is reflected in greater information-sharing, a joint consultation before planning and increasingly, a culture of coordination. The ongoing work on the operationalisation of the *comprehensive approach* will further support the optimisation of the EU's – and Member States' – engagements in favour of peace and security worldwide [10].

CONCLUSIONS

Capability development processes are nowadays very well defined for both organisations, the NATO and EU. The already successfully conducted cycles allowed refining the details in order to have a better correlated and as simple as possible processes.

The 2015 year is an important point of reference from many perspectives with significant impact on capabilities field. In NATO was elaborated the new political guidance for future start up of defence planning process, the Readiness Action Plan was put into practice with all its component (Very High Readiness Joint Task Force - VJTF, enhance NATO Response Force eNRF, NATO Force Integration Units -NFIU).

From the EU perspective, the European Council in June 2015 was the highest and the latest forum were European stakeholders discussed the defence matters. They decided inter alia to elaborate new EU global strategy on foreign and security policy. This core document will determine not only an important volume of work in Capitals but a series of revisions of some important strategic EU document and processes, including Requirements Catalogue and its subsequent scenarios.

Both NATO and the EU share the same sets of standards, principles and interests, as well as a majority of their members. From our perspective it is the high time that NATO and the EU act in a more articulate and harmonized way and deliver on their potential, taking into consideration the fundamental changes of strategic realities at their borders. In this respect, in the existing international situation, the two entities have to develop and preserve a sufficient level of cooperation and coordination with regard to their policies, including in deeper harmonizing processes for developing the military capabilities. Even if the sovereignty is still an issue it is seen as one of the crucial elements. The way European governments and publics will consider it, also in the NATO framework, will decide the future of European defence. A shared view on the common treats will help the security stakeholders to more and more take into consideration the collaborative ways for addressing the security matters.

The developing of military capabilities in NATO and in the EU frameworks, should be rather seen a complementary approaches than competitions ones. Starting from the bottom level, where the cooperation links between staff experts are in place and daily contacts are established, until the highest decision makers' forums where the security issues are addressed from both

points of views, the relationship between these entities became more and more effective and strengthened.

In view of developing the complementarities between NATO and EU there are still enough room for improving, especially by: conducting the high level common decisional bodies meeting, nowadays blocked by some members states divergent interests; jointly developing of strategic documents addressing the same issues (global security, maritime security, involving of partners); mutually develop and use of expensive capabilities (transport airplanes, communication networks) or avoiding duplication and ensuring coordination between specific initiative such as *Smart Defence* and *Pooling and Sharing*, both solutions designed for developing multinational projects.

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COMMUNICATION CHALLENGES IN THE MILITARY

COL. Chokri DRIDI

Communication is an essential element in our environment. It is present in every moment, and we use it in most situations we face. A definition of communication is given in the Encyclopedic Dictionary of the Sciences of Information and Communication: "Action to establish a relationship with someone, or put something in common with another person or group of persons and result of this action. Etymologically, it is to communicate together. "The communication appears as data transfer between different individuals, exchange of knowledge, information. It is in the communication within a system comprising a transmitter and a receiver. Communication areas are many and various. It is found in our lives every day, advertising communication, communication between individuals, but also on the news media communication, corporate communication, communication of different entities on their actions, such as the army.

Indeed, after being considered for long time as the "great mute", the army recognized the need to communicate. It has quickly identified the interest to communicate, in order to explain their actions to the public and justify the significant funding allocated to the nation defense. In this respect, it appears that all modern armies do have to face major challenges related to communication activities such as need of anticipation and coherency, transparency as well as the need to master the communication tools related to the new communication and information technology.

To develop this idea, I will first provide the definition and the organization of the communication activities in the military. Then I will describe the main communication tools used by the armed forces, before presenting the challenges and recommendations related to the communication in the military world.

DEFINITION AND ORGANIZATION

The army has to communicate, because it needs the support of both national and international opinion. Also, because it needs to consider the globalization and the "global village" new concept where everything can be seen, said and known.

Communication consists into "establishing a shared understanding and relationship" or "leading a persuasive action or seduction" or "presenting a favorable image" involving the search of a psychic and relational deliberate effect on others.

Communication in the army can be a deliberate and planned initiatives based on its own goals. Communication implies the idea of link, values and emotional relationships. It involves human relationships that creates or strengthens membership. It evokes the idea of more proactive and longer-term strategy.

The concept of communication evokes those of truth, transparency and information risk. Each army is trying to establish a balance between these three imperatives:

- “Do not lie” because it is against the officer’s ethics and it will be counter-productive since everything will come out and lying will discredit all the speech;
- “keep secret as little as possible” because it should not be any gray areas in a democracy;
- “But Do not say more than enough” to inform the enemy and compromise the safety of soldiers or successful operations that requires a minimum degree of secrecy and surprise.

No communication service will admit to be lying to his own people or to be promoting an ideology but it will advance other concepts such as "psychological warfare," "influence," or "military actions on the environment" or public diplomacy that lead to change the attitude or behaviors of adversaries, neutrals, populations.

The specific constraints of the army action, including international missions under the eyes of the media, are to be considered when making communication. It is necessary to explain further, when the troops are deployed in multinational operations and not to defend the national territory.

In addition, because budget constraints are everywhere present, it is required to the army, as well as the government its self, to justify what it costs to the public, policy makers and legislators.

1. Organization of the military communication

In order to be more efficient, national army communication services are decomposed according to the areas of activities and the army specifications. The most known organization is decomposed as follow:

- Institutional communication which promotes the image of an institution with regard to its partners and stakeholders (or the public);
- Internal communication, it gives relevant information to the personal, and promotes transparency hoping to make them adhere to the policy, culture or organizational goals.
- External communication which is a holistic concept covering the messages delivered to the organization's environment, usually used to create a good image and contribute to the success of the army objectives;
- Communication "press", as the name suggests, it provides the most relevant content to news media to convey the desired message;
- Event communications, often called off media, which consists in meetings, exhibitions, celebrations, festivals, conventions, etc. to attract a specialist and / or the public.
- Advertising communication, generally handed over to specialized agencies to promote goods or services;
- Public relations, it is supposed to maintain an image or reputation in a general fashion to all audiences and through multiple means of contacts.
- Crisis communication, it is a component of crisis management, it has the particularity of trying to combat the potential negative effects (eg in terms of reputation) of a news or noises or judgments that spread alarmingly;
- Communication of influence, it targets the public in order to obtain either certain behaviors or decisions from important authorities.

COMMUNICATION TOOLS

Military communication tools consist of all communication and transmission vectors whether external or internal to the military organization, whether or not represented by physical objects.

There is now a wide range of tools. If we take the jargon of communication and marketing on the number and variety of tools, multi-channel and cross-channel approaches abound.

1. **Internet**

Via Internet, the majority of the target audience can find the media that answers his questions and situation, this with a quality broadly in line with its reading habits or culture.
This tool is expected to allow smooth movement between sites where occur forums or FAQs (FAQ) used to ask questions on skills, qualifications, career prospects, centers closest recruitment forums.

The brand has many videos and testimonies of illustration with a clear goal: make easier the process of intelligence and commitment.

The digital communication of the army presents itself as a galaxy of sites referring to each other, recognizable by some formal unity. The media and social networks are expanding this galaxy.

2. **Social networks**

As an institution, the army must use the social networks. It must have a Facebook page, a Twitter account and put videos and documents online in order to be present on the net. An army may decide to encourage blogs, tweets, online videos and Facebook pages for units or military personnel and their families. It can develop a real strategy of "storytelling" which will allow those who are operating to relate the conflict from their point of view, to make known the military life and to their families or their friends to support them online.

Facebook is the primary platform. The army's Facebook page is clearly designed to give or direct to information. It is through its model, photos and style of texts that Facebook can provides the details requested in brief messages.

Armed forces Facebook Version, is an evolution of classic site: a showcase that brings institutional information and provides guidance to a young public which may joined the army. Breifly, it represents a opportune information center.

Other social media are involved: Calaméo, convenient to upload downloadable brochures, Dailymotion, YouTube to the image content online. Twitter, dedicated to rapid and laconic microblogging (the famous 140 characters) but it is a minority media where journalists draw a lot of ideas and topics.

The military institution has to be interested in what is told about it on social networks, whatever it emanates from its personnel or from friendly or hostile environments.

3. Press relations

For armed forces, the number of issuers confirms that press relations are very considered. The websites show quite clearly the Media spaces where journalists (and the public) can access to press releases of the high-level military authorities.

In addition, well-detailed Press kits are available during events like fairs, contracts or important partnerships signatures, "memorial" events, seminars or major conferences.

4. Image

Military communications, in terms of images, do not only provide good quality and timely shots to current media, but also, it provides decorations or equipment, various technical advice (writing, technical information, historical advice...), services, or other archival use.

5. The paper edition

The armed forces issues internal/External news magazines, which are very attractive to many military people. These magazines can provide a synoptic view of the defense policy. Free downloadable electronic versions can be available online.

6. Advertising

In the majority of modern armies, advertising remains the most powerful way to reach the public, usually, during the recruitment campaigns. Some armies allocate important resources for these campaigns and they count on the multimedia presence, especially TV and press.

7. The presence on TV

Television offers support to the army in terms of audience and image by transmitting reportages about military activities, which contributes to promote the army-nation link.

8. **Entry into video games.**

Many armed forces, following the example of the French army, have purchased advertising spaces right inside some games and the result seems to be successful in terms of audience.

9. **Communication activities of "proximity"**

In the language of communication, it would be called street marketing. Numerous topics could be valued more strongly through selected themes that would promote the national dimension, such as the armed initiatives participation in census, rescue of boaters, drug seizures. Such initiatives would extend the army openness to civil society: presence in the student or businesses lounges; participation in forums; educational activities in schools; Home for film shoots.

Certainly, there is tendency to the approach of diversified communications. But is the cohesion of the whole so evident? Time Planning and guidelines do not seem to be sufficient to deliver a unique message.

CHALLENGES AND RECOMMENDATIONS

In order to take maximum profit from the use of all the above communication means and tools, the military institution should ensure, mainly, anticipation and consistency, transparency and has to master new means related to the new communication and Information Technology.

1. **Anticipation and consistency**

The military institution must anticipate, first, the consequences of any communication action. It is better to abandon a seduction campaigns development which an army cannot ensure that it will bring to it more advantages then damages. In addition, it seems essential to promote a long-term strategy such as the positive image of the military institution and the profession of arms, rather than ephemeral effects, oriented only for immediate needs such a massive recruitment.

A global communication approach prevents against the issue of conflicting messages. Continuity and consistency should be the watchwords. Therefore, the armed forces can reduce the gap that exists today between the real military status and the apparent representation of it. Communication must be global. It must be coordinated to avoid contradictions, friction or energy

loss. It should be planned as early as possible (if not be proactive) to achieve synergy and coherence.

Military personnel are a key relay to consolidate the nation-defense link. Only he can testify about his experience, and enhance the institution in which he serves. Therefore, by taking in consideration the specificity of the military career as a touchstone, the military institution can develop communication strategies available to the civilian world based on its personnel cohesion.

2. Mastery of communication tools

Better information diffusion within the army must appear as a command support and a efficiency means not a constraint or a threat.

Therefore, the military training objectives should, systematically, include controlling communication tools to better understand their added value for both mission success and troops moral. The perverse effects deserve to be better known especially regarding sensitization about "cyber" risks. The radio interviews, filmed exercises and writing articles deserve to be taught more to provide effective communication tools and greater serenity with journalists to military personnel.

3. Transparency

When it comes to operations on the ground, it must be admitted that media transparency requirements are not compatible with the efficiency armed forces interests. Most often, the armed communicate rather they inform citizens. In this case, perfect skills are required in relations between the military machine and the mass media, some of these mass media are real partners that, despite their profit motive, they will invest an informative mission towards citizens. In situations of war, the logic of production and information diffusion are not the same. Indeed, every war has two components: a physical component within which the conventional military actions can be grouped and a psychological component within which actions and psychological war are grouped.

The psychological weapon is part of the overall military strategy. It also works in peacetime as well as in war. In fact, the arrival of democracy marked the appearance of the public opinion concept. Therefore, persuading citizens' views has become a matter to be controlled both by policy makers and by military strategists. For not only political but also military power, the media offer interesting possibilities for persuasion. However some control

problems appear. If the media are used to send a message to millions of people, it is true that the management and absolute control of information remain a problem for the military. Armies had to readjust their communication skills and learn to manage their relationships with journalists. Each of the wars in the world was an opportunity to test different information control formulas.

It was after all the experiences of the armed forces with journalists and the media that the military began to professionalize communications designed as part of the psychological processes for the media.

The techniques used to control media information are at two levels. First, armies can control the journalists and their access to information. On the other hand, they can tailor messages provided to information professionals.

In addition, the army communication services can establish a blackout or total censorship. In this context, the military did not allow journalists access to the battlefields. This model, used for example in the war of Granada in 1983 was widely criticized in democratic societies where freedom of press is a constitutional right.

While the purpose of the information is, a priori, to reduce a degree of uncertainty to a fact occurred in reality, the purpose of the war of communication is to produce messages to deter the enemy and convince the population of the legitimacy of the war. For this reason, it will be assumed that media transparency requirements are not always compatible with the concern for confidentiality of certain military operations.

In order to defy the challenges cited previously, the armed forces will precede in three main areas namely training, establishment of adequate structure and mastery of new tools related to new communication technologies and information.

It is paramount for armies to offer its staff a proper training in matters of communication and allow it to acquire, according to levels of responsibility, the basic rules on the matter.

In addition, it is becoming increasingly necessary to create and implement specialized structures in the matters of communication with a vision and a clear definition of tasks and responsibilities that help to achieve the defined objectives.

CONCLUSION

In conclusion, after being considered for long time as the "great mute", the army identified the need to communicate. It needs to explain and justify its actions to the decision makers and the public opinion, particularly with the increasing consideration given to new concept of civilian control on the military institution. To be efficient, military institution has to anticipate its actions, provide coherent messages, be transparent without compromising its security and master all the new tools of communication related to the new communication and information technology.

Finally, it is important to mention that regarding the society democratization tendency and the rapidity of technology evolution, military institution does have to be more and more anticipative and updated regarding the legal framework and the institution status.

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NEW CHALLENGES TO NATO'S FUTURE AND THE EU'S COLLECTIVE SECURITY

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In response to the Europe changing security environment the EU and NATO need to adapt their strategies or policies. The situation at Europe's eastern borders has fundamentally changed and the Wales Summit confirmed that Article 5, NATO's original main task, regained its central position. In addition, conflict has become the norm in the Middle East and Northern Africa. Islamic State has mixed irregular and regular forms of warfare, including the use of heavy weapons; and it operates as both a state and a non-state actor.

This study starts with a short analysis of the Europe's evolving security environment (chapter 2). Chapters 3 and 4 are dedicated for assesses the impact of these new threats on NATO and EU capacities. What should be the priorities for each of them? How can the capacities of the EU and NATO be synchronised in order to realise a systematic, coherent and efficient response by Europe and North America to the changing world? The study ends with conclusions in chapter 5.

1. EU/NATO cooperation

1.1 Background

Sharing strategic interests, NATO and the European Union cooperate on issues of common interest and are working side by side in crisis management, capability development and political consultations. The European Union is a unique and essential partner for NATO. The two organisations share a majority of members (22), and all members of both organisations share common values.

Institutionalised relations between NATO and the European Union (EU) were launched in 2001, building on steps taken during the 1990s to promote greater European responsibility in defence matters (NATO-Western European Union cooperation1). The political principles underlying the relationship were set out in the December 2002 NATO-EU Declaration on a European Security and Defence Policy (ESDP). The declaration also reaffirmed EU assured

access to NATO's planning capabilities for the EU's own military operations. Later, the so-called "Berlin Plus" arrangements set the basis for the Alliance to support EU-led operations in which NATO as a whole is not engaged.

With the enlargement of both organisations in 2004 followed by the accession of Bulgaria, Romania and Croatia to the EU, NATO and the European Union now have 22 member countries in common.2

At the Lisbon Summit in November 2010, the Allies underlined their determination to improve the NATO-EU strategic partnership. This was reinforced by NATO's 2010 Strategic Concept which commits the Alliance to prevent crises, manage conflicts and stabilise post-conflict situations, including by working more closely with NATO's international partners, most importantly the United Nations and its strategic partner - the EU.

NATO's Strategic Concept clearly states that an active and effective EU contributes to the overall security of the Euro-Atlantic area. The European Union's Lisbon Treaty (in force end 2009) provides a framework for strengthening the EU's capacities to address common security challenges. Non-EU European Allies make a significant contribution to these efforts. For the strategic partnership between NATO and the EU, their fullest involvement in these efforts is essential.

NATO and the EU can and should play complementary and mutually reinforcing roles in supporting international peace and security. The Allies are determined to make their contribution to create more favourable circumstances through which they will:

- fully strengthen the strategic partnership with the EU, in the spirit of full mutual openness, transparency, complementarity and respect for the autonomy and institutional integrity of both organisations;
- enhance practical cooperation in operations throughout the crisis spectrum, from coordinated planning to mutual support in the field;
- broaden political consultations to include all issues of common concern, in order to share assessments and perspectives;
- cooperate more fully in capability development, to minimise duplication and maximise cost-effectiveness.

Close cooperation between NATO and the EU is an important element in the development of an international "Comprehensive Approach" to crisis management and

operations, which requires the effective application of both military and civilian means. The Chicago Summit in May 2012 reiterated these principles by underlining that NATO and the EU share common values and strategic interests. Fully strengthening this strategic partnership is particularly important in the current environment of austerity. In this context, the NATO Secretary General engages actively with his EU counterparts and has addressed the European Parliament's Foreign Affairs Committee in joint session with the sub-committee on Security and Defence on numerous occasions.

At that time, the Western European Union (WEU) was acting for the European Union in the area of security and defence (1992 Maastricht Treaty). The WEU's crisis-management role was transferred to the European Union in 1999.

An exchange of letters between the NATO Secretary General and the EU Presidency in January 2001 defined the scope of cooperation and modalities of consultation on security issues between the two organisations. Cooperation further developed with the signing of the NATO-EU Declaration on ESDP in December 2002 and the agreement, in March 2003, of a framework for cooperation.

NATO-EU Declaration on ESDP: The NATO-EU Declaration on ESDP, agreed on 16 December 2002, reaffirmed the EU assured access to NATO's planning capabilities for its own military operations and reiterated the political principles of the strategic partnership: effective mutual consultation; equality and due regard for the decision-making autonomy of the European Union and NATO; respect for the interests of EU and NATO members states; respect for the principles of the Charter of the United Nations; and coherent, transparent and mutually reinforcing development of the military capability requirements common to the two organisations.

The "Berlin Plus" arrangements: As part of the framework for cooperation adopted on 17 March 2003, the so-called "Berlin Plus" arrangements provide the basis for NATO-EU cooperation in crisis management in the context of EU-led operations that make use of NATO's collective assets and capabilities, including command arrangements and assistance in operational planning. In effect, they allow the Alliance to support EU-led operations in which NATO as a whole is not engaged.

NATO and the EU meet on a regular basis to discuss issues of common interest. Meetings take place at different levels including at the level of foreign ministers, ambassadors,

military representatives and defence advisors. There are regular staff-to-staff talks at all levels between NATO's International Staff and International Military Staff, and their respective EU interlocutors (the European External Action Service, the European Defence Agency, the Commission and the European Parliament).

Permanent military liaison arrangements have been established to facilitate cooperation at the operational level. A NATO Permanent Liaison Team has been operating at the EU Military Staff since November 2005 and an EU Cell was set up at SHAPE (NATO's strategic command for operations in Mons, Belgium) in March 2006.

1.2 Capabilities

Together with operations, capability development is an area where cooperation is essential and where there is potential for further growth. The NATO-EU Capability Group was established in May 2003 to ensure the coherence and mutual reinforcement of NATO and EU capability development efforts.

Following the creation, in July 2004, of the European Defence Agency (EDA) to coordinate work within the European Union on the development of defence capabilities, armaments cooperation, acquisition and research, EDA experts contribute to the work of the Capability Group.

Among other issues, the Capability Group has addressed common capability shortfalls in areas such as countering improvised explosive devices and medical support. The Group is also playing an important role in ensuring transparency and complementarity between NATO's work on "Smart Defence" and the EU's Pooling and Sharing initiative.

Both NATO and the European Union are committed to combat terrorism and the proliferation of weapons of mass destruction (WMD). They have exchanged information on their activities in the field of protection of civilian populations against chemical, biological, radiological and nuclear (CBRN) attacks. The two organisations also cooperate in the field of civil emergency planning by exchanging inventories of measures taken in this area.

1.3 Areas of cooperation

In July 2003, the EU and NATO published a ″Concerted Approach for the Western Balkans″. Jointly drafted, it outlines core areas of cooperation and emphasises the common vision and determination both organisations share to bring stability to the region.

On 31 March 2003, the EU-led Operation Concordia took over the responsibilities of the NATO-led mission, Operation Allied Harmony, in the former Yugoslav Republic of Macedonia. This mission, which ended in December 2003, was the first “Berlin Plus” operation in which NATO assets were made available to the European Union.

Building on the results of Concordia and following the conclusion of the NATO-led Stabilisation Force (SFOR) in Bosnia and Herzegovina, the European Union deployed a new mission called Operation Althea on 2 December 2004. The EU Force (EUFOR) operates under the “Berlin Plus” arrangements, drawing on NATO planning expertise and on other Alliance’s assets and capabilities. The NATO Deputy Supreme Allied Commander Europe is the Commander of Operation Althea. The EU Operation Headquarters (OHQ) is located at SHAPE.

NATO has been leading a peacekeeping force in Kosovo (KFOR) since 1999. The European Union has contributed civil assets to the UN Mission in Kosovo (UNMIK) for years and agreed to take over the police component of the UN Mission. The European Union Rule of Law Mission in Kosovo (EULEX), which deployed in December 2008, is the largest civilian mission ever launched under the Common Security and Defence Policy (CSDP). The central aim is to assist and support the Kosovo authorities in the rule of law area, specifically in the police, judiciary and customs areas. EULEX works closely with KFOR in the field.

NATO and the EU are playing key roles in bringing peace and stability to Afghanistan, within the international community’s broader efforts to implement a comprehensive approach in their efforts to assist the country. The NATO-led International Security Assistance Force helps create a stable and secure environment in which the Afghan government as well as other international actors can build democratic institutions, extend the rule of law and reconstruct the country. NATO welcomed the EU’s launch of a CSDP Rule of Law Mission (EUPOL) in June 2007. The European Union has also initiated a programme for justice reform and is helping to fund civilian projects in NATO-run Provincial Reconstruction Teams (PRTs) that are led by an EU member country.

Both NATO and the EU supported the African Union’s mission in Darfur, Sudan, in particular with regard to airlift rotations.

Since September 2008, NATO and EU naval forces are deployed side by side (respectively Ocean Shield and EUNAVFOR Atalanta), with other actors, off the coast of Somalia for anti-piracy missions.

Since the adoption of NATO's new Strategic Concept at the Lisbon Summit in November 2010, which identifies the need for the Alliance to address emerging security challenges, several new areas of cooperation with the EU are taking place, in particular energy security issues and cyber defence. In this context, NATO and EU staffs have been holding consultations in order to identify the specific areas in which the two organisations could enhance their cooperation in these fields.

The organisations have 22 member countries in common. Albania, Canada, Iceland, Norway, Turkey, and the United States, which are members of NATO but not of the EU, participate in all NATO-EU meetings. So do Austria, Finland, Ireland, Sweden, and since 2008, Malta, which are members of the EU and of NATO's Partnership for Peace (PfP) programme.

However, Cyprus which is not a PfP member and does not have a security agreement with NATO on the exchange of classified documents, cannot participate in official NATO-EU meetings. This is a consequence of decisions taken by NATO in December 2002. Informal meetings including Cyprus take place occasionally at different levels.

European defence cooperation will be supported by Washington as long as it leads to better capabilities for Europe, so it can not only take more responsibility for conflict management in its neighbourhood but also reinforce the Alliance's collective defence. But it is not just about improving Europe's military capabilities. Hybrid threats need hybrid responses. For many of the responses (military, cyber, strategic communications), the EU and NATO will have to cooperate closely, while in areas of sole competence of either of the two (e.g. NATO's nuclear weapons and missile defence; the EU's energy policy and association agreements), both organisations should consult and coordinate to synchronise timing and impact. The comparative advantages of the EU and NATO should be used to the maximum extent. This requires a totally new strategic relationship as the agenda is no longer solely dictated by crisis management or non-article 5 operations[1].

2. The challenge: mixed threats

The geostrategic power change is continuing and the cooperation of the European Union and the United States with Russia and China remains constrained. The belt of instability now runs from Central America through Northern and sub-Sahara Africa and the larger Middle East (MENA) area to Eastern Europe. Conflicts occur across this belt. In the MENA area religious and political sectarianism dominates. Some states, like Syria and Libya, have collapsed, while others are fragile and challenged by internal conflict or extremist groups operating across national borders. Islamic State (IS) has blurred the distinction between state and non-state actors as it has characteristics of both. To their immediate East the EU and NATO have to deal with a complex combination of local armed conflict and state-level confrontation. In East Asia more traditional interstate tensions are rising as Beijing is expanding its footprint into the South China Sea. The proliferation of nuclear weapons and missiles also continues to pose threats to security and stability. Europe's security is challenged by a multitude of threats, but the most pressing are geographically determined: the areas adjacent to its eastern and southern borders.

2.1 The hybrid threat

Russia's interference in Ukraine was described as being hybrid warfare. Moscow itself is not conducting a classical war but is applying a set of confrontational instruments. It would be more appropriate to use the term hybrid threat or hybrid intervention, which consists of a mix of non-military and military elements, applying both 'soft power' and 'hard power'. For implementing 'soft power' Russia uses propaganda as a tool to influence public opinion, both at home and abroad. Nationalism combined with anti-Western propaganda dominates in most of the state-controlled Russian TV, radio and newspapers, on the internet and on social media. Another non-military instrument is Russia's gas and oil export power. In general, Moscow is reluctant when it comes to interrupting energy flows abroad, as the state's income is largely dependent on gas and oil exports (approximately 80% of GDP). Kremlin has not hesitated to use energy as a political power tool to increase the pressure on Kiev. In case of further deterioration of relations with the West, gas and oil dependencies could also make other European countries vulnerable to Russian threats, in particular with regard to their gas imports.

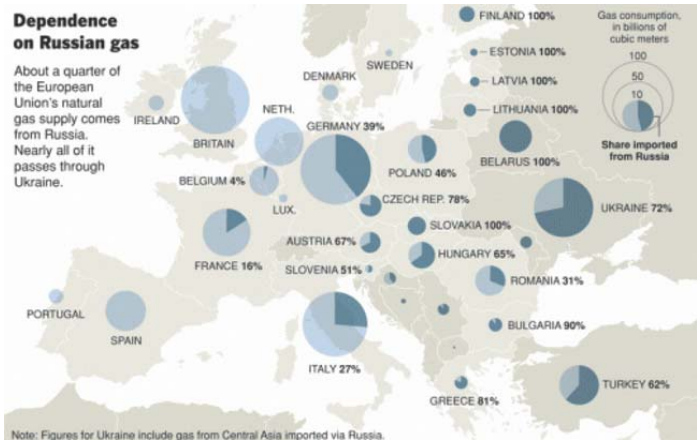

Fig. 1 Dependence on Russian gas

In Eastern Ukraine the Kremlin has operated by 'indirect means' of various sorts:

- propaganda by putting all the blame on the 'offensive' Ukrainian Army;
- covert activities by supporting proxies (local rebels) with weaponry and by sending Russian volunteers disguised as 'green men' or local fighters;
- keeping the area somewhere between war and peace through supporting the Minsk negotiations on the one hand while ignoring violations of the cease-fire agreements on the other.

2.2 Modernisation of Russia's armed forces

Hybrid warfare does not exclude the use of regular armed forces. First, they can be used to influence and intimidate the opponent, for example by concentrating forces and exercising them. Second, they can be used in hybrid warfare, in a covert way, in combination with irregular means – as is the case in Eastern Ukraine. Third, the Russian military doctrine does not exclude overt, full-scale war as the ultimate way to win a conflict. Thus, modern regular armed forces are needed. The Georgia War in 2008 revealed the shortfalls of Russia's armed forces in terms of information technology, unmanned aerial vehicles and precision-guided munitions[2].

The poor military performance in the Georgia War led to the 2008 New Look reform plan, which aimed at restructuring the armed forces away from the Soviet model of mass mobilisation, which is suitable for large-scale military confrontations, towards a professional force with a much higher level of readiness[3]. Restructuring the Soviet-type 'specialised'

divisions (tank and motorised infantry) into all-arms brigades – that are fully manned, ready and with modern weapons – was a central element of the plan.

The other important element of the plan was the modernisation of equipment. In 2011 President Putin launched a $500 billion rearmament programme with the aim of replacing 70% of the armed forces' equipment by 2020. The defence budget, which had already doubled from 2004 to 2012 (to $ 80 billion), would further increase. However, the Russian economic recession that started in late 2014 – as a result of lower oil prices and the international sanctions – became a spoiler for rising Russian Government spending. If the recession of Russia's economy continues, the defence budget is likely to be cut even further. For the moment, Russia remains third in the world rankings for defence expenditure, be it is still far behind the United States and China.

Another factor influencing the modernisation of the Russian armed forces is demography. The Russian population is shrinking, which makes it nearly impossible to abandon conscript service and create an all-volunteer and fully professional force. The current Russian troop strength is estimated at approximately 800,000 (meaning 20% below the planned level of 1 million), far behind NATO's total numerical strength of more than three million military. The Russian armed forces will not be turned into a full professional force and will continue to be dependent on conscript service. The military leadership has given up the brigade structure (light, medium, heavy). The Russian Army returns to divisional structures with traditional armoured (tracked vehicles) and motorised (wheeled vehicles) brigades.

2.3 Chaos in the South

For a long time the 'Middle East' used to be a synonym for the area of turmoil to Europe's South-East. After the Arab Spring unrest started to spread across the Maghreb, the geographic term for the area of instability then became the MENA (Middle East and North Africa) area. Conflicts have spread from North Africa's shores at the Mediterranean to the Sahel (Mali, Niger) and even to sub-Sahara Africa (e.g. northern Nigeria). The Middle East area had already been extended to the East, encompassing Afghanistan and North-West Pakistan.

Geographic expansion is just one feature of the growing chaos in *the wider MENA area*. Another characteristic is the *rise of non-state actors*. In Syria alone some 1,200 armed groups are involved in the fighting. In **Libya more than 1,700 rival clans, criminal gangs, tribal** factions

and Islamist militias are competing for power[4]. But with the rise of Islamic State (IS) the distinction between non-state and state actors has been blurred. By proclaiming the Islamic Caliphat, conquering and defending territory and installing state-like institutions, IS gives the impression of being a 'state'. One of the most important functions of the latter is to collect revenue, not only to finance the armed struggle, but also to pay the salaries of public sector employees, finance the repair and maintenance of infrastructure and fund social welfare.

The next feature of the changing character of conflict in this part of the world is the rise of sectarianism. In the past the Sunni-Shi'a divide was primarily an interstate power struggle between the Sunni group of states – with Saudi Arabia as the dominating nation –and the Shiites with Iran as the leading country. In Syria and Iraq both groups are now striving for wider influence through armed confrontation. Saudi Arabia, Qatar and also NATO member Turkey continue to fund and arm Sunni opposition groups in Syria, while Iran is providing financial aid, technical assistance and pro-government forces to the Assad regime. As IS has connected the fighting in Iraq and Syria, international borders are losing their relevance. Although the risk of redrawing the Middle East map is rather low – certainly it is not in the interest of Iran, Saudi Arabia and Turkey – the factual disappearance of the border between Iraq and Syria has a wider geographical destabilising effect.

The spill-over effects of the chaos in the wider MENA area are tremendous. First and foremost, the humanitarian consequences are staggering. Syrians are now the largest refugee population after the Palestinians, with four million people having left the country and approximately eight million having been internally displaced, together making up nearly half of the country's pre-war population (22 million inhabitants).

The overwhelming majority – some 98% of Syria's refugees – is hosted by the neighbouring countries]. Second, the migrant flow to Europe has increased exponentially in recent years. It should be noted that migrants escaping from conflict areas only partly account for these numbers. Many migrants, in particular from West African countries, try to reach Europe for economic reasons.

Another feature of the conflicts, which in particular has been on the rise since IS entered the scene, is the increase in foreign fighters. An estimated 20,000 jihadists from 90 countries have joined IS or other extremist groups in Syria and Iraq. Most of them originate from non-Western countries, with Tunisia (3,000), Saudi Arabia (2,500) and Jordan (2,089) forming the

top three – which could put these countries at risk of a marked increase in terrorist attacks. The contingent of foreign fighters from EU countries is estimated at 3,850 or 19% of the world's total[5].

	West-Med	Central-Med	East-Med	Total
2012	6,400	15,900	37,200	**59,500**
2013	6,800	40,000	24,800	**71,600**
2014	7,840	170,760	50,830	**229,430**

Fig. 2 Number of migrants crossing the Mediterranean

Terrorist strikes could also hit European targets (citizens, companies, diplomatic representations) in the wider MENA, in particular in countries with weak state structures. Several attacks have been carried out in the past. Hostage taking has also become a standard feature of terrorist acts in the region with the major aim being to get ransom money from parties willing to pay for their release. Foreign fighters also pose security risks inside Europe. Although the number of jihadist terrorist attacks has been limited the psychological effect is enormous – not least due to the wide media attention. The attack on the Jewish Museum in Brussels (May 2014, four killed) and that on the office of Charlie Hebdo in Paris (January 2015, 12 killed plus 5 killed elsewhere) dominated most of Europe's news channels for days.

2.4 The threat of Islamic State

IS has emerged as a major security threat to the MENA area and far beyond. Its 'success' in armed fighting, and its propaganda encouraging to join the Caliphate's mission, has not only attracted foreign fighters to the battlefields of Syria and Iraq, but has also resulted in the creation of a growing number of IS affiliates across the region.

As stated above, IS is neither a full-blown state nor solely a non-state actor. It is somewhere in between. The same applies to the characteristics of its way of fighting. It is a *combination of many elements*: traditional territorial conquest and irregular or guerilla-type fighting, terrorist acts but also exploiting the internet for recruitment, intimidation and propaganda.

2.5 Consequences for the EU and NATO

The wider MENA area will continue to be characterised by instability for years to come. The *complexity of conflicts is growing* as they are increasingly fuelled by a range of factors: collapsed states like Syria and Libya who have become prime proliferators of insecurity with effects far beyond their own borders; extremist groups, of which IS is now the dominating force, acting as a hybrid state and spreading its influence through affiliate networks across the wider MENA area; and the growing involvement of Shi'a Iran on the one hand and Saudi Arabia plus other Sunni countries on the other, which increases the *sectarian character* of the clashes and leads to further radicalisation of Shi'a and Sunni fighters. European security is affected in quite a different way compared to the challenges from the East. It is not a territorial threat. The instability in the South primarily produces *spill-over effects* like increasing migration, transborder crime and terrorism. It is in its internal security that Europe finds the destabilising impact of the turmoil in the wider MENA area. Therefore, the hybrid character of the threat from the South is *quite different* from the 'non-linear' dangers from Russia. There are certainly comparable elements like the vast use of propaganda and irregular ways of fighting, but they also show essential differences. Extreme violence, brutal killings and other ways of frightening the opponent are openly promoted and shown in propaganda by IS, while by denying any formal involvement in the Donbass War Russia is doing the opposite.

3. NATO: more flexible

For more than two decades NATO has focused on crisis management operations, starting in the Balkans in the early nineties and culminating in the largest Allied operation ever in Afghanistan. Russia's intervention in Ukraine in 2014 has brought the Alliance back to its core business: territorial defence under article 5 of the Washington Treaty.

The Readiness Action Plan (RAP) approved at the Wales Summit introduces measures that together aim to enable the Alliance to respond in a timely and robust way to the new challenges to security in and near Europe. The RAP contains two main pillars: the Assurance Measures and the Adaptation Measures. In the words of NATO Secretary General Stoltenberg: "The Readiness Action Plan is the biggest reinforcement of our collective defence since the end of the Cold War. And it is my top priority to implement this plan in full and on time"[6].

The RAP measures underlines the fact that, although NATO is committed to the peaceful resolution of disputes by diplomatic efforts, it is willing and able to perform its erstwhile principal military function: to undertake military operations carried out under article 5 of the Washington Treaty.

3.1 The RAP Assurance Measures

The Assurance Measures include the "continuous air, land, and maritime presence and military activity in the eastern part of the Alliance (..) on a rotational basis"[7]. Amongst the measures, the following have been broadcast loud and clear by NATO:

- increasing from 4 to 16 fighter jets for air-policing in the Baltic region;
- commencing AWACS72 surveillance flights over eastern NATO territory;
- more ships patrolling in the Baltic, Black, and Mediterranean Seas;
- deploying ground forces to the eastern NATO member states for training and exercises, on a rotational basis;
- conducting over 200 NATO/national exercises in Europe since the Wales Summit73.

3.2 The RAP Adaptation Measures

The Adaptation Measures are intended to enhance NATO's military posture and readiness levels. These measures include:

- enhancing the NATO Response Force (NRF) to make it more responsive and capable; taken together, the NRF land forces could be similar in size to a division size force;
- creating – as part of NRF restructuring – a Very High Readiness Joint Task Force(VJTF) of several thousand ground troops supported by air, maritime and special forces, which can be deployed within a few days;
- enhancing Standing Naval Forces with more (and more types of) ships;
- establishing permanent multinational NATO command and control presence as well as reception facilities, on the territories of the eastern Allies (Bulgaria, Estonia, Latvia, Lithuania, Poland, Romania), with personnel from Allies on a rotational basis, focusing on planning and exercising collective defence;

- raising the readiness and capabilities of the Headquarters Multinational Corps Northeast in Szczecin in Poland and enhancing its role as a hub for regional cooperation;
- pre-positioning military equipment and supplies;
- improving NATO's ability to reinforce its eastern Allies through preparation of national infrastructure, such as airfields and ports;
- updating defence plans for Eastern Europe;
- conducting more exercises focussed on crisis management and collective defence.

4. EU: more integrated

The outline of the EU's response to the new security challenges has become clearer throughout 2014 and 2015, although the 'new European Strategy on Foreign and Security Policy' will only see the light of day in June 2016. This new strategy will also assess the extent to which the EU's instruments are still fit for purpose. The complex cross-border and cross-sectoral nature of the current security challenges makes the EU potentially an organisation that should be increasingly able to position itself as a security provider. In particular, the EU addresses horizontal threats, which are also mentioned in the European Commission's 'European Agenda for Security': terrorism, organised crime, foreign fighters, hybrid threats, smuggling and trafficking of human beings, irregular migration, border management, energy security and cyber security[8], as well as threats such as the proliferation of weapons of mass destruction, piracy and climate change.

4.1 Hybrid threats

The comprehensive nature of hybrid threats means that, in theory, the European Union is well placed to counter them. Hybrid threats can be of an unintentional nature, which means that the threats are of a multifaceted and complex nature, crossing over the internal and external security domain, but are not designed by an actor against Europe. The situations in North Africa, in the Sahel and in the Horn of Africa are examples of this. Because there is an 'addressee' in the case of the Russian Federation's use of hybrid tactics, different responses by the EU are needed than when dealing with the more diffuse sources of the threats emanating from the South. To

complicate things further, IS, in Iraq and Syria, is directing its propaganda at vulnerable groups within EU countries for recruitment purposes.

4.2 The EU's response to challenges from the southern periphery

It is clear that the extent of the EU's leverage and options towards Ukraine is larger than that towards its southern neighbours. The pull of possible 'club-membership' for Ukraine is absent for countries such as Libya, Mali, Somalia or Syria and Iraq, which limits the EU's options considerably. In a nutshell, these threats are terrorism, transborder organised crime, mass migration and failed states. While these threats are also, for a large part, interconnected, of equal concern are the humanitarian catastrophe of the refugees in the Syria-area, the migration problem in the Mediterranean, and the foreign fighters issue. All of these aspects combined make the MENA a very explosive region.

The pressure on the southern EU external borders and the terrorist threat to EU territory are matters that demand the most acute attention from the EU countries. The June 2015 attack on a chemical factory in Grenoble and the 'IS-style' beheading there have vividly impressed upon the EU and its member states how external issues can have an impact at home. The fall-out of the Arab spring and the migration pressures of the recent period have spurred on cooperation among Freedom, Security and Justice (FSJ) and external relations institutions within the EU.

4.3 Migration

At the end of 2014 and into 2015, the migration problem has been taken up by the European Council, the EEAS and the Commission with much urgency. CSDP is now activated in assisting Italy and Frontex in patrolling, deterring human traffickers and rescuing refugees. The European Council decided on 22 June to launch the naval operation EUNAVFOR Med. Its mission is to identify, capture and dispose of vessels and enabling assets used or suspected of being used by migrant smugglers or traffickers.

To start with, a common EU asylum policy is needed: the competence for immigration law and the asylum system still lies strictly with the individual member states136 and while the Commission tries to take the initiative in the matter, national political interests to keep the toxic immigration issue at bay are still dominant. Solidarity among the member states by allowing a fair 'intra-EU relocation system' of refugees among the 28 member states is still a distant

prospect and only a voluntary distribution plan could be agreed by the Heads of States and Government in their June meeting.

The EU will deploy European migration liaison officers in key countries, set up a programme for the rapid return of illegal migrants from frontline member states, and organise a conference in Valletta with African countries to discuss migration issues. In addition, the EU continues to work with the International Organization for Migration (IOM) and the United Nations High Commissioner for Refugees (UNHCR).

Border management is almost literally at the interface between internal and external security and the politically salient issue of mass migration is currently pushing the increased coordination of policies and instruments from various EU institutions forward. Work is ongoing to allow the greater involvement of EU Agencies in the FSJ sector, in particular Europol and Frontex, in CSDP missions. A proposal was made by the Commission for a new regulation on Europol to consolidate the enhanced contribution to CSDP. Similar arrangements are being prepared for Frontex.

CONCLUSIONS

Europe is confronted with a multitude of risks and challenges to its security, characterised by growing complexity and involving an increasing number of state, non-state or semi-state actors. Instability and conflicts have come to Europe's borders in the East and the South – thus the most pressing security challenges are geographically determined.

The Alliance has returned to its original core business, territorial defence under article 5 of the Washington Treaty. The Readiness Action Plan (RAP) is the expression of NATO's rebirth. The RAP (over-)focuses on article 5 deployments. Although RAP capacities like the Very High Readiness Joint Task Force (VJTF) could theoretically also be used for non-article 5 deployments, for the moment they are primarily dedicated to article 5 related activities. The dominating focus on the East might endanger Allied solidarity if it remains unbalanced with little or no NATO attention to the South.

The new EU Foreign Policy and Security Strategy, to be adopted in June 2016, should clearly acknowledge the importance of the contribution of the Common Security and Defence Policy (CSDP). Without the military component under CSDP the EU cannot act as a security provider and assume larger responsibilities with regard to security in its own neighbourhood.

The EU needs *strategic regional autonomy* in order to deal with the security problems in its neighbourhood. This requires more robust military CSDP capabilities, including an *autonomous Military Planning and Conduct Capability*.

Although NATO has the primary role in territorial defence, the threat posed by Russia also requires the EU to show solidarity, in particular with *non-NATO EU members like Finland and Sweden*. A first step could be to create an *EU maritime rotating presence* in the Baltic Sea.

The EU and its the member states should develop a *strategic communication strategy* to counter the Russian propaganda. Targetting the right audiences sufficiently using the Russian language and communicating through a multitude of channels (printed material, broadcasting, internet and social media) are important aspects.

The main hybrid threat from the South is the recruitment of foreign fighters and IS inspired terrorist attacks within Europe. *Disrupting IS use of internet and social media* is a way to counter this threat and its potential should be fully explored.

Clearly, NATO has collective defence as its core function, although the EU has to play a security role in the East. In crisis management a geographical division can be envisaged, with the EU primarily focussing on its southern neighbourhood.

EU and NATO have to *fully align their responses to the hybrid threats* from the East and the .South. For many of the responses (military, cyber, strategic communications) the EU and NATO will have to cooperate closely, while in areas of the sole competence of either of the two (e.g. NATO's nuclear weapons and missile defence; the EU's energy policy and association agreements) both organisations should consult and coordinate to synchronise timing and impact.

A strategic approach is required concerning EU-NATO coordination for military operations. The strengths of both organisations should become the point of departure for defining complementarity of capacities.

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COST ANALYSIS AND LIFE CYCLE COST USES IN IMPROVING THE MILITARY CAPABILITIES

LTC Giorgi CHAGHOSHVILI, Georgia

Costs have long since become a major issue in military systems analysis. Attention is not limited to the acquisition costs alone, but encompasses all costs involved in the use and disposal of systems. Concepts such as Life Cycle Cost (LCC), Whole Life Cost (WLC), Cost of Ownership (COO) or Total Ownership Cost (TOC) are more and more frequent in any document dealing with system analysis.

Life-cycle costs (LCC) can be defined as the sum of all monies expended, attributed directly and indirectly to a defined system from its conception to its disposal. These costs include costs for research and development, production, personnel to operate and maintain the system, ongoing logistic support, facilities and eventual disposal.

LCC is widely recognised in many nations' defence forces, and in some commercial organisations, as a valuable aid to making more-informed decisions on the management of assets.

Development of LCC

LCC came to prominence in the US Department of Defence in the early 1960s. By the mid 1970s, the technique was well established for military procurement, and was starting to be employed in industry. Its significance has increased as the in-service lives of major defence equipments have extended to 25 years or more.

The use of life cycle cost must, whatever the phase of a programme, inform the process by which managers can bid for future expenditure, manage existing budgets and make the best decisions on options presented to them.

LCC may consider non-cost related factors, which may influence decision. These factors include political decisions based on socio-economic benefits; safety related decisions, which may preclude using certain cost-saving material procedures; and legal requirements imposed upon the use or maintenance of a system.

In addition to assisting resource allocation decisions LCC assists with decisions on management of assets. These decisions can occur at any stage throughout the life-cycle of an asset - from initial planning, through budgeting to source selection, and in-service management and finally disposal.

LCC has many uses. These include:

• To account for resources used by Defence now or in the past (reporting);
• To assess future resource requirements (budgeting);
• To assess costs of acquiring different capabilities (investment appraisal);
• To decide between sources of supply (source selection);
• To improve system design;
• To optimise logistic support; and to assess when assets reach the end of their economic life and replacement is required (disposal).

lso the techniques of LCC are used to assist the project managers and various levels of decision-makers in making the most cost-effective decisions based upon data. The data from the LCC analysis is used for;

• Long term defence planning,
• Comparison of competing projects,
• Comparison of logistic concepts,
• Decisions about replacing old equipment,
• Selection between competing contractors.

One of the principal objectives of life cycle costing is to reduce or control the life cycle cost by assessing the financial impacts of the decisions taken about the complete system. For example In the tender evaluation process the life cycle costs can be used to ensure that the contract decision is made to the tenderer who offers a system that meets all technical and availability requirements at minimum life cycle cost. The cost of investment in reducing maintenance resources and the cost of lifetime support will be weighed against the cost of investment in the overall system. The resulting life cycle cost will therefore be beneficial to the overall tender evaluation process.

To establish a cost-effective in-service phase it is essential to consider operating and maintenance issues at the same time as the procurement of the system. The life cycle cost from

the evaluation process can often be used as a baseline for negotiation on contractor logistic support contracts.

LIFE CYCLE COSTING

The life cycle cost is the output of process of collecting, interpreting and analysing data, this process applies quantitative tools and techniques to predict the future expenditure that will be required in any life cycle stage of a system of interest (life cycle costing).

Simply put, life cycle costing is a powerful technique that supports the analytical processes by which managers can make the most cost-effective decisions on options presented to them at differing life cycle stages and at different levels of the life cycle cost estimate. however that life cycle cost is just one of many criteria (e.g. operational need, government constraints) that could influence an investment decision.

A life cycle cost estimate does not provide the exact figure for the costs, it merely gives an insight into the major cost factors and it may also help to compare alternative solutions. It highlights the magnitude of the costs and identifies areas for potential cost savings as well as areas for technical and organisational improvements.

A life cycle cost estimate, done properly, is the single best metric for measuring the value for money of defence resources. This metric, in turn, is useful in wide range of applications including:

- Evaluating alternative solutions and source selection.
- Assessing the affordability of the programme.
- Managing existing budgets.
- Developing future expenditure profiles.
- Evaluating cost reduction opportunities.
- Evaluating areas of financial risk and uncertainty.

APPROACH TO LIFE CYCLE COSTING

Prior to any costing activity it is essential to define what is to be estimated and understand what the estimates will be used for.

With some variation, the basic approach to life cycle costing can be applied to all projects regardless of their specifications. This approach encompasses the following steps:

• **Define the aims and objectives of the study**.

-The first step is to identify formulate and state the objectives of the analysis or study. Properly formulated objectives define and limit the scope of cost analysis effort and help insure that the life cycle cost estimate is relevant to the program decision which depends upon the estimate.

• **Establish the programme content, the costing boundary and the assumptions for the study**.

The lack of information (e.g. data related to an operational scenario, system life and support organisation) of any kind or in any stage makes it necessary to identify and record assumptions in order to develop a complete life cycle cost of the system of interest.

-The identification and adoption assumptions which influence the estimating process in life cycle costing is critical if the exercise is to yield useful results.

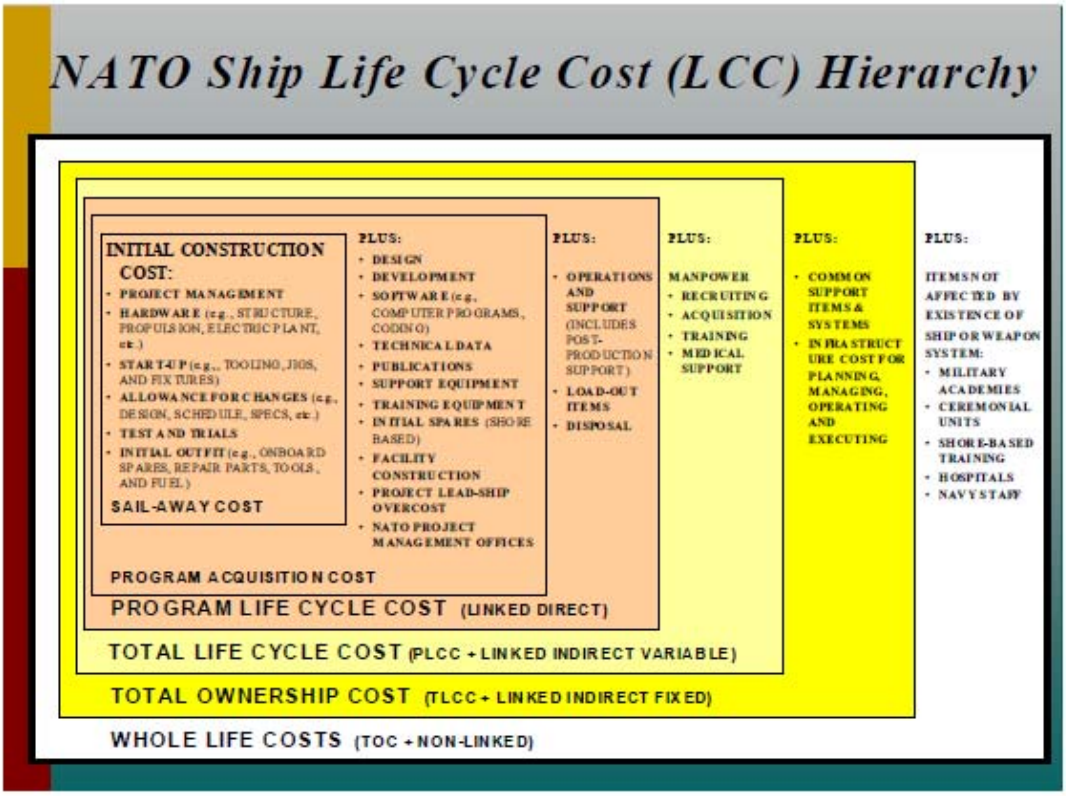

FIGURE 2. Typical Life Cycle Cost Boundary. [1]

- **Assumptions give boundaries to the analysis.**

The Costing Boundary defines exactly what cost elements will be included in the study and the level of detail in which they will be considered. The level of detail of the study is also dependent of some external factors, like the maximum duration of the study, the financial means available to conduct the study, the availability of qualified personnel to conduct the study, the availability of experts to provide information and the availability of data.

• Develop the cost breakdown structure CBS

A Cost Breakdown Structure (CBS) is used to ensure that all relevant costs related to the system of interest are considered. This may be defined as an organised list of all cost items related to the life cycle of a system or programme.

Life Cycle Cost can be broken down in a number of ways. Examples of breakdowns are:

• By time (year, month, or life cycle stage).
• By type of costs (direct, indirect, linked, variable or fixed).
• By product (systems, subsystems, components).
• By process/activity (management, engineering, maintenance, etc.).
• By resources (personnel, equipment, consumables).
• By organisation:
  • Unit, service branch, etc.;
  • Nation (multi-national programme); and
  • Public/private company.

Most of these breakdowns are not mutually exclusive, and a CBS will typically involve a combination of a number of these types of breakdowns.

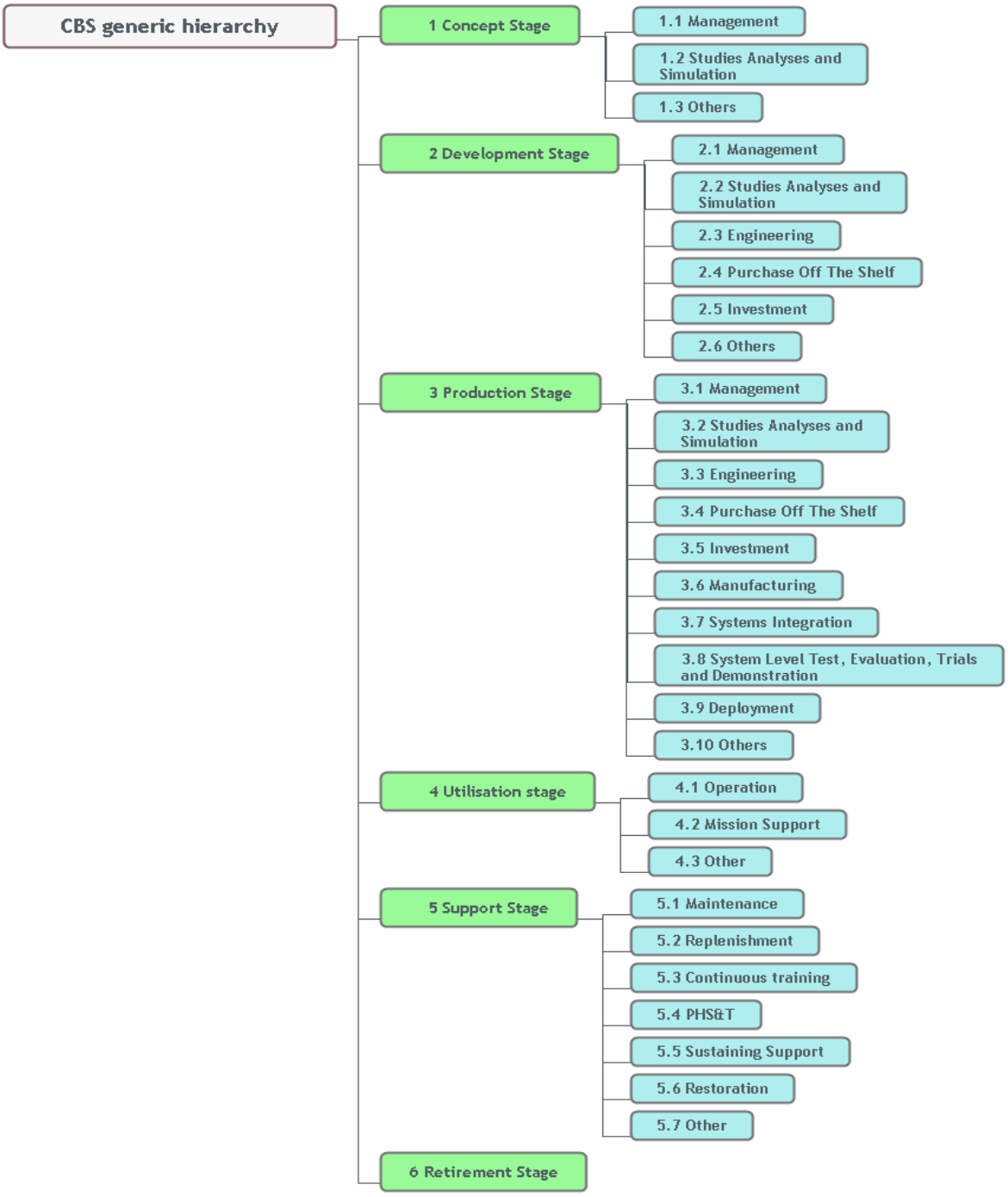

FIGURE 3. CBS generic hierarchy [4]

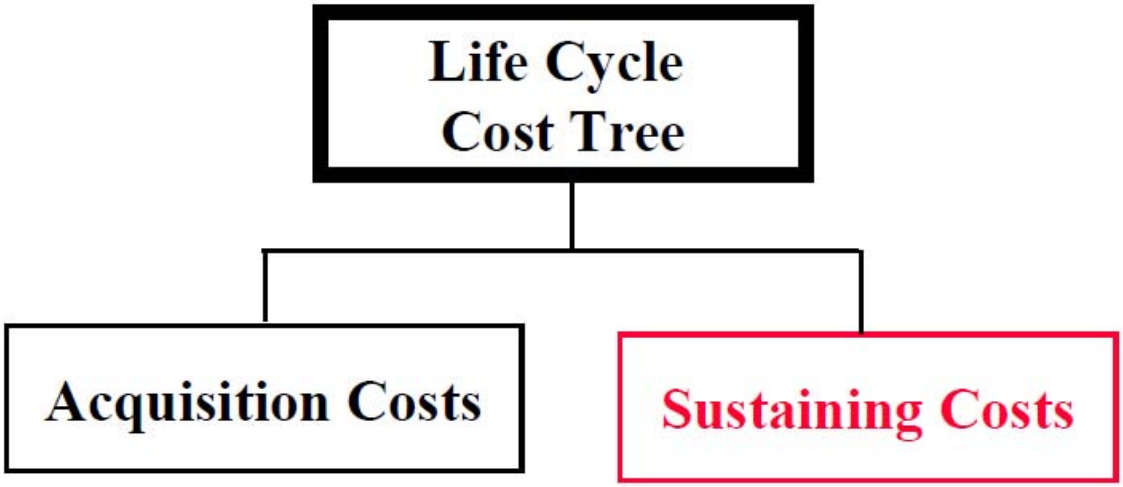

FIGURE 4. Top Level of LCC Tree [5]

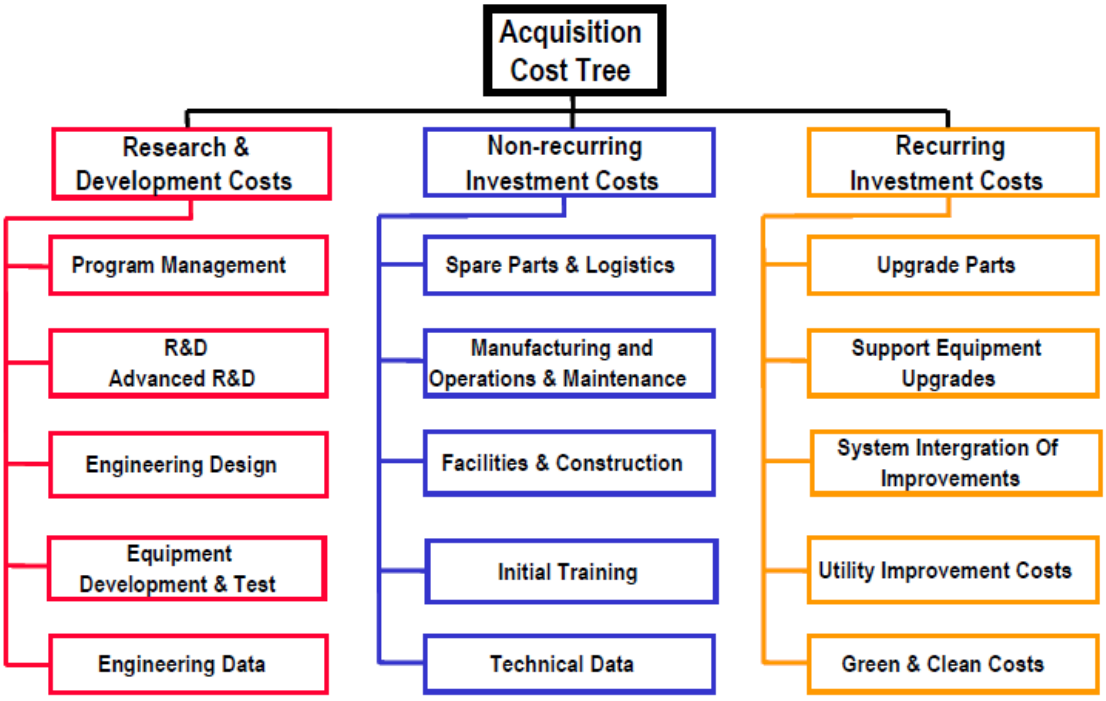

FIGURE 5. Acquisition Cost Tree [5]

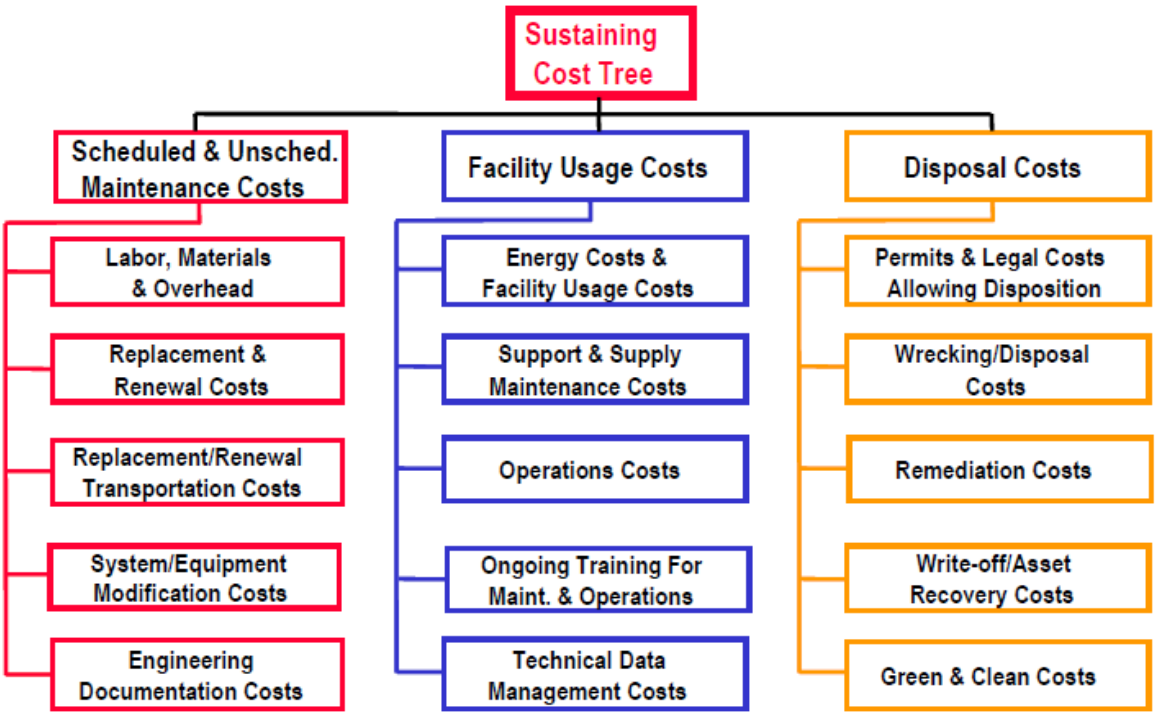

FIGURE 6. Sustaining Cost Tree [5]

• Establish the data and populate the life cycle cost framework.

Once the structure of the life cycle cost framework has been established, the cost breakdown structure needs to be populated. The cost breakdown structure will comprise a number of cost elements. These cost elements will need to be estimated.

COST-ESTIMATING METHODS

Cost estimating is a forecast of future costs based on a logical interpretation of available data. Therefore, availability of data will be a major factor in the estimator's choice of estimating methodology.

The engineering approach, parametric approach, analogy approach, and expert opinion approach are four cost-estimating methods. The use of a specific approach varies with the reliability and quantity of available data. Each approach has limitations.

a. The engineering (bottom-up) approach is an examination of separate work segments in detail and a synthesis of the many detailed estimates into a total. With this approach, the analyst divides the system, activity, or item of hardware into its segments and makes an estimate of each segment's costs. The analyst then combines these estimated costs with estimates of integration costs to arrive at a total cost. A major limitation at the engineering approach is that it requires the analyst to have an extensive knowledge ofthe system, activity, or item. Also the analyst must know both the development and production processes. Particularly for new technologies the detailed knowledge required for a complete engineering analysis is not always available, making tins approach the most difficult to apply..

b. In the parametric approach, the analyst relates cost to some physical attributes or performance characteristics. An attribute can be weight, horsepower, bore diameter, fuel consumption, etc. In developing the cost-estimating relationship (CER), data availability limits the application. Confidence in the results of a parametric estimate depends directly on setting up valid relationships between cost and definable physical attributes or performance characteristics. When documenting the results of a parametric approach, the analyst must present the statistical characteristics, data sources, and assumptions surrounding its development.

c. The analogy approach is a direct comparison with historical data of similar existing systems, activities, or items. The major limitation ofthis approach is that it is ajudgment process and requires considerable experience. The analyst must show the validity of the direct comparison. A variation to this methodology is to adjust the historical data to account for some variation in the proposed system, activity, or item. For example, if commercial vehicle data are used to estimate some aspect of a tactical vehicle, then the historical data might have
to be adjusted to accommodate the impact of complexity or "militarization." It is very important that the analyst document the "adjustment technology" to show the applicability of the methodology.

d. The expert opinion approach uses the subjective judgment of an experienced individual or group. Whenever expert opinion is used, the documentation should contain the sources of the opinions cited. Also, the documentation should include a list ofthe sources' attributes ihat make them experts. It is very important to show the credibility ofthe experts.

CONDUCTING THE COST ANALYSIS

The level of analysis required by different studies varies considerably. In some circumstances, simple accountancy calculations involving discounted cash flow may be all that is required. Cost analysis would traditionally include the testing of parameters and assumptions by means of sensitivity analysis. Testing of alternative assumptions by means of "what if" analyses should also be conducted. It is essential that any life cycle cost model has the ability to support these types of analyses so that the decision-makers have a full understanding of the costs and the financial implications.

LCCA may be defined as a systematic analytical process of evaluating various designs or alternative courses of action with the objective of choosing the best way to employ scarce resources.

An analytically sound methodology and a systematic approach are the keys to developing reliable and valid cost analyses. The following six steps briefly describe the general cost analysis approach:

(1) Set up definitions, ground rules, and assumptions/constraints.

(2) Select the cost structure.

(3) Compile the data base.

(4) Prepare the cost estimate.

(5) Test the total cost estimate.

(6) Prepare documentation.

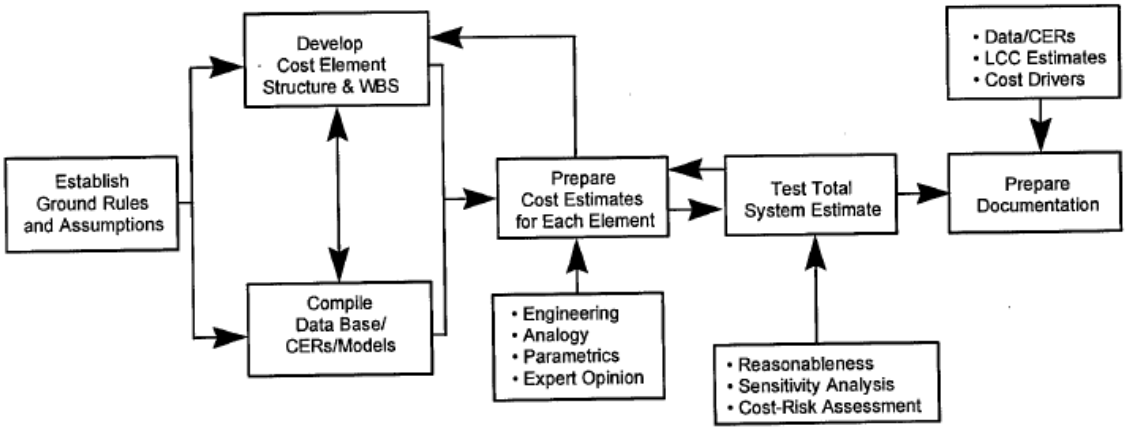

FIGURE 6. Cost Analysis Methodology (8)

CONCLUSION

Life cycle costing is not an exact science it is a management tool designed to assist in efficient resource allocation and success in this depends on how correctly we use it. From my point of view LCC das not have any drawbacks, we more can say that LCC process has some difficulties then disadvantages. Life cycle cost estimates of any new system of interest will inevitably contain uncertainty and risk, therefore the main issuein in this process is accurately estimate the system development and production costs, as well as future decades of operation and maintenance costs.

A clear understanding of the life cycle cost principles, methodologies and techniques will enable us to apply life cycle cost to defence programmes and to successfully deliver and control the system of interest throughout its life cycle.

There are some unequivocal benefits to be gained by all the stakeholders through undertaking a life cycle cost analysis on the system of interest. These include:

• Providing a better insight of all the costs in the programme and identifying the key cost drivers for potential cost savings.

• Providing a realistic planning programme and budgeting through a methodical and consistent estimating approach.

• Providing the basis for measurement of effective organisational and logistic scenarios and provisions.

• Providing a measure to evaluate two or more technically different solutions to assist the decision making process.

Life cycle costing is a very useful process to support the control and management of all the mandatory and stakeholders' multi-criteria requirements in the most effective and economical way.

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INSIDE THE EUROPEAN AIR TRANSPORT FLEET PROJECT "DIPLOMATIC CLEARANCES TECHNICAL ARRANGEMENT"

LTC Marius - Cătălin GÎȚĂ

The European Air Transport Fleet partnership signed by 20 Member States in 2011 under the auspices of the European Defence Agency is looking at augmenting the availability of military airlift in the EU and developing concrete solutions to increase its efficiency and effectiveness. EATF provides a flexible and inclusive partnership for national and multinational military air transport fleets and organisations in Europe. It tackles the way particular air transport assets are acquired, assisted and conducted to ensure this is done in the most efficient way possible. The long term sight of the EATF is to create a robust network linking various European air transport entities aiming at the efficient employment of all present and future air transport capabilities made available by the partnership Member States (pMS) for military needs, no matter of type or origin.

Main objectives of the EATF are:

• to growth the military airlift provision within the EU by better use of the existing assets and facilitating acquisitions of additional ones.

• to find concrete solutions in order to increase the efficiency of existing and future airlift assets

• to enhance means for optimisation of interested existing and future air transport organisations and structures in order to create synergy between them through far-reaching coordination.

• to be able to transport any personnel/equipment by any asset with a minimum of constraints, i.e. by harmonizing and standardizing rules, regulations and procedures.

• to address the way different types of air transport assets are acquired, operated, supported and managed in the most efficient way.

• to seek for cost effective solutions. [1]

The intention is not to create another air transport structure within Europe, but to better coordinate and strengthen existing and/or future ones, thus avoiding duplication.

In this framework, a particular area of interest concerned the freedom of movement of EU military registered transport aircraft transiting the national boundaries within EU. The distinct requests to obtain diplomatic clearances to land in or to fly over EU member states cause delays and in fact hamper swift airlift operations.

This legacy mechanism need to be adapted to the 21st century's needs, mainly looking at the future implementation of the Single European Sky (SES) in the following years, where a route driven system will become into a trajectory driven system.

DIPLOMATIC CLEARANCES TECHNICAL ARRANGEMENT MECHANISM

The Diplomatic Clearance is the granted permission for an aircraft to overflight a state in order to reach the final destination. Without this clearance nobody is allowed entry into a sovereign state airspace.

The aim of the Diplomatic Clearances Technical Arrangement (DIC TA) is to harmonize and simplify the legacy diplomatic clearances mechanism by issuing a yearly Diplomatic Clearance Number (DCN) for most (>95%) of the signatories military transport aircraft missions.

An Annual DCN is issued for a calendar year starting January 1st of each year, valid for all transportation mission, carrying all types of cargo (excluding ICAO/IATA non-compliant dangerous goods) and including support to EU, NATO or coalition operations, unless stated otherwise.

he DIC TA - effective since 1st June 2013 - was signed on 19 Nov 2012 by 11 nations (Belgium, Bulgaria, Czech Republic, Cyprus, Greece, Germany, Netherlands, Norway, Romania, Slovakia and Sweden), Italy, Latvia and Lithuania signed later on. Austria is in the process of accessing the DIC TA and should be a full member by 1st January 2016. Finland, Hungary and Luxembourg indicated to be almost ready to ask for accession to the DIC TA.

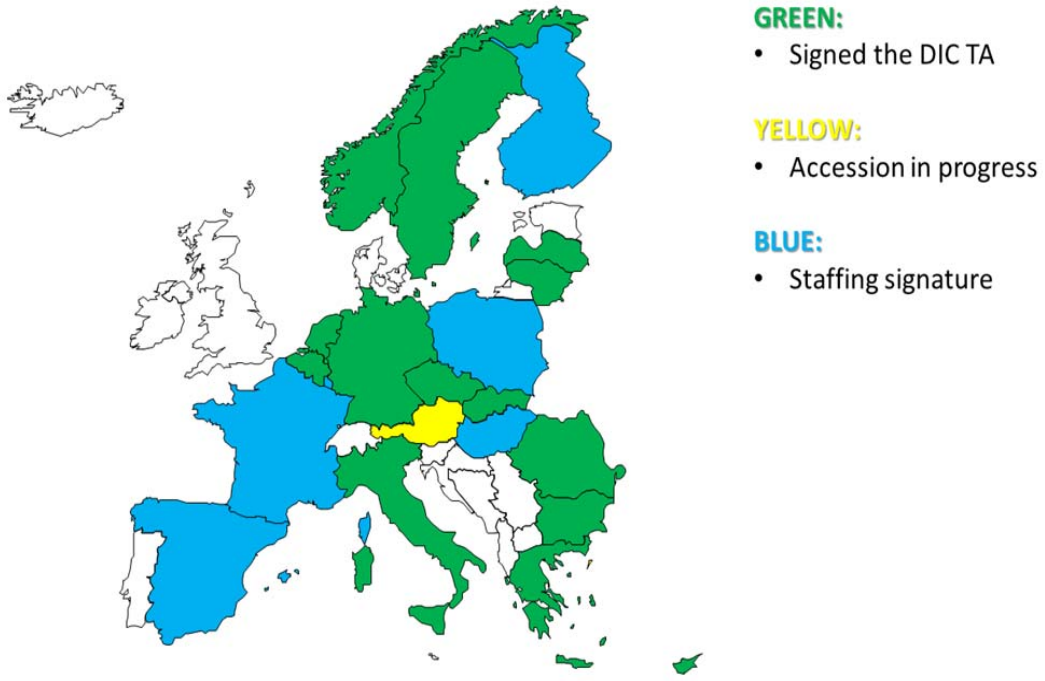

Fig.1 1 – DIC TA signature map [2]

Each military aircraft belonging pMS members overflying or landing inside the area covered by DIC TA will use yearly DCN. Additionally, under certain conditions, Participants will notify the flights through diplomatic channels (where its name comes from). Usually, the Ministry of National Defence (MoND) is responsible for granting flight clearance to all foreign military aircraft. There are exceptions, when the Diplomatic Protocol Department, in consultation with the competent authorities, grants diplomatic clearances to foreign state aircraft (such Slovakia). The state of origin will provide full flight details, in a diplomatic note from its embassy to local MoND through Ministry of Foreign Affairs (MoFA).

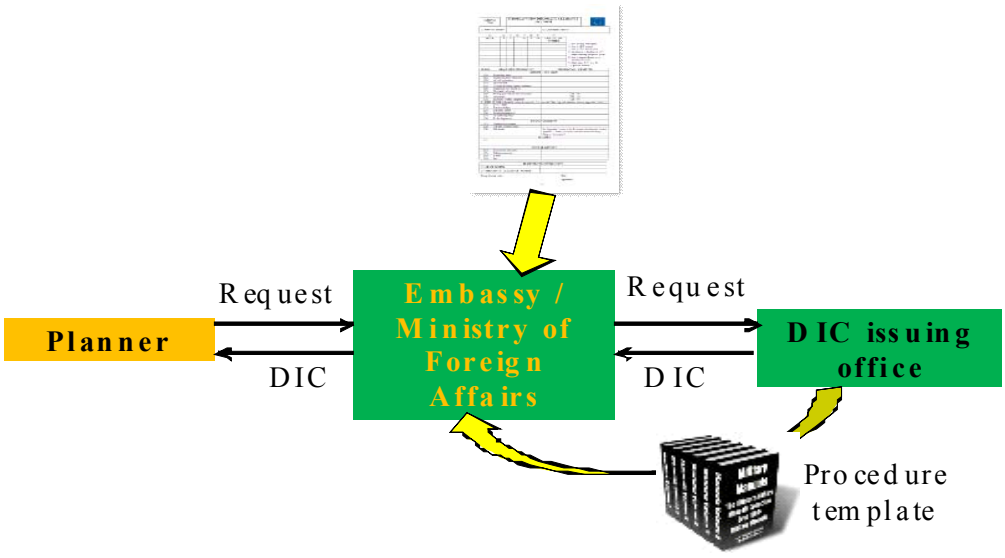

Fig.2 DIC delivery process

DIC TA PILLARS

In order to harmonize and simplify the use and the delivery process of diplomatic clearances for military transport aircraft within the EU using the DIC TA it was established the steps to be followed.

First pillar refers to EU nation military transport aircraft transiting the EU based on a new European DIC procedure, usable for EU operations and missions. An unified format for DIC notification and request for all types of military flights (preferably to be used by all EU nations) was created to replace the existing 28 different forms.

Second pillar take into consideration the air-to-air refueling operations (tankers and receivers) in order to establish common arrangements for DIC over the EU.

Third pillar raise the issue of enlargement of the EU DIC procedure to the Non-EU nation military transport aircraft entering EU.

Fourth pillar will face to find a solution on use EU DIC for EU registered military transport aircraft outside the EU.

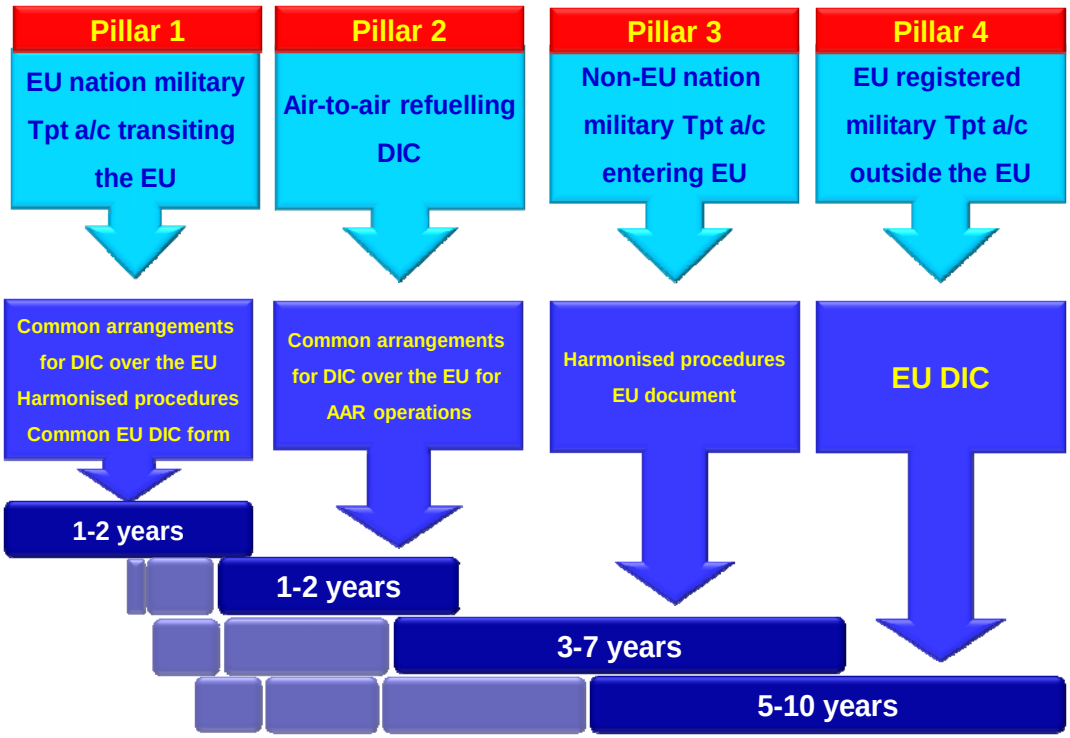

Fig.3 DIC TA pillars

The easiest way to emphasize the differences between and other DIC issued by a non pMS is to compare processing times of the application.

When ***using the Annual EUAT DIC*** , the Participants will notify the flights as follows:

- For flights with VIP on board:
  - Overflights: not required.
  - Landings: NLT 1 working day before ETD.
- For flights with ICAO/IATA compliant DG:
  - Overflights and landings: not required.
- For all other flights: not required.
- For aircraft carrying ISTAR and EW equipment a notification period of 1 working day is required. [3]

Request period for transportation flights ***covered by other DIC***:

- For flights with VIP on board:

▪ Overflights: NLT 3 working day before ETD.

▪ Landings: NLT 5 working day before ETD.

- For flights with ICAO/IATA compliant DG:

▪ Overflights: NLT 10 working days before

▪ Landings: NLT 10 working days before

O For all other flights:

▪ Overflights: NLT 3 working days before

▪ Landings: NLT 5 working days before

- For aircraft carrying ISTAR and EW equipment a notification period of 10 working day is required.

Obvious the use and the delivery process of diplomatic clearances for military using the DIC TA was simplify.

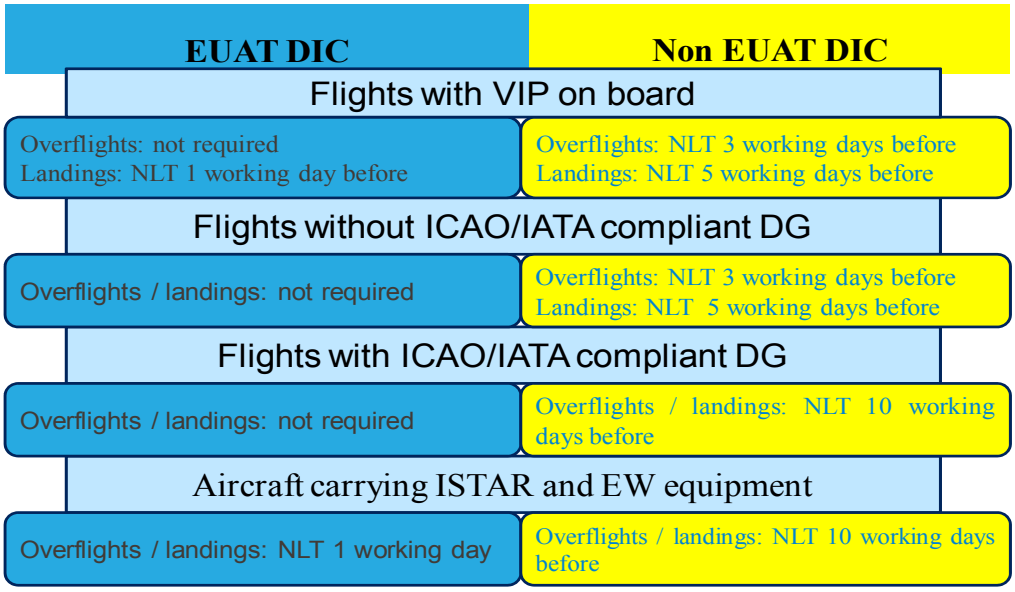

Fig.4 Comparison

DIRECT BENEFIT OF THE DIC TA

The DIC TA mechanism enables all actors dealing with DIC to save human and financial resources as well as time thanks to the reduced workload since an annual DCN covers almost 95% of the flights demanding one. In 2013 it signify for a multinational command like EATC that for missions with more than 5300 overflights and over 7500 landings a standing DCN existed which resulted in a substantial reduction in workload and costs.

Other advantages of the new DIC mechanism are numerous. First of all the DIC TA offers a solid flexibility to planners and taskers – since for most flights even no prior notification is needed anymore - but more importantly it provides that also to the crews in flight. For example, in case of urgent flights, the new mechanism allows crews to decide the shortest route since clearances to overfly and eventually land are already obtained. Second, from operational and financial point of the DIC TA mechanism results in an increased efficiency and effectiveness of European airlift missions. Thirdly, the DIC TA simplifies and harmonizes the European diplomatic clearances procedures and prepares a mechanism that will have to be developed with the implementation of Single European Sky (SES). Where today the air route driven system allows one to calculate at what time a border and in which point will be crossed, with the future SES trajectory driven system and the creation of the Functional Air Blocks (FAB) this will not be possible anymore. Therefore nations will have to develop a harmonized and simplified system for which this DIC TA mechanism is a precursor. Another advantage is that the common DCN format facilitates identification of European military airlift missions by ATC or other authorities. The DIC TA also includes a common EU DIC form that reduces the administrative workload and facilitates automated generation of the DIC form by IT-tools. Finally, having a harmonized and simplified mechanism, will increase the understanding and benefits of the European DIC procedures.

CONCLUSION

After two and a half years of implementation the DIC TA is identified by its signatories as a substantial step forward in harmonizing and simplifying diplomatic clearances in the EU.

As consequences, it stood out drastic decrease in amount of DIC request and notification, thus saving time as well human and financial resources. In addition, increase of flexibility during mission planning and execution.

The more nations will sign the DIC TA the more this new DIC mechanism will become effective. Hence nations that didn't sign the DIC TA are invited to staff the advantages of it in depth and eventually consider signing the DIC TA.

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ENERGY SUPPLY, ITS DEMAND AND SECURITY ISSUES. PROTECTION OF CRITICAL INFRASTRUCTURE

LTC Sorin MIMILIGA

Energy is inevitable for human life and a secure and accessible supply of energy is crucial for the sustainability of modern societies. Continuation of the use of fossil fuels is a major challenge in front of human beings: depletion of fossil fuel reserves, global warming and other environmental concerns, geopolitical and military conflicts and the possibility of using energy as economic weapon of unequal geographical distribution of energy resources and of late, continued and significant fuel price rise. These problems gather in front of us a potentially dangerous situation for the future of human civilization. Renewable energy can be the solution to the growing energy challenges. Renewable energy resources such as solar, wind, biomass, and wave and tidal energy, are abundant, inexhaustible and environmentally friendly.

The growth in global energy demand is projected to rise sharply over the coming years. At this moment, the world heavily relies on fossil fuels to meet its energy requirements—fossil fuels such as oil, gas and coal are providing almost 80% of the global energy demands. On the other hand, renewable energy and nuclear energy making 13.5% and 6.5% of total energy needs.

1. Human civilization and energy use

Energy is one of the most basic needs of the human being. The achievements of civilization were largely based on using more efficient and larger scale of various forms of energy to extend human capabilities. Providing adequate and affordable energy is essential for eradicating poverty, improving human welfare and raising living standards worldwide.

Why exactly now the question arises: what awaits humanity - hunger for power or energy abundance? We can see throughout history, almost anywhere on the planet, news about the conflicts that the review of resources is often. Always these conflicts led to the change of borders or governments. Communications about new installations and new inventions in the field of energy have become journalistic sensationsDesign and develop large energy programs or

innovations in this area require an enormous effort and very high costs. A number of projects involving the technological changes and rethinking the use of development resources can be stopped by powerful financial companies with major interests in the field.If at the end of the nineteenth century the prevalent now energy (electric) play an auxiliary role and insignificant in balance global energy in 1930 the world produces about 300 billion kW/h of electricity, in 1996 this figure reached 13,000 billion kW/h.

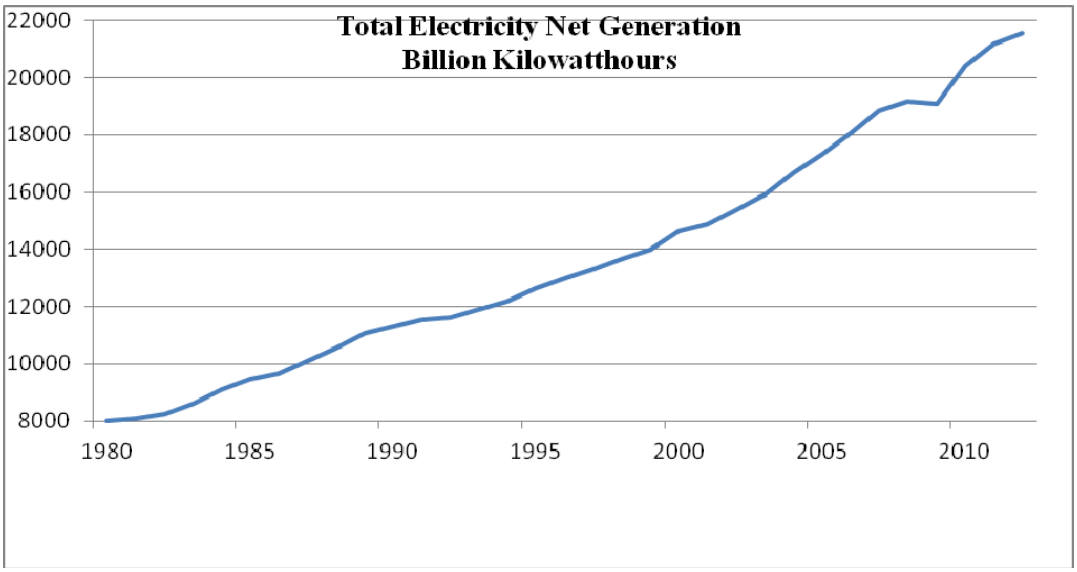

Figure 1 [11]

Evolution of producing energy can be show on Figure 1. As you can see, in last 35 years production of energy increases with 260% (8017,581 vs 21531,71) but by regions the fastest growing was in Middle East, 990% (91,44 vs 906,9815). At this moment the biggest production on the world are recorded in Asia & Oceania (40%) – Figure 2.

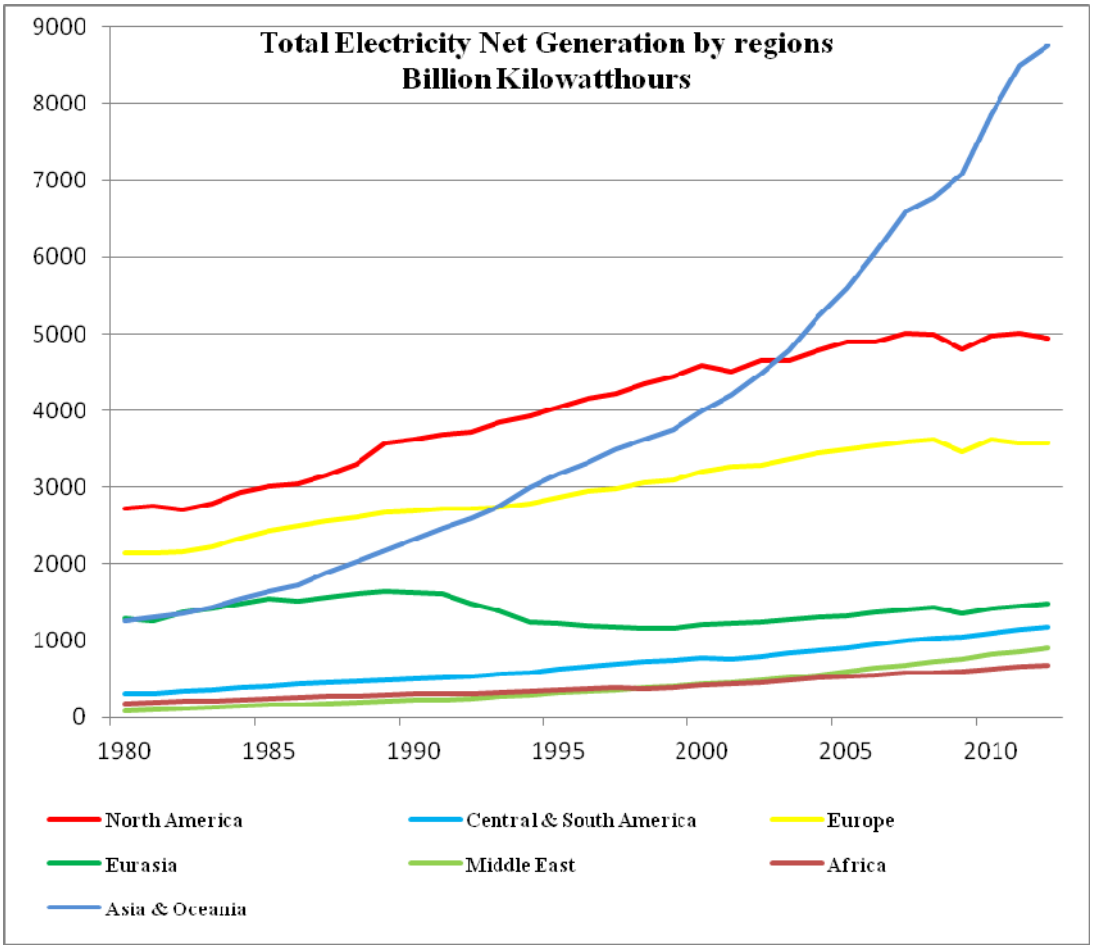

Figure 2[11]

The material level, ultimately and most spiritual of mankind is directly depends the amount of energy provided. To extract the ore, metal to get him to build a house, to do anything, you need to use energy. But human needs grow over time, but the number of population increases.

Scientists and inventors have developed various means of energy production, primarily to the electric. It should build as many power plants, and energy available will be as much as necessary! It would seem that this is the solution to this serious problem, but it creates a string coping with other problems.

The laws of nature say that getting useful energy is possible only by changing them from other forms. Perpetuum mobile, power generation from nothing is impossible. Today's energy structure is such that each 4 of 5 kilowatts are obtained in principle by the same method as in the

days of primitive man by burning, or by using the chemical energy of fuel, obtaining electricity in power plants.

Of course, the kinds of fuel combustion became more complicated and perfect.

New factors - higher oil prices, the rapid development of atomic energy, growing needs for environmental protection - have called for a new review on energy.

When planning future energy program involved the greatest scientists in this field, experts in various ministerial agencies and research departments. With computers were estimated several variants of the global energy balance structure. Although based energy stand the heat in the near future using finite resources, its structure will change. You will need to shrink oil use. It will increase electricity production essential to atomic power. It will begin using in the future, huge reserves of cheap coal, for example, the Kuznetsk basin, Kansk-achinsk, Ăkibastuzk.

But scientists viewed in the future, after the stock limits provided for energy programs, they give account of the reality of the third millennium. Unfortunately, the reserves of oil, natural gas, coal are not inexhaustible. Nature, to create these reserves has given millions of years, to be used in today's consumer with an impressive rate. Today, people began to think seriously of the need to maintain and protect the underground riches.Only in this way fuel reserves may reach 2-3 centuries. Regretfully, many countries of oil are living with today. They relentlessly consume oil reserves gifted by Mother Nature. Currently these countries, especially those in the Persian Gulf bathes in money, denying themselves, as over decades of these reserves will not remain anything. What will happen, but it will take place sooner or later, when oil and gas reserves will run dry? Current increase in oil prices, necessary not only energy, but also transport and chemical industry, led to research other types of fuel needed to replace oil and gas. Most were thoughtfully put those countries that have their own resources of oil and gas that they are forced to buy it. But more and more scientists in the world dealing with nontraditional search new energy sources that will take upon themselves some insurance worries of mankind with energy. The solution to this problem is seen by researchers from different viewpoints.. Most preferred methods are use of energy resources flowing water and wind, the tides, the underground heat, sunlight. Much attention is paid to development of atomic energy, scientists are looking for ways on earth reproductive processes occurring on the surface of stars and they supply the enormous energy reserves.

2. Transition in energy use

This term was the title of a 1980 publication by the German Öko-Institut, calling for the complete abandonment of nuclear and petroleum energy. On the 16th of February of that year the German Federal Ministry of the Environment also hosted a symposium in Berlin, called Energy Transition: Nuclear Phase-Out and Climate Protection. The views of the Öko-Institut, initially so strongly opposed, have gradually become common knowledge in energy policy. In the following decades the term expanded in scope; in its present form it dates back to at least 2002.

'Energy transition' designates a significant change in energy policy: The term encompasses a reorientation of policy from demand to supply and a shift from centralized to distributed generation (for example, producing heat and power in very small co generation units), which should replace overproduction and avoidable energy consumption with energy-saving measures and increased efficiency.

In a broader sense the energy transition also entails a democratization of energy:[7] In the traditional energy industry, a few large companies with large centralized power stations dominate the market as an oligopoly and consequently amass a worrisome level of both economic and political power. Renewable energies, in contrast, can as a rule be established in a decentralized manner. Public wind farms and solar parks can involve many citizens directly in energy production. Photovoltaic systems can even be set up by individuals. Municipal utilities can also benefit citizens financially, while the conventional energy industry profits a relatively small number of shareholders. Also, significant, the decentralized structure of renewable energies enables creation of value locally and minimizes capital outflows from a region. Renewable energy sources therefore play an increasingly important role in municipal energy policy, and local governments often promote them.

Three key factors drove the 19th century transition to fossil fuels: declining resource availability (deforestation), higher quality (higher energy density, easier storage, greater flexibility) and lower cost of coals and hydrocarbons. On these three points at least, there is no urgency for an accelerated shift to a non-fossil world: fossil fuel supplies are adequate for generations to come, new energies are not qualitatively superior, and their production will not be substantially cheaper.

Arguments for an accelerated transition to a non-fossil world are predicated almost entirely on concerns about climate change. Even then, because of the enormity of requisite

technical and infrastructural requirements, many decades will be needed to capture substantial market shares on continental or global scales. A non-fossil world may be highly desirable, but getting there will demand great determination, cost and patience.

3. Global energy overview

Energy, being a crucial feature of human life, has evolved to match with contemporary human development and requirements. It has been estimated that the global population in 1800 was approximately 1 billion, an uncertain estimate given that the first population census had just been introduced around that time in Sweden and England. Estimates of past energy use based on historic statistics and current energy use in rural areas of developing countries suggest that energy use per person typically did not exceed some 20 GJ as a global average. Over 200 years later, the global population has risen by a factor of 6 while the per person energy consumption is estimated to have risen by a factor of 20. A 20-fold increase, far in excess of world population growth, constitutes the first major energy transition, a transition from penury to abundance. This transition is far from complete and is characterized by persistent spatial and temporal heterogeneity. This transition in energy quantities is also closely linked to corresponding energy transition in terms of energy structure as well as in terms of energy quality. Given the past record of developed countries in their profligate use of energy, developing nations tend to mimic their energy consumption pattern to match those of the developed nations.

One of the most significant transitions in global energy systems is that of decarbonization, an increase in energy quality. Considering the case of fossil fuels, the dominating energy resource over the course of human history, each successive transition from one source to another—from wood to coal, from coal to oil—has entailed a shift to fuels that were not only harnessed and transported more economically, but also had a lower carbon content and higher hydrogen content. It is also evident that at each step greater energy density is being achieved. The third wave of decarbonization is now at its threshold, with natural gas use growing fastest, in terms of use, among the fossil fuels. The fourth wave, the production and use of pure hydrogen, is certainly on the horizon. Its major drivers are technological advances, renewed concern about the security and price of oil and gasoline, and growing pressure to address local air pollution and climate change.

4.1. Energy modes

There are various forms of energy that are employed worldwide to meet human energy requirements. These different forms of energy can be widely categorized into three types: fossil fuel, nuclear and renewable.

An example of how energy is produced in the year 2012 can be seen in the chart below. The graph indicates that the total energy produced, 75% is the non-renewable energy produced and 65% by burning fossil fuels – Figure 3.

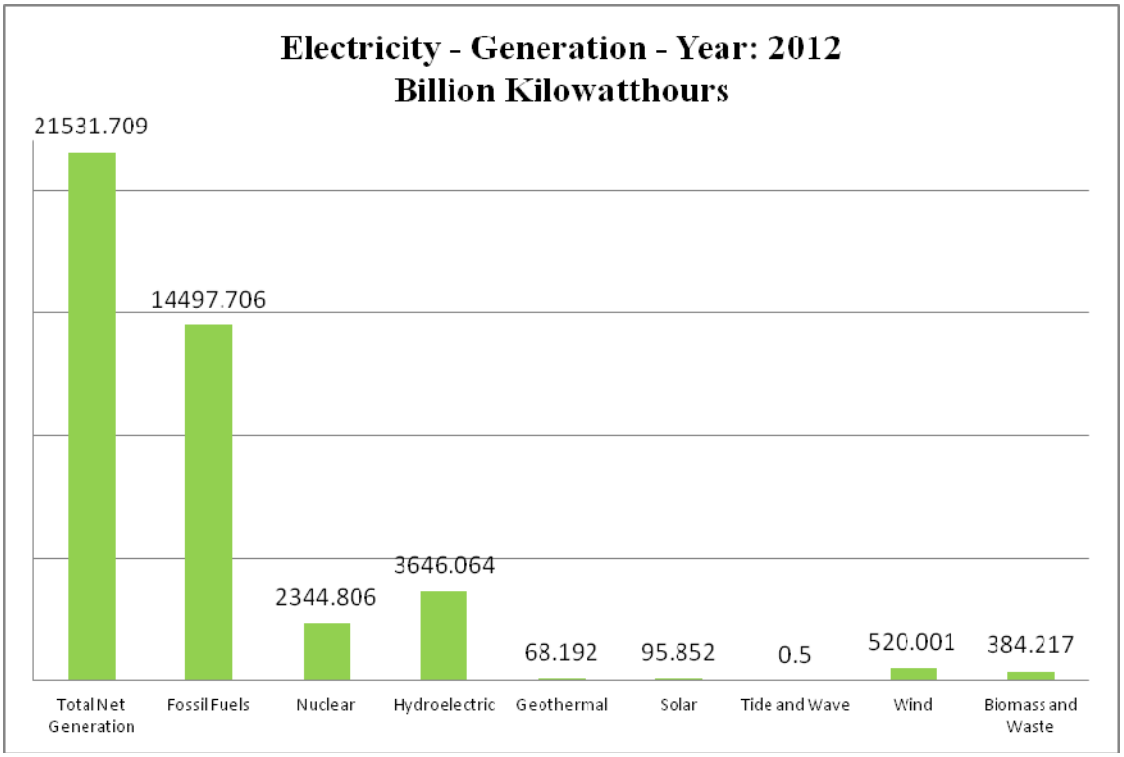

Figure 3[11]

3.1.1. Fossil fuel energy

Historically, fossil fuels, in their various forms, have been the main source of energy supply and have served the human energy needs for thousands of years. Wood and coal have been serving society to meet energy needs for a long time. In the beginning, this energy source was very stable and sustainable. Forests and coal resources were in abundance and were sufficient to meet energy demands. However, as human creativity exceeded expectations, producing a more efficient energy technology based on coal and then on oil was needed.

Especially, with the advent of industrial revolution in 19th century, fossil fuels saw their refined liquid phase, oil that is more efficient than their traditional solid phase counterparts (wood and coal). More recently, world became familiarized with gaseous phase of fossil fuels that is ever more efficient. This energy transition from wood to coal to oil to natural gas has been the different phases of traditional fossil fuels.

In the last 35 years increased energy production based on fossil fuels was 2.6 times – Figure 4, but by regions Middle East increase production by 10.7 times– Figure 5.

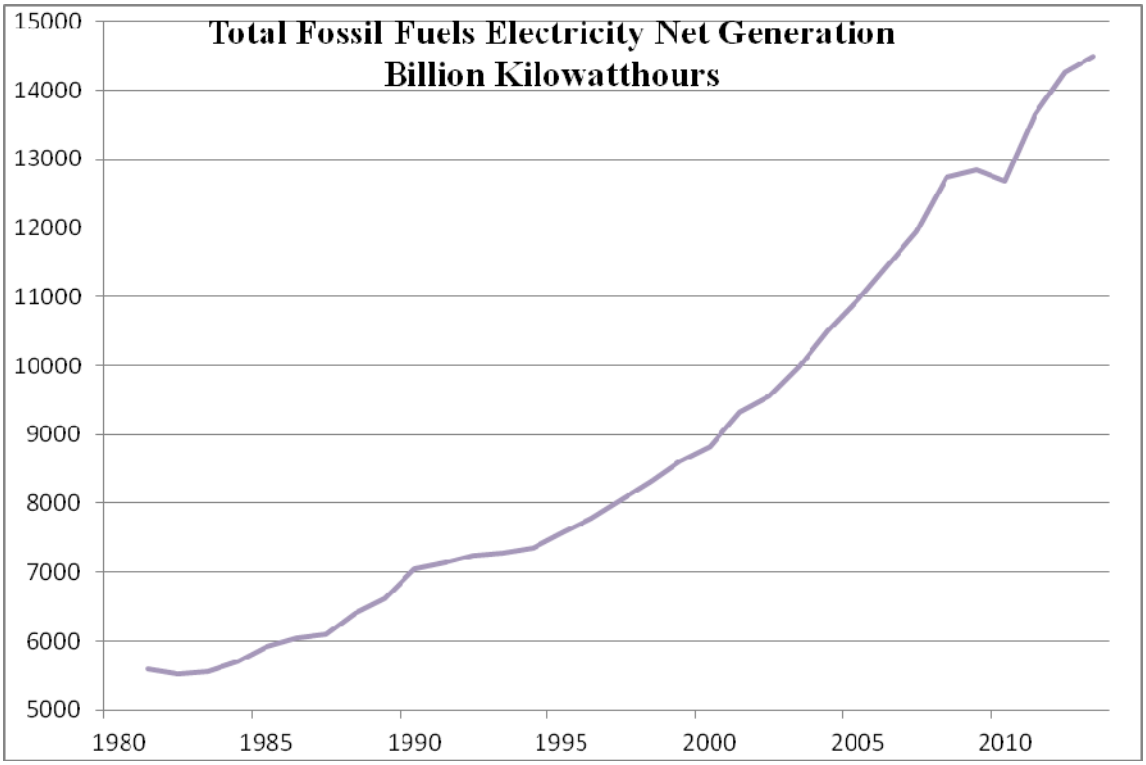

Figure 4[11]

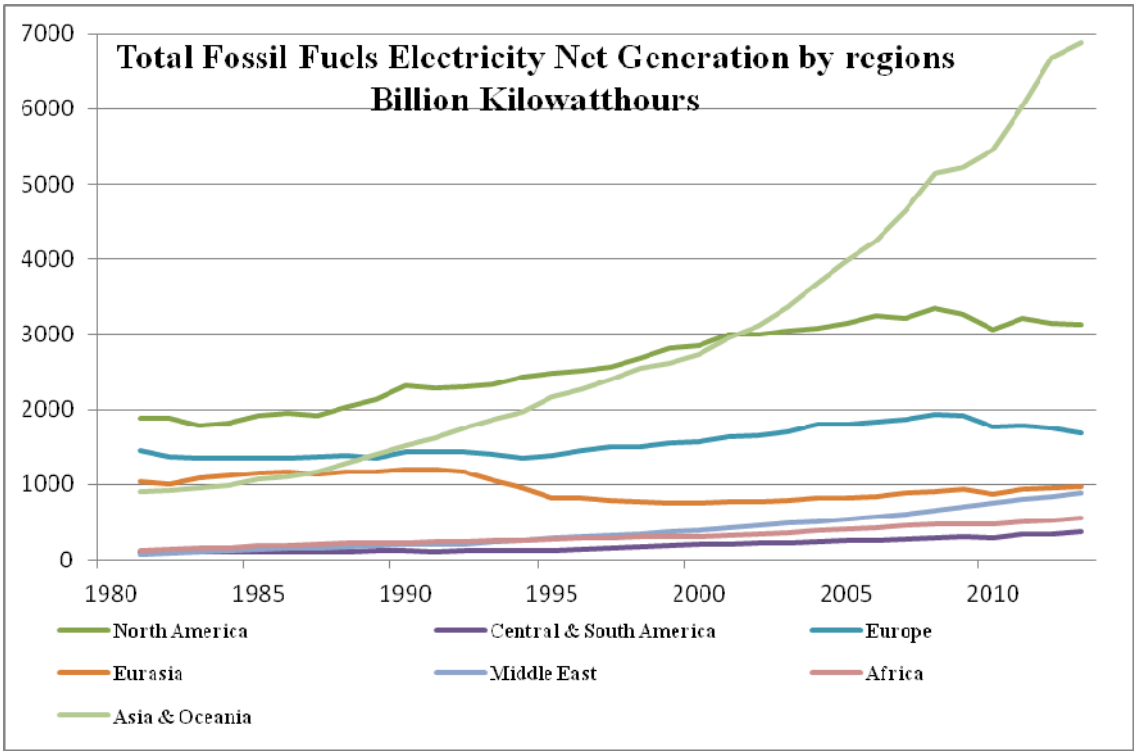

Figure 5[11]

4.1.2. Nuclear power

Radioactive uranium discovery was key to nature's energy deposits.

The main, which were immediately, interested the researchers was the question: where to take energy emitted by uranium and uranium why it is always warmer than the environment? Was put into question or energy conservation law or principle atomic unchanged? A great scientific courage is required of scientists who stepped over the border and were denied the ordinary ideas that have endured throughout the ages.

They were two young scientists Ernest Rutherford and Frederic Soddy. Two years of intense work for the study of radioactivity were brought to a conclusion groundbreaking on those times: the atoms of elements are subject to weathering, which is radiant energy in amounts much higher than usual energy obtained from decomposition of molecules. With enormous steps now to develop atomic energy. In 30 years shared power of all nuclear power plants increased from 5000 up to 23 million kW! Some scientists argue that in the XXI century half of the electricity produced worldwide will have nuclear origin.

In principle a nuclear energy reactor has a simple construction - in it, so that a simple boiler, the water turns to steam. It uses energy that radiates from a chain reaction of disintegration of uranium atoms or another type of nuclear fuel.

The most common type of nuclear reactor is the reactor with water and graphite.

Another type of reactor is the so-called spread-water reactor. In it serves both as water heating, as well as moderator to slow neutrons, instead of graphite. Builders brought the power of these reactors up to one million kW.

There is no doubt that atomic energy has occupied a leading place in the energy balance of humanity. It certainly will prosper and continue to produce energy for people. But it will be necessary for improved nuclear security methods**.**

As you can see in next graphs, world production increases 3.4 times but after 2006 when was maximum, production decreases slowly– Figure 6. The biggest producer on the world in this domain is Europe and North America (75%) – Figure 7.

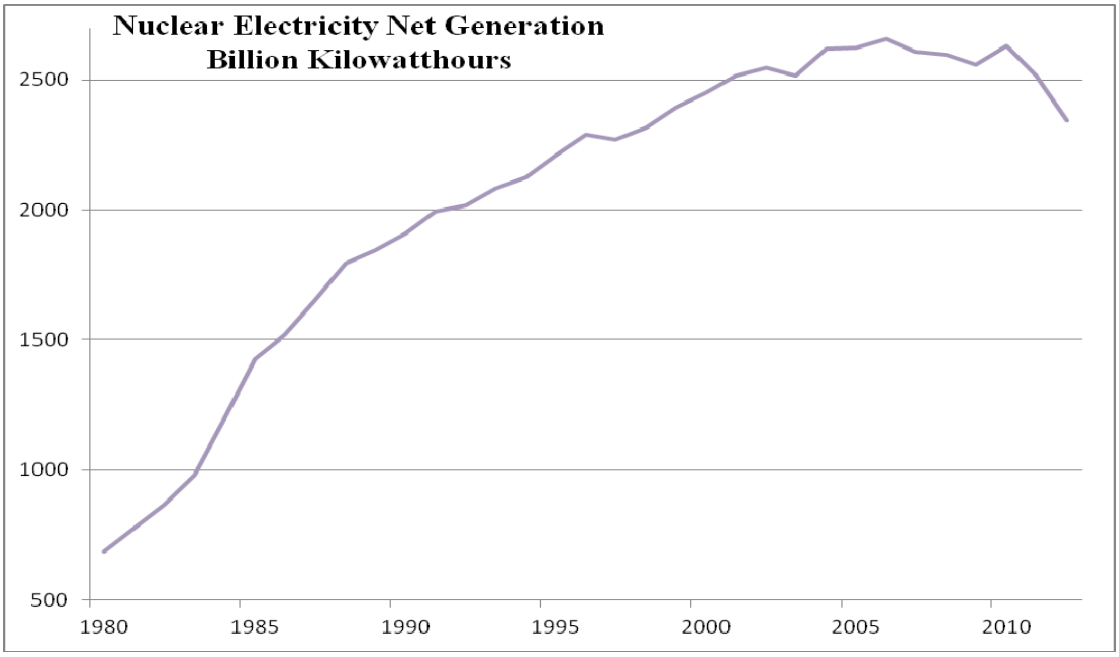

Figure 6[11]

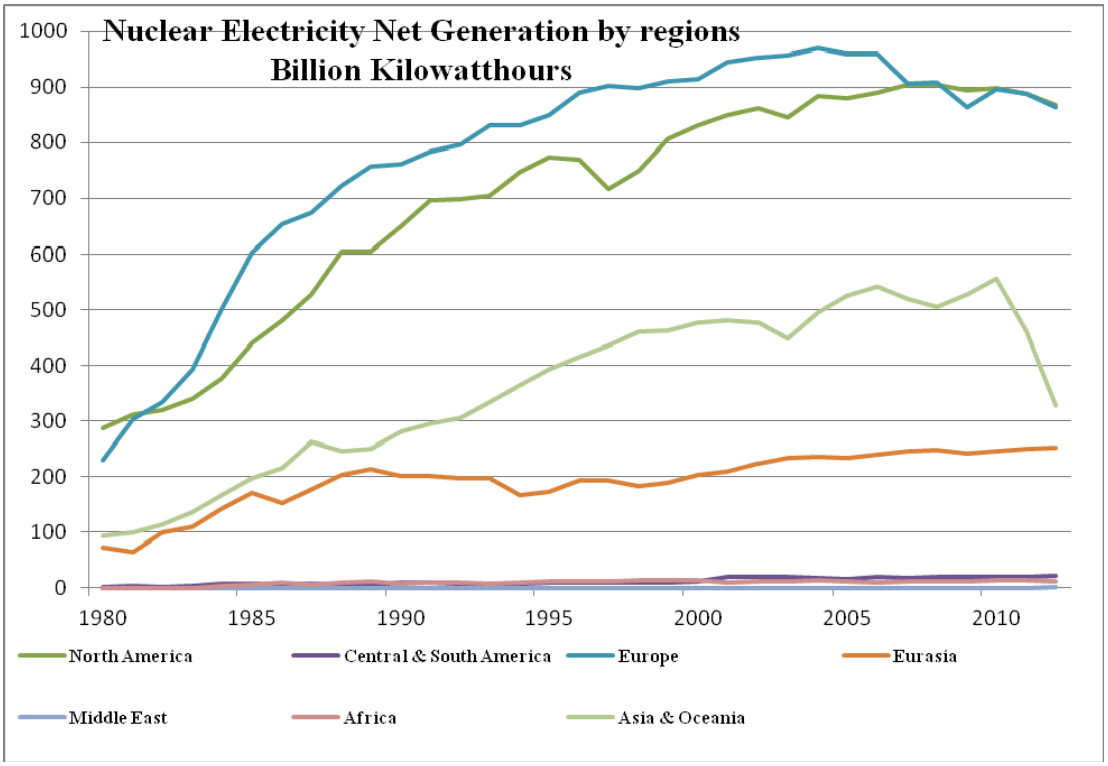

Figure 7[11]

4.1.3. Renewable energy

It is also called alternative energy, usable energy derived from sources that are able to recover, such as the sun (solar energy) wind (wind energy), rivers (hydro power), thermal springs (energy geothermal), tides (tidal power) and biomass (bio fuels).

a. **Solar Energy** Lately it increased interest in the problem of using solar energy, and even if it adheres to the source that can be renovated, which is given attention, makes us unique on the potential. Potential possibilities based on the use of solar radiation energy, are quite high. It was calculated that using only 0.0125% of this amount would be quite possible to ensures the energy needs of the modern world, and 0.5% use it fully ensure the future needs. Sorry, it is unlikely that these resources be used enormous potential large scale. One of the most serious obstacles is the low intensity of solar radiation. Even in the best weather conditions (latitude, blue sky), solar radiation flux density of 250 W / m². Therefore, because of solar radiation collectors to gather per year, energy to meet the needs of humanity they must be located in an area of 130,000 km²! Solar power is very expensive because it requires very high

material costs. Using large scale solar energy giant lead to material needs and as a result the workforce for extraction of raw materials, obtaining materials, manufacture heliostats, as collectors and other equipment and transportation. Calculations show that 1 MW/year electricity generated using solar energy require from 10000 up to 40000 man-hours. In traditional energy index is 200-500 man-hours.

b. **Wind energy.** The energy of air masses is enormous. Reserves wind energy hydro power reserves surpass 100 times all the rivers on Earth. The wind blows constantly globe - from a weak breeze, which brings much needed coolness in the summer heat, up to powerful hurricanes, which bring huge losses and destruction. Ocean air in which we live is in perturbation continue. Winds that blow in our country, can meet the needs of its electric! Why such a rich source, accessible and clean it uses so little? Today engines that use wind, covers only a thousandth part of global energy needs.

c. **Hidro power.** For millennia, man serves the energy of flowing water. This type of energy reserves on earth, are a huge number. Clearly, in search of energy that mankind could not pass over these enormous energy resources. First people have learned to use the energy of rivers. And it began the golden age of electricity, has been revolutionized water wheel and then - water turbine. The generators, producing energy needed to be rotated, this could easily be done by water, the more that experience in this area exists. It may be modern hydro power was born in 1891. The advantages are obvious: the renewal of the very nature reserves of energy, operation simple, non-polluting environment. But the construction of a dam for a hydro electric sea has become a problem more difficult to achieve than the construction of a dam for a small water wheel. To put into operation hydro turbines strong, have gathered to one side of the dam a large amount of water. For the construction of this jetty is needed so that the volume of Egyptian pyramids material compared it may seem very small. Therefore, in the twentieth century they were built only a few hydroelectric plants. In Russia it is the largest hydro power in the world, basically they produce huge amounts of energy, and have become centers around which were built large industrial complexes. But the people it serves only a small part of the hydro power potential of the earth. Current annual water giant, formed from rain and snow melt seeps in the

ocean unused. If, it were possible to be retained by means of dams human civilization would have received huge energy reserves.

d. Tidal Power We know that the ocean level energy reserves are huge. So then, internal energy, corresponding to surface warming ocean waters, with 20 ° C, has a size of about 10 ^ 26 J. The kinetic energy of ocean currents is equal to approximately 10 ^ 18 J. But people can use only a tiny amount of it energy, and is why the very high costs, so this kind of energy is much less prevalent until now. The most obvious method of using ocean energy tidal power plants shows construction (CFE). Since 1967 operates such a power plant of 240 thousand kW power yield of 540 000 kW * h. Bernstein worked Engineer Construction method blocks CFE pushed on the surface in places needed, calculated the cost-effective procedure for implementing the CFE circuit, in the times of maximum load power line. His ideas were verified at CFE, built in 1968 in Guba Chislaia, next Murmansk. From 1966 two French cities meet their energy needs using the ebb and flow of energy. Electric plant on the river Rans (Brittany), consisting of 24 reversible turbine generators, using this energy. Its power is 240 MW - one of the most powerful hydroelectric plant in France. Relatively recently, a group of scientists in oceanology determined that near the Florida, the speed Gulfstream speed has 5 mph. The idea of using this current hot water was quite appealing. One of the scientists more optimistic as others predicted that electricity from Gulfstream energy will compete with traditional electricity produced already in the 80s.

e. **Geothermal energy** Since ancient times people know about the existence of gigantic energy which is hidden inside the globe. Memory mankind enormous eruptions of volcanoes known, that changed many places on earth. The power of a volcano eruption even small is huge; it often surpasses the power of the large power plants, man-made. True, the direct use of energy as volcanic eruptions cannot be it, because the people have no such opportunities to stave energy and to subdue it, and eruptions are a rare phenomenon. But this is energy that is hiding in the basement, and only a part of it comes with volcanic eruptions. Little Iceland ensure European country with tomatoes, apples and bananas even from their own sources! Icelandic greenhouses countless receive heat energy from the earth - other energy resources in Iceland

virtually missing. Instead, the country is very rich in hot springs and geysers-known - warm water fountain that the accuracy of the timer spring under the ground. And even if they belong to the idea of using heat underground springs (Romans yet known to fetch water for their baths under the ground), inhabitants of the Nordic countries operates very intense underground boiler-houses. Capital - Reykjavik, where half of the population lives, is heated by underground springs. But not only for heat energy out of the deep earth people. Already more time, operates power plants that use hot underground springs. The first plant of this type, with a little power, was built in 1904 in the Italian city of Larderello. The power plant during power-dependently increases were put current assembly, using new sources of hot water, and nowadays these power plants has reached 360,000 kW. In New Zeeland there is such a power in the region Vairakei, its power is 160,000 kW. 120 km from San Francisco in the US, a geothermal power plant produces energy with the power of 500,000 kW.

A short and succinct evolving in figures of energy generated from renewable sources can be seen in Figure 8. In last 35 years production increased 2.7 times but Asia & Oceania became the main producer since 2004 with an increase of 583% and now produces a third of global renewable energy– Figure 9.

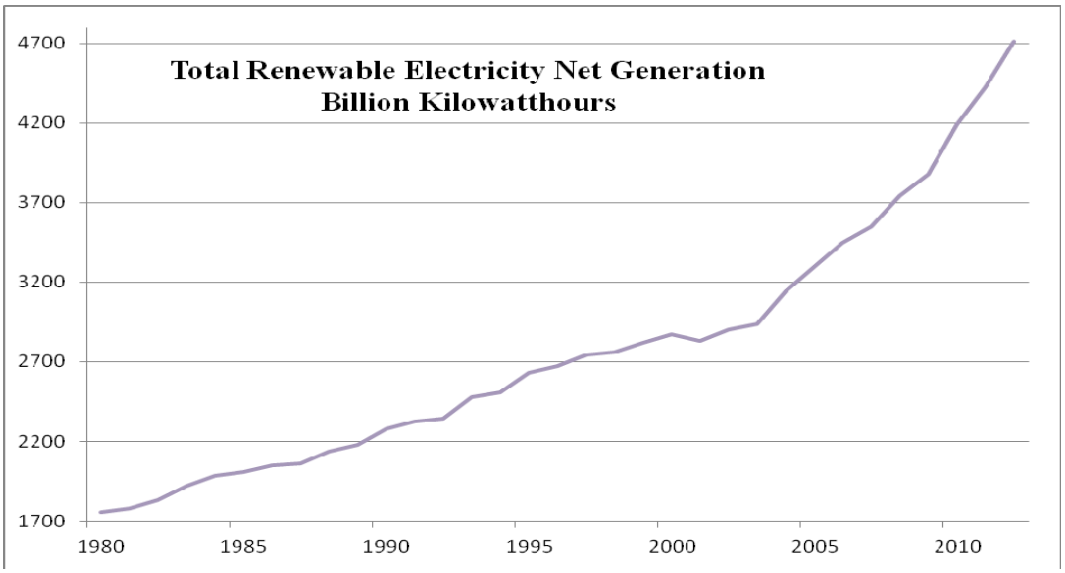

Figure 8[11]

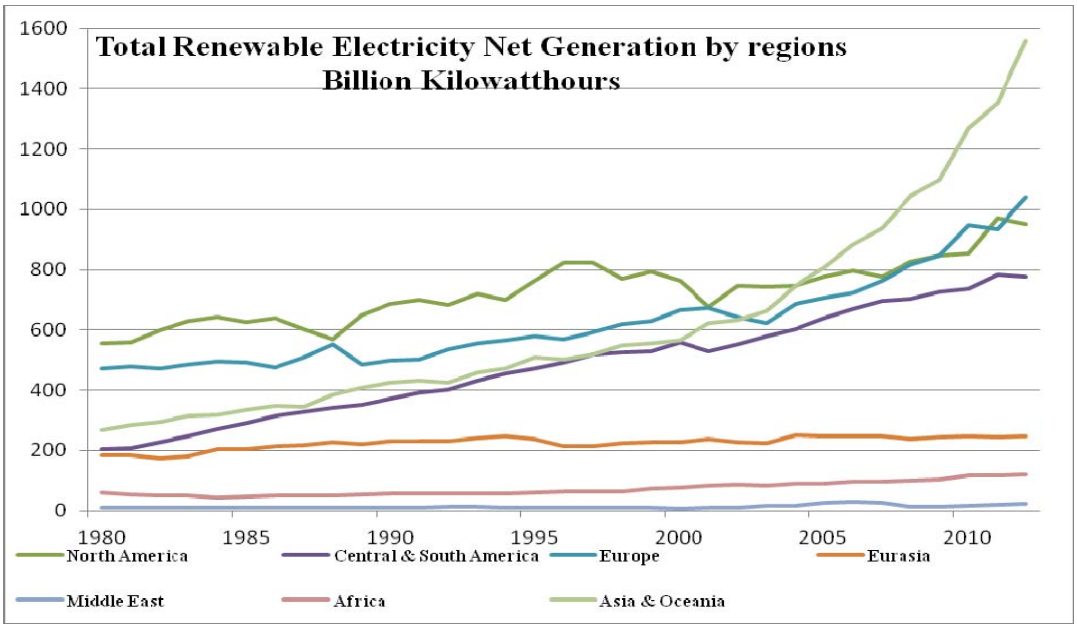

Figure 9[11]

3.2. Growing energy demand

The 2009 World Energy Outlook, published by Jual Locker in the International Energy Agency, predicts that world demand for oil (often used as a proxy for world demand for energy) will increase from 2,000 million tons of oil equivalent (mtoe) to 16,800 mtoe in 2030. About 93% of this increase in demand is expected to come from China and India. Meeting this demand growth, will require spending $26.3 trillion by 2030, as the majority of, in 2030 will come from fields that have not yet been discovered or developed – Figure 10.

What is driving the increase in worldwide energy demand?

(1) Industrialization, especially in emerging markets. Businesses, and factories in particular, require significant amounts of energy in the form of both electricity and petroleum-based fuels in order to operate. As economies industrialize, energy demand increases.

(2) Increasing wealth in emerging markets, especially China and India. When economies grow, their energy needs grow. Consumers want cars, air conditioners, refrigerators, and other energy hogs.

(3) Globalization. Transportation is one of the largest consumers of energy in the world, accounting for 58% of liquid fuel consumption in OECD countries in 2004. As we move more

often, further, and with greater speed, the energy we use in transportation will inevitably increase. Air travel in particular is a heavy user of fuel.

(4) Concerns over energy security. While energy demand is typically driven by short-term considerations (e.g., GDP growth, weather, transport needs), long-term concerns over energy security around the world have led to what some might consider an irrational premium paid for energy assets. This is most apparent in the very favorable deals struck by China with host governments in countries around the world to explore for oil & gas, one of the contributing factors to the increasing premium paid per barrel of proven oil reserves in the oil exploration and production industry.

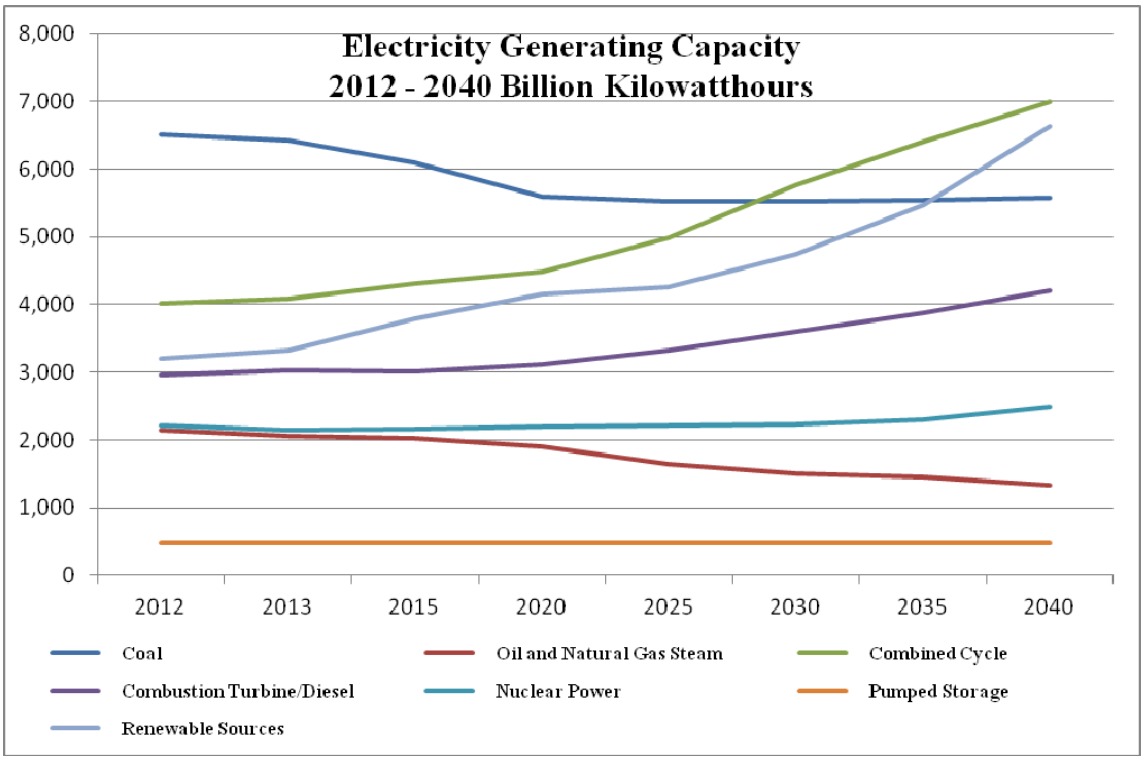

Figure 10[11]

3.3. Energy related challenges

The epic challenge of the 21st century is filling the gap between energy supply and demand with clean, reliable and inexpensive energy. While new sources of energy are gradually changing the landscape, products made from fossil fuels continue to heat our homes, fuel our cars and power our computers. Despite extraordinary advances in technology, rapid economic

growth in countries like China and India will require more energy. Some solutions are being implemented today, but many will come from the next generation of entrepreneurs, engineers and scientists. In order to rise to this grand challenge, we must consider the following issues.

3.3.1. Fossil fuels depletion

You will never see cheap gasoline again. You will probably never see cheap energy again. Oil, natural gas and coal are set to peak and go into decline within the next decade, and no technology can change that.

Peaking is a simple concept. We generally exploit natural resources in a bell-shaped curve, with the rate of extraction increasing over time until we reach a peak and then gradually slowing down until we stop using them.

Peak oil is not about "running out of oil"; it's about *reaching the peak rate of oil production.* It's not the size of the tank that matters, but the size of the tap.

The peak is usually reached when resources become too difficult to extract, or too expensive, or they are replaced by something cheaper, better or more plentiful. Unfortunately, we have no substitutes for oil that are cheaper or better.

According to the best available data, we are now at the peak rate of oil production. After over a century of continual growth, global conventional crude oil production topped out in 2005 at just over 74 million barrels per day (mbpd) and has remained at that level ever since.

The additional "oil" that brings the oft-cited world total to 84 mbpd today (down from 87 mbpd last year; according to U.S. government data) isn't conventional crude, but, rather, unconventional hydrocarbons, including natural gas liquids, "extra heavy" oil, synthetic oil made from Canadian tar sands, refinery gains, liquids produced from the conversion of coal and natural gas, and bio fuels.

Oil production is expected to go into terminal decline around 2012. The principal reason is that the largest and most productive fields are becoming depleted while new discoveries have been progressively smaller and of lesser quality. Discovery of new oil peaked over 40 years ago and has been declining ever since despite furious drilling and unprecedentedly high prices.
When it begins to decline, rate of crude production is projected to fall at 5%, or over four mbpd, per year–roughly equivalent to losing the entire production of Latin America or Europe every year. The decline rate will likely accelerate to over 10% per year by 2030– Figure 11.

Figure 11[3]

Natural gas is likewise expected to peak sometime around 2010-2020, and coal around 2020-2030. Oil, natural gas and coal together provide 86% of the world's primary energy.

By the end of this century, nearly all the economically recoverable fossil fuels will be gone. From now until then, what remains will be rationed by price. There will be shortages.

As fossil fuels peak and then decline, the world's economies will be forced for the first time to live within a shrinking, not expanding, energy budget. They will adapt to this new reality by repeating the cycle we saw over the last 18 months: commodity price spikes, leading to economic destruction, leading to supply destruction, leading back to price spikes. Only in recessionary periods, like now, will there be excess supply.

The coming energy shortage is the most serious crisis the world has ever faced, but it could have a very positive outcome. In theory, the Earth's wind, solar, geothermal and marine resources could each provide more than the total energy the world consumes every day, if we had the ability to harvest them.

As fossil fuel prices rise, the price of renewable generated electricity will continue to fall. If we are wise and lucky, we will rapidly improve the efficiency of our built environment, deploy renewable capacity and convert to an all-electric infrastructure that runs on it. Fortunately, political momentum is now leaning strongly in this direction.

If we move fast to re-localize production and proceed with the renewable revolution, we could end the 21st century with a largely carbon-free economy, putting an end to climate change and averting resource wars. We would have healthier food and a safer, more resilient and equitable world.

3.3.2. Global warming

Global warming refers to the gradual increase in the average temperature of the Earth's surface and its atmosphere which has been attributed to the accumulation of greenhouse gases. The main greenhouse gases are carbon dioxide (CO_2), methane (CH_4), water vapor, nitrogen oxides (NO_X) and chlorofluorocarbons (CFCs). All the greenhouse gases except CFCs are naturally produced and their concentrations in the atmosphere are increasing due to human activities.

CO_2 is the main greenhouse gas, accounting for more than 50 percent of the global temperature rise. This has occurred because of the burning of fossil fuels and wood products. Notwithstanding the increase in the levels of CO_2, there is continuing loss of the world's forests that serve as CO_2 sinks (green plants remove CO2 from the atmosphere). Through the process called photosynthesis, green plants constantly remove CO_2 from the atmosphere and combine it with water vapor in the presence of sunlight, to produce carbohydrates and oxygen: $6\ CO_2 + 6H_2O + \text{Sunlight} \rightarrow C6H_{12}O_6 + 6\ O_2\uparrow$

Methane may be produced naturally when wet organic matter decomposes under bacteria action in the absence of oxygen. Such decomposition could take place in landfills, swampy/paddy fields, digestive tracks of ruminants and termites and septic tanks. Man induced methane emissions may come from leaks in natural gas distribution systems, leaks of refinery gases in petroleum reefing and coal mining.

The burning of fossil fuels also produces significant amounts of nitrous oxides. During the burning of fossil fuels, nitrogen in the air combines with oxygen at high temperatures to produce nitrous oxides: $N + O_2 \rightarrow NO_X$

The effects of global warming include the following:

- Rise in mean (average) global temperature
- Rising sea levels
- Occurrence of weather extremes

- Shifting of vegetative zones – Figure 12.

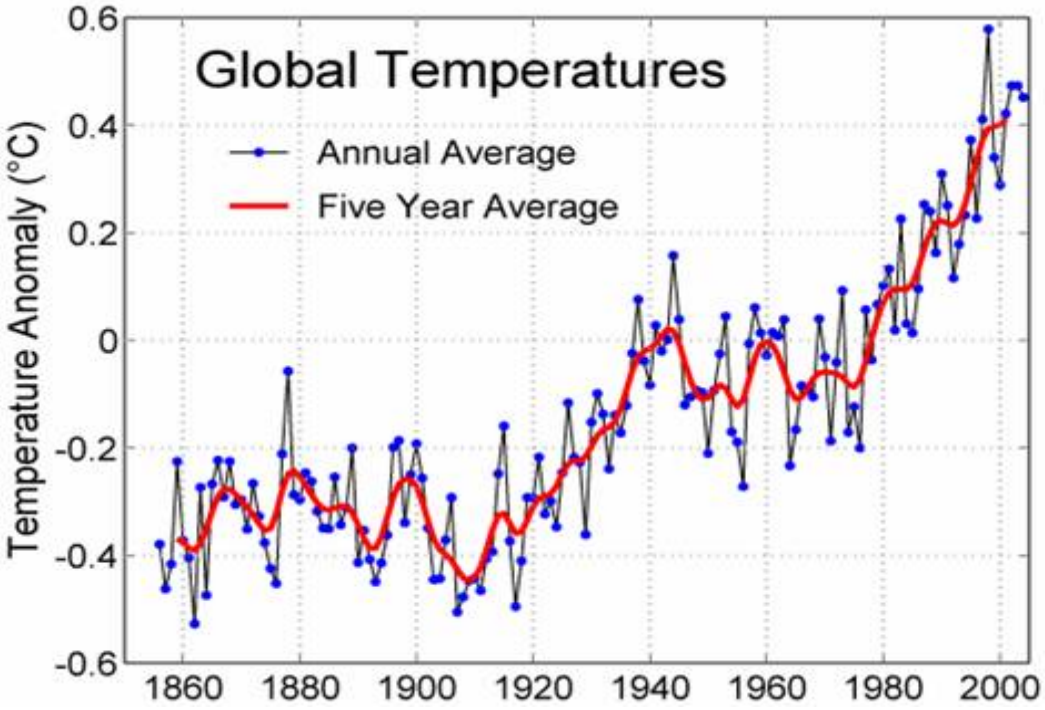

Figure 12[6]

3.3.3. Energy security

The standard definitions explain energy security as "the uninterrupted availability of energy sources at an affordable price". Energy security has many dimensions: long-term energy security mainly deals with timely investments to supply energy in line with economic developments and sustainable environmental needs. Short-term energy security focuses on the ability of the energy system to react promptly to sudden changes within the supply-demand balance. Lack of energy security is thus linked to the negative economic and social impacts of either physical unavailability of energy, or prices that are not competitive or are overly volatile. In cases such as the international oil market, where prices are allowed to adjust in response to changes in supply and demand, the risk of physical unavailability is limited to extreme events. Supply security concerns are primarily related to the economic damage caused by extreme price spikes. The concern for physical unavailability of supply is more prevalent in energy markets where transmission systems must be kept in constant balance, such as electricity and, to some extent, natural gas. This is particularly the case in instances where there are capacity constraints or where prices are not able to work as an adjustment mechanism to balance supply and demand

in the short term. Ensuring energy security has been at the center of the mission of the nations since its inception. The ability to respond collectively in the case of a serious oil supply disruption with short-term emergency response measures remains one of the core activities. The long-term aspect of energy security was also included in national objectives, which called for promoting alternative energy sources in order to reduce import dependency. The nations should continue to work to improve energy security over the longer term by promoting energy policies that encourage diversification, both of energy types and supply sources, and that facilitate better functioning and more integrated energy markets.

3.3.4. Protection of critical infrastructure

Critical infrastructures are those facilities with role important in ensuring security in the operation and in developing the economic, social, political, informational and military.

Infrastructures are considered critical because:

- Unique condition in the infrastructure of system or process;
- Vital importance that we have as a support material or virtual (network), in the operation and work flows economic, social, political, informational, military, etc;
- Important role irreplaceable, they meet the stability, reliability, security, functionality and especially in security systems;
- Greater vulnerability to direct threats, such as and the targeting systems of which they part;
- Their particular sensitivity to changing conditions, and more especially to sudden changes of situation.

If the first studies in the field have identified objectives deemed "critical", since the 80s, the term "critical infrastructure" was used officially in July 1996, when the US president decreed "Executive Order for Critical Infrastructure Protection". The preamble to the bill explains that the notion of critical infrastructure as "part of the national infrastructure that is so vital that destruction or making them incapable of functioning can seriously diminish or defend the US economy." It is believed that it comprises: telecommunications, electricity system and water supply, gas and oil deposits, finance and banks, emergency services (medical, police and fire) and the continuity of government.

Critical infrastructures are or become due, primarily their vulnerability to those threats which directly concerns them or against systems, actions and processes to which they belong.
Threats to critical infrastructure are fostered and facilitated at least three very important factors:

- Lack of flexibility, given the fixed nature and relatively precise location infrastructure, including critical;
- Flexibility, fluidity, perversity dangers and threats to critical infrastructure and very broad spectrum of their manifestations;
- The unpredictable and surprising nature of hazards and threats to critical infrastructure.

Also, dangers and threats to critical infrastructure can be grouped based on the location of these facilities, for the manifestation of the scope, how they emerge and develop etc.
Some of these dangers and threats are part of the nature of things, there are dangers and threats of system or process, as a result of malfunctions or a product of evolution systems and processes. Others are caused intentionally, due to certain interests, the permanent and ruthless battle for power and influence, for resources, markets and money.

We believe that the dangers and threats to critical infrastructure could be grouped as follows:

- Cosmic dangers and threats, climatic and geophysical studies;
- Dangers and threats resulting from human activity;
- Dangers and threats against critical infrastructures in cyberspace.

An energy system can be found in functionally in one of the following states: normal operation, alarm-fault incident and restitution.

In most of the time energy system is able to operate in normal conditions (steady). In this operation attention is paid to economic operation and an operation to successfully cope with major incidents reduced.

Alarm operating mode is characterized in that for any incidents or damage that is detected (exit accidental operation of a group of energetic high power, triggering a power transmission lines etc.) is taking action by turning in reserve groups shifts in the pattern of electrical networks, etc.

The operating mode of failure is characterized by the occurrence of an incident primary or damage (triggering a power transmission lines leading to significant changes in power flow

and voltage values) in such situations energy system must have the necessary reserves (starts groups of reserves - oil hydroelectric and thermal power plants - changes the configuration of the grid system) to successfully cope with these phenomena (static and dynamic stability reserves). Usually incident primary scale is followed by incidents associated (tripping of power lines and energy groups, variations of power transmission lines and energy units) after which energy system is taxed to the utmost in terms of stability static or dynamic.

Follow state of restoration, where the situation when the power system has successfully coped with requests, the reinstatement lines and energy groups triggered where there were no failures, and when the power system went out of service, recover first connects the important parts of the energy system in parallel with a special power plants and major thoroughfares, then reapplied running (parallel) all networks and stations, being supplied with the importance of their consumers and after system possibilities.

Usual, production and distribution networks for electricity are (but not limited) consisting of power distribution subsystems, systems and command and control networks for data transmission interconnection required for operation – Figure 13.

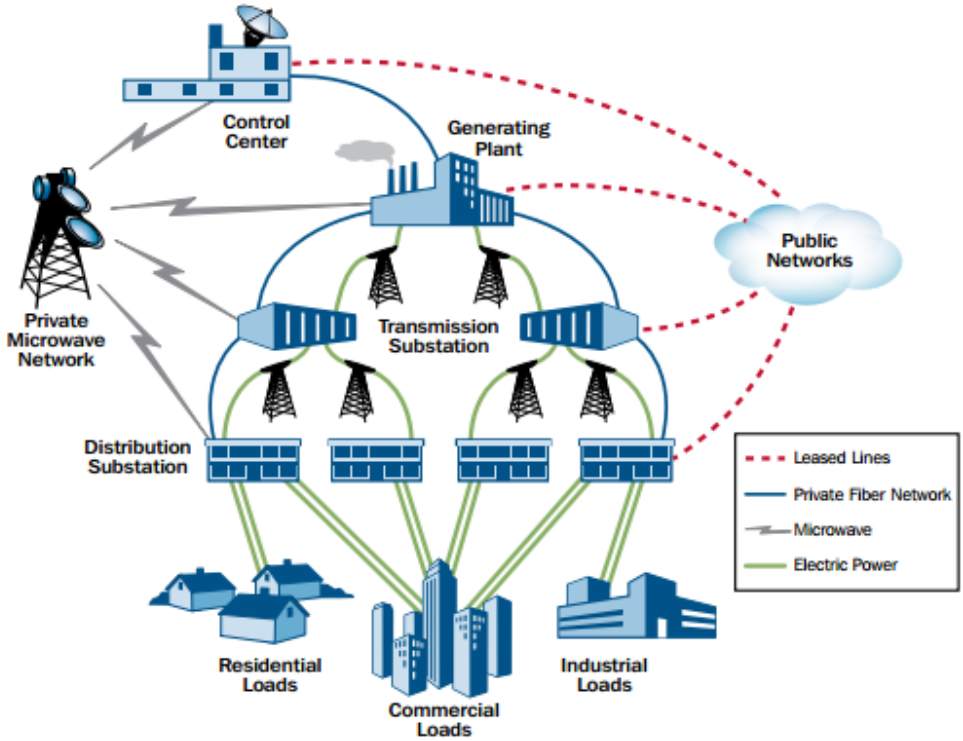

Figure 13[8]

Regionally, most often, these networks are interconnected, providing, in addition to economic exchanges between countries, regional and redundancy required for operation – Figure 14.

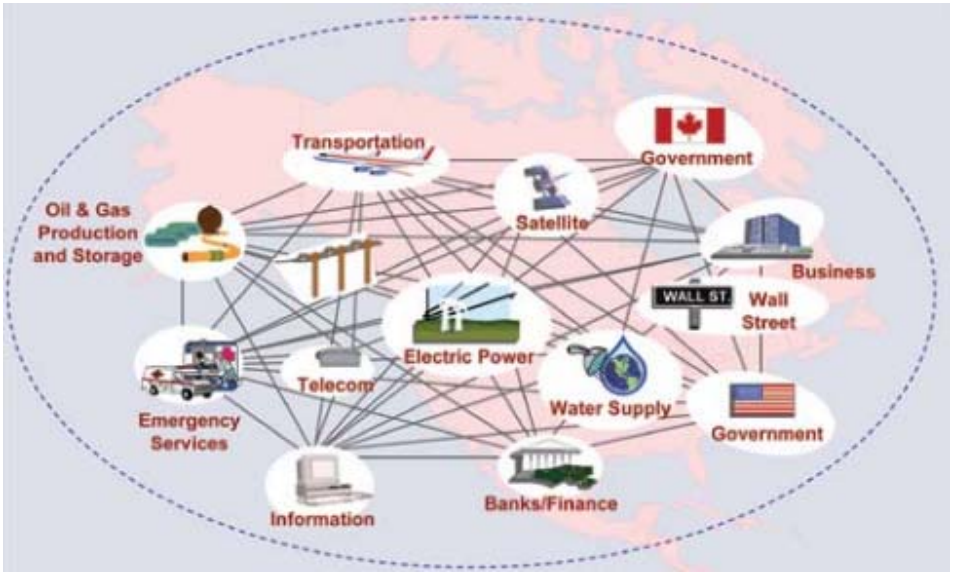

Figure 14[8]

Critical infrastructure protection (CIP) requires a continuous partnership and coherence between owners of critical infrastructure, the personnel operating them or managing them and the state authorities concerned and the Member States of the European Union (regional) or all states (where it critical infrastructure value and global importance, such as, for example, which provides air transport infrastructure protection, the communication and information networks etc.).

Obviously, the primary responsibility to protect those infrastructures (physical facilities, supply routes, information technologies and communication networks) are the owners and staff serving them.

There is a rich national, European and international referring to the operation and protection of critical infrastructure and the required control. For example, inspections carried out under EURATM treaty aimed at ensuring good conditions for use and safe operation of nuclear materials.

It was also created a European Agency responsible for Network and Information Security Agency (ENISA). The main objective of this Agency is securing electronic communications.

3.3.5. Rising oil prices

Crude oil prices are set globally through the daily interactions of thousands of buyers and sellers in both physical and futures markets, and reflect participants' knowledge and expectations of demand and supply.

In addition to economic growth and geopolitical risks, other factors, including weather events, inventories, exchange rates, investments, spare capacity, OPEC production decisions, and non-OPEC supply growth all figure into the price of crude oil.

The biggest long-term factor in the oil price is the cost of replacing oil wells as they run out ("deplete" in industry parlance). The international oil companies have slashed their long-term capital expenditure. Projects in Canada's oil sands, in deep-water and Arctic oil fields, look worryingly costly. But the finding and developing (F&D) cost of new reserves is falling, not rising, thanks to America's frackers. The worldwide average in recent years was over $30 – Figure 15. Moreover, Saudi Arabia, Iraq and Libya have plenty of low-cost oil left to pump. For now those countries are chasing market share, rather than trying to raise prices by curtailing output. The other relevant factor is demand. The use of fossil fuels in the rich world is mostly stagnant or falling. Emerging economies are not currently taking up the slack.

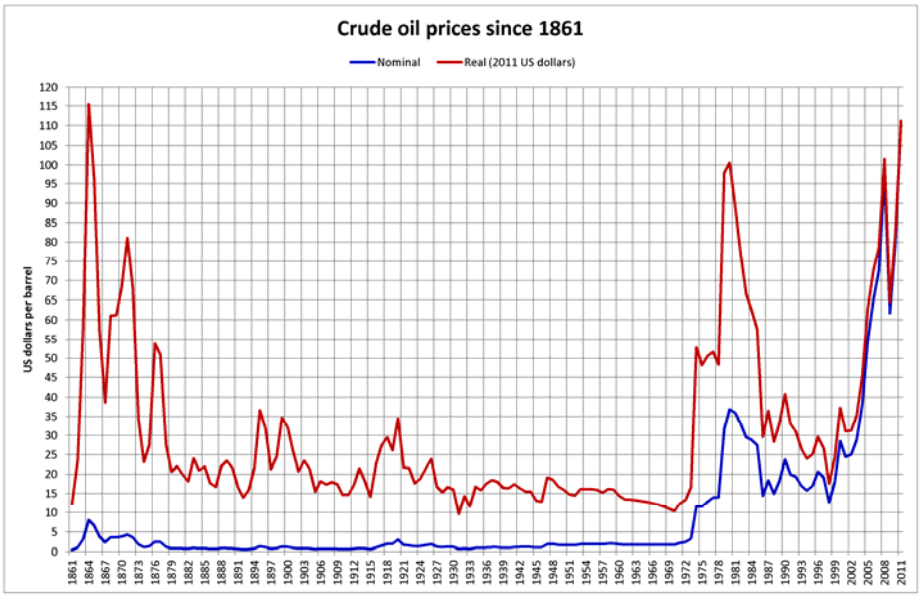

Figure 15 [6]

Peak oil is the period when the maximum rate of global petroleum extraction is reached, after which the rate of production enters terminal decline. It relates to a long-term decline in the available supply of petroleum. This, combined with increasing demand, will significantly increase the worldwide prices of petroleum derived products. Most significant will be the availability and price of liquid fuel for transportation.

The US Department of Energy in the Hirsch report indicates that "The problems associated with world oil production peaking will not be temporary, and past "energy crisis" experience will provide relatively little guidance."

Estimates of remaining proven reserves of oil and NGLs range from about 1.2 to 1.3 trillion barrels (including about 0,2 trillion barrels of non-conventional oil). They have almost doubled since 1980. This is enough to supply the world with oil for over 40 years at current rates of consumption.

Though most of the increase in reserves has come from revisions made in the 1980s in OPEC countries rather than from new discoveries, modest increases have continued since 1990, despite rising consumption. The volume of oil discovered each year on average has been higher since 2000 than in the 1990s, thanks to increased exploration activity and improvements in technology, though production continues to outstrip discoveries (despite some big recent finds, such as in deep water offshore Brazil) resulting in further price increase – Figure 16.

Ultimately recoverable conventional oil resources, which include initial proven and probable reserves from discovered fields, reserves growth and oil that has yet to be found, are estimated at 3.5 trillion barrels. Only a third of this total, or 1.1 trillion barrels, has been produced up to now. Undiscovered resources account for about a third of the remaining recoverable oil, the largest volumes of which are thought to lie in the Middle East, Russia and the Caspian region. Non-conventional oil resources, which have been barely developed to date, are also very large. Between 1 and 2 trillion barrels of oil sands and extra-heavy oil may be ultimately recoverable economically. These resources are largely concentrated in Canada (mainly in Alberta province) and Venezuela (in the Orinoco Belt). The total long-term potentially recoverable oil-resource base, including extra-heavy oil, oil sands and oil shales (another largely undeveloped, though costly resource), is estimated at around 6.5 trillion barrels.

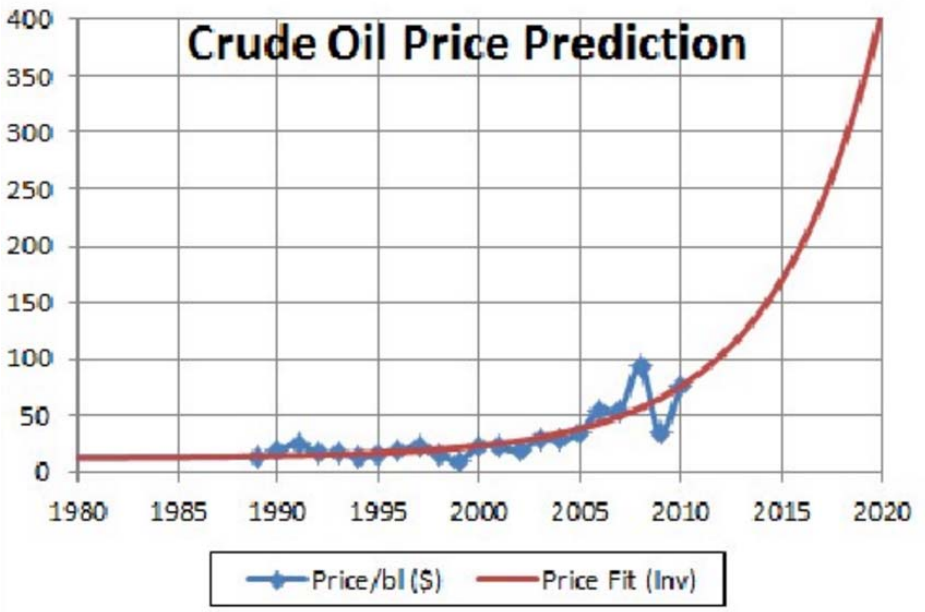

Figure 16 [3]

CONCLUSIONS

The continuing economic slump puts a focus on the role of energy in the economy. The energy industry fuels the economy, and steady availability of reasonably priced energy is a crucial to economic growth.

Notable advances in conventional energy production – including the rapid growth of offshore and, more recently, shale gas and tight oil – are creating new possibilities that may be very important for national economies. Advances in renewable technologies, such as offshore wind and solar PV, are also adding jobs and boosting economic growth. Regardless of their energy endowments, countries are turning to renewable and green technology as sound investments. Particularly in developing nations, reliable and affordable energy supplies are crucial. Unreliable electricity takes a heavy toll on GDP. Bridging the supply gap offers a major development opportunity. Investment and innovation clusters around renewable energy are bringing about advances in related technologies and providing solutions to environmental and energy security problems.

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CONSIDERATIONS ON THE ISSUE OF CONSEQUENCE MANAGEMENT

LTC Constantin OLOGU

In the current international environment characterized by extensive developments and contradictory, proliferation and uncontrolled spread of materials and technologies for chemical, biological, radiological and nuclear (CBRN) weapons of mass destruction (WMDCBRN) and other unconventional means, expansion of networks, terrorist activities and transnational organized crime, developing in secret military programs of chemical, biological and nuclear weapons, the existence of countries with irresponsible leaders who provide support to terrorist organizations, shows clearly the existence and diversity of sources such CBRN that can injure state security seriously affect environment and health and adversely affect the preparation and conduct military actions.

Access state actors and non-state actors to means of mass destruction should not lead to oblivion specter constantly threatened the arsenals of destructive nuclear powers, "missile crisis" of 1962 and the strain dangerous relations between NATO and the Warsaw Pact from although early 1980s now the likelihood of a nuclear holocaust is small compared to the risk of attacks with other weapons of mass destruction, the devastating consequences sound balance concern and efforts of the international community.

The danger of WMD attacks can have a powerful psychological impact, and if we add to this the possibility of accidents / incidents in facilities with CBRN risks and threats, ecological disasters, resulting spectrum frightening, compelling us to realism and prudence and to planning and implementation of appropriate measures to maintain response capabilities to a high level of training and equipment to defend against these threats. An increasing number of states are in possession of offensive war with WMDCBRN means or their development programs underway. The ability of these types of weapons to produce a large number of victims, the relative ease in manufacturing / purchase and use of some of these concerns in the area intensified research, amplified by the proliferation of a phenomenon that worries - CBRN terrorism - poses significant risks to international security and thus to the security of Romania. Another threat is the risk of

toxic industrial materials because of the potential emissions performance, intentionally or human error or technological.

The terrorist attacks of 11 September 2001 that killed almost instantly, several thousand innocent civilians, along with other criminal actions similar executed in several parts of the world, led to significant changes in the security environment, with significant consequences for the international community. Developments in the brutal attacks of terrorism to a large number of victims, to superterorism, weapons of mass destruction are a major temptation for the terrorist entities interested precisely in the effects of mass distruction of these weapons. The terrorist threat cannot be ignored or tolerated. It is devoted to assessing the possibility of terrorist attacks with weapons of mass destruction is the greatest threat hanging over humanity.

Even if it seems more menacing specter of WMD proliferation, recent events show that there are spent and other risks of CBRN field to be treated with special attention. It is enough to remember the danger of epidemics and pandemics in recent years, and the catastrophe at Fukushima which is still unfortunately an open chapter.

CONSEQUENCE MANAGEMENT CONCEPT

The term "Consequence Management" has been introduced into the lexicon of US national security in 1995, with the promulgation of Presidential Decision Directive no. 39 (PDD 39) [2]. PDD 39 sets out the tasks assigned to federal departments and agencies to anticipate prevent and limit the effects of terrorist attacks with weapons of mass destruction.

The concept of “consequence management” will remain ill-defined as well-intentioned organizations and individuals grapple with how they might institutionalize a comprehensive operational response to a terrorist’s use of WMD. Make no mistake, though, consequence management is not only a characteristic of the Post Cold War, it is also an indicator of just how capable US is of re-conceptualizing and reorganizing for its security in the 21st Century.

Specialty papers show that developing Presidential Decision Directive no. 39 was determinated by sarin gas terrorist attack in a Tokyo subway in 1995. Balance was particularly tragic: 12 deaths and hundreds of severe intoxication hospitalized with sarin. Resolute action to be taken as terrorist attacks does not become frequently and powerfully. The episode "Tokyo" is consumed after a long string of terrorist attacks going all over the world, in which is included the attack on the World Trade Center in February 1993 where they were released cyanide in the

explosion and the arrested soon after, in the US, a person who was driving a car filled with suspected biological weapons [3]. From this perspective, the Presidential Decision Directive no. 39/1995 was meant to trace the guidelines of US counterterrorism policy [4]. This sets up the duties of the state institutions to prevent terrorist attacks with weapons of mass destruction and, if they succeed, the manner in which their consequences to be managed and how US citizens must respond to such aggression.

In conclusion, the historical scale, the concept of "consequence management" appeared in a period where terrorism is a threat to the international community complex and persistent, requiring a comprehensive and multidimensional response in all areas and at all levels.

The debate over the roles and missions of the military today revealed two different approaches to combating terrorism: terrorist framing in "War" and the approach to terrorism as "risk management". War approach, supported in particular by the US, implies a massive mobilization of resources in a concerted international effort. This implies the limitation of freedoms and individual sacrifices. Specialty papers developed in Europe considers that unrealistic combat terrorist actions with specific methods of war. It shows that the terrorist phenomenon cannot be eradicated only action on its roots which excludes the use of forceful means specific to the military. From this point of view, terrorism is not a war with losers and winners, but "a dangerous risk, unavoidable, to be managed"[5].

The two approaches are not mutually exclusive, but different strategies. In this framework encompasses the management concept of consequences. Although it is not treated uniformly in the Euro - Atlantic goals pursued are the same.

US Department of Defense, DOD dictionary, consequence management is projecting that "actions taken to maintain or restore essential services to manage and limit the consequences of disasters and natural catastrophes or man, as well as terrorist incidents"[6]. Specialized studies developed definition Defense Department, explaining that in the process of management of the consequences of adopting a set of measures to ensure protection and safety and public health, restoring government services essential and providing emergency aid state governments, companies and individuals affected by the consequences of a situation in which they were used chemical, biological, nuclear and / or powerful explosives [7].

The US Air Force in 2007, in the document which sought to fill the Doctrine sitting US Army for protection against weapons of mass destruction, stated that the management of the

consequences is a "response deliberated" on the use and effects of a CBRNE (chemical, biological, nuclear and high explosive), which seeks support in restoring essential services and operations in the country and abroad in a permissive environment [8].

This definition restricts the domain of manifestation of the concept of management of the consequences, reducing it to manage exclusive CBRNE incidents, but at the same time, no longer conditional on the terrorist act. Thus, after a decade, the concept is given a degree of independence against the root from which emanated: Presidential Decision Directive no. 39 of 1995.

The debate on the role of NATO in the fight against terrorism had struck the whole scaffolding of theoretical elaborations. Transatlantic divergences on how to be treated as terrorism have caused some delay in achieving consensus "formalize" the meaning of certain concepts including the management of consequences.

The final documents drawn up by NATO are unanimous in showing the consequences of that management involves reactive measures to mitigate the destructive effects of a terrorist attack or natural disaster incident. It states that it is an activity of national responsibility. NATO support Allies by providing a forum where planning arrangements for such situations can be coordinated among countries [9].

Conceptual Delimitations in the American Version

American literature, and not only provides a lot of information that is presented in terms and phrases not always well chosen clearly highlight the desired ideas.

To eliminate such shortcomings is necessary to dwell on three commonly used phrases often "crisis response", "crisis management" and "consequence management".

Crisis Response refers to those situations where hostile action initiators were discovered before the onset of an attack with weapons of mass destruction [10]. For the US the response of the internal crisis is the responsibility of the FBI and the State Department through Office of Counterterrorism is dealing with incidents outside their borders.

By comparison, consequence management is the description of the ways and means necessary to reduce the short and long term physical effects, socio-economic and psychological attacks with weapons of mass destruction [11]. Consequence management also includes a description of the means coordinating local, regional, national and international before, during

and after the attack. Obviously, this involves preparatory activities before the crisis, such as: conduct locations, assessment of competence to the nearest medical units and quantity, quality and locations where you can purchase necessary to decontaminate victims or material.

It also has the ability and the treatment of victims, which involves not only physical treatment but also psychological counseling, along with other necessary action regaining confidence in the economic welfare and social order in both the affected area and throughout the country.

In the US case, consequence management responsibility lies with the Federal Emergency Management Agency (FEMA) within the country and by the State Department through Office of Foreign Disaster Assistance situations abroad. In the US vision crisis response and consequence management are two concepts that should be considered as parallel and complementary (Figure 1), indicating that management of consequences, like war, is related to political goals, strategy and interaction between two wills: the authorities and that of those who initiate these attacks. Considering all this and adding US Department of Defense definition of crisis management, we can say that it can be described mainly as the ability to effectively manage the consequences of an attack [12]..

The third concept, crisis management, is, according to the definition provided by the US Department of Defense, the sum of the measures taken to solve a hostile situation, investigation and preparing a judiciary case for prosecution under federal law.

Understanding this has been facilitated by the conclusions resulting from the debates of the US House Judiciary Committee. Here at the end of 2003 following observations were made: *"Crisis management measures include the identification, planning and use of resources necessary to anticipate, prevent or liquidation of a terrorist threat or act. C*onsequence *Management is primarily intended of the removal of the attack and restores functionality society "*[13].

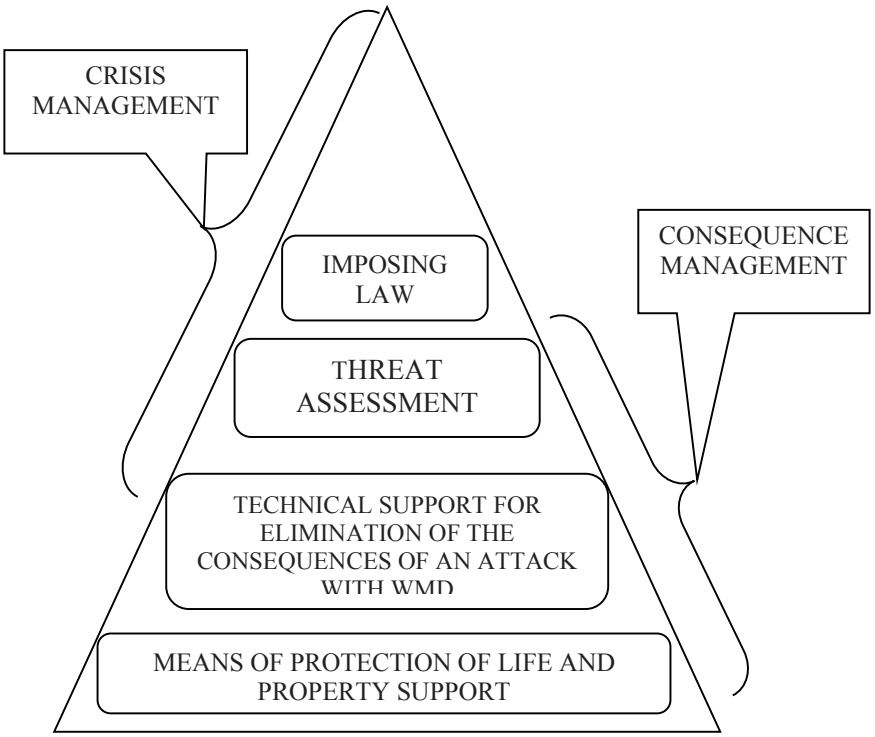

Figure 1. The relationship between crisis management and consequence management / Source: Federal Response Plan (FEMA 229/1997)

US specialty papers generally believe that crisis management include the answer to aggression using weapons of mass destruction, improvised explosive devices or a crisis involving hostage taking and exceeding federal agency's responsibility. The FBI is the federal agency vested with a first class role in crisis management, but "the army must be prepared to effectively manage the consequences of an attack with weapons of mass destruction, protecting US itself" [14].

THE PRACTICE OF THE CONSEQUENCES MANAGEMENT

2.1. United States of America

National Strategy to Combat Weapons of Mass Destruction (WMD), developed by the White House identifies "consequence management"[15] as one of the main pillars of the fight with WMD.

As it is mentioned before the nature normative of the consequences management process is Presidential Directive no. 39 of 21 iunie1995.

This ensures the drive unit in the US counterterrorism actions by establishing federal agency - Federal Lead Agency. Its tasks are designated by the Department of Justice (DOJ). In turn, the Federal Lead Agency delegates Federal Bureau of Investigation (FBI) with responsibilities in the sphere of counterterrorism actions.

In its work, the FBI is supported by the Federl Emergency Management Agency (FEMA), along with other agencies. The FBI will not be involved in counterterrorism measures only those federal agencies estabilised by classified documents. FBI will take these responsibilities until the Attorney General will transfer directly to FEMA Agency. Further, FEMA will directly lead the management of the consequences related activities for the entire period in which aid is given federal [16].

The inventory of forces and resources involved in the management of consequences, objectives, missions, cooperative way and finalities are set by the Federal Response Plan (FRP 93-288) [17]. This plan provides unified intervention of federal agencies, local institutions and volunteers to disasters and terrorist actions.

The FEMA Agency is responsible for ensuring consistency between FRP and the consequences of management of terrorist attacks with weapons of mass destruction.

The US Army forces may participate in the management of consequences both on national territory and abroad. Within this, the laws governing military activity stipulates that the involvement of forces is to:

- a "remove or reduce the consequences of natural disasters and those triggered by human or otherwise endemic"[18]. But, Publication 3-07.6 makes the statement: "humanitarian assistance of US Army forces is generally limited in scope and duration. Assistance is given to supplement or complement the effort of the agencies or local civil authorities. They have primary responsibility "[19].

- "Fight against weapons of mass destruction and means of using them"[20]. During this mission, the military must "provide assistance for joint operations and multinational and, interagency coordination"[21].

To strengthen the fight against WMD in the US Army forces, the Military Council was set up to combat weapons of mass destruction. This is an advisory forum to identify, define and develop concentrated effectiveness of military actions to combat WMD [22].

Finally, participation in the consequences management is one of the of US Army missions. Involvement is done differently:

a. To prevent the use of weapons of mass destruction (WMD) the US Agencies and special services are coordinating the activity. The organizational entities of intelligence and army research obtained and provide data mainly for the commandments and General Staff.

b. To remove the consequences of using WMD military are appointed to lead the preparation and conduct joint operations.

c. In order to limit and remove the consequences of natural disasters the army participates with limited engagement under the leadership or government bodies.

2.2. NATO

2.2.1. The Evolution of the Legal and Institutional Framework of NATO Organizatin in Consequence Management

Analysts believe that one of the important issues that NATO has to face is how to define its place in the international efforts to combat the proliferation of weapons of mass destruction (WMD).

This is because NATO members are unanimous in assessing that the dangers of terrorism, the threat of WMD proliferation tops the list of priorities of the international community on the dangers to the security of present and future.

To remain credible as a security institution, NATO must play a leading role in addressing the magnitude of such challenges. From the summit in Brussels in January 1994, the Allies decided to focus seriously on WMD proliferation and attention to its impact on security. There followed a multitude of NATO initiatives on WMD. Alliance Proliferation Concerns were completed and subsequently were concerted aspects of combating the use of such weapons.

For effective action within the Alliance were established two working groups: the senior Defense Group on Proliferation (DGP) and Senior Politico-Military Group on Proliferation (SGP), the former being focused on military capabilities and the second on political and military dimensions. DGP has produced a number of concrete initiatives and active, with relative public visibility. Most notably, between 1994 and 1996, has developed the first comprehensive assessment of the Alliance on risks posed by the proliferation of WMD, identifying ultimately shortcomings in terms of capabilities related to WMD of NATO member countries and

establishing plans to help eliminate those shortcomings. DGP later realized weaknesses Defense Capabilities Initiative (DCI) in 1999, developing a new approach to build defense against WMD, where they are treated first aspects of consequence management.

As a result, in 2001 he founded the Civil Emergency Plan, on which were established to improve national capabilities and activities necessary to prepare the population for action in case of any terrorist attack on citizens or WMD critical infrastructure[23].

NATO summit in Prague in November 2002 highlighted five DGP-inspired multinational initiatives, including those related to creation of a response team in case of events and one deployable analytical laboratory [24].

In the capital of the Czech Republic it was established the development, with the contribution of each member state, of a special NATO document on the management of consequences of the use of WMD by the terrorist elements [25].

NATO Summit held in Bucharest (2-4 April 2008), would bring new contributions from Member States to the embodiment of the Alliance consequence management. In the final declaration of the heads of state and government of the member countries of NATO it was highlighted the particular importance of protecting our populations, territories, infrastructure and forces allied against the consequences of terrorist attacks. They pledged to "support the program of work to develop advanced capabilities to help defend against terrorist attacks, including the continued development of new technologies"[26].

Measures taken by the makers of Alliance member states have resulted in improvements at the institutional level and act.

In the concept of NATO, the fight against terrorism is national responsibility. The aim of the Alliance is to help member states to discourage and eliminate terrorist threats. This principle has been respected and consequence management in the event that a development of a particular situation. To optimize individual activities, NATO Allies support by providing a forum in which they can coordinate their forces and means in case of a terrorist attack with weapons of mass destruction [27].

In 1998, the Alliance created Euro - Atlantic Disaster Response Coordination Centre (EADRCC). At first, the work of this institution is limited to natural disasters and those caused by humans. Since 2001, the EADRCC received responsibilities in response to the terrorist attacks with chemical, biological, radiological and nuclear [28].

To increase the efficiency of the time they were created a series of protocols that have been signed and sealed by the Allies. One of these has to do with the victims of a terrorist attack with WMD. Joint Medical Committee has developed a protocol for the treatment of the wounded. In it were established coordination mechanisms capabilities and mechanisms for transportation and evacuation of wounded allocation within hospitals in other countries.

For greater flexibility during consequence management actions, NATO initiated a Memorandum of Understanding (MoU) between member states, which facilitate border crossings by transport injured. The memorandum simplifies common border crossing procedures by convoys of wounded and customs control medical staff to assist emergency specialist.

2.2.2. Consequence Management - Organizations and Principles of Action

The concept of management of the consequences is much better and more clearly as defined in the Alliance; he also benefiting from an institutional framework adapted its application in practice. Consequence management is defined as a set of measures aimed at limiting reaction with destructive effects of terrorist attacks, incidents or natural disasters [29].
The main body responsible for the management of consequences is Euro-Atlantic Disaster Response Coordination Centre - EADRCC, which has arisen since 1998 to coordinate the allies response to natural disasters. The center was created by the Euro-Atlantic Partnership Council, being one of the two elements of enhanced cooperation policy international support in the event of a disaster. "The other element was represented by Euro-Atlantic Disaster Response Unit - EADRU[30].

EADRCC was established under the NATO Command, which is headed by the Director of Civil Emergency Planning, bringing together staff from NATO member and partner states, representatives of UN and NATO military authorities. EADRU, however, is a not permanent body comprising national civilian and military elements (qualified staff, medical facilities, equipment and materials, and transport) volunteered by member states of the Euro-Atlantic Partnership Council. This unit can be mobilized at the request of an affected state, and its members are appointed according to the specifics of the disaster. Although initially, the two bodies have been designed to act only in the Member States and partner only to natural or man, then they have expanded both its scope (it became possible to act in third countries) and situations that may arise (from 2001 was added responsiveness and management of the

consequences component in case of terrorist attacks using CBRN weapons). Thus, when they were aware of the risk of a terrorist attack with weapons of mass destruction (WMD), the extent and severity of the effects that such an act would entail've population, this component management has been integrated into the consequences existing institutional framework, with efficient and verified already acquired solid experience by taking actions to mitigate the effects of natural disasters or man or by carrying out simulation exercises.

The EADRCC role is to record all support (including those provided by third countries or other international organizations), the required capabilities, data tools and human resources sent and the actual situation on the ground. The primary function of the structure is to coordinate and not to drive, being an information center that operates continuously. This cell receives support application that forwards to other member states. Once they communicate their offer, the EADRCC will send information on the affected states.

Another department with responsibilities for the consequences management is the Unit of Planning of Civil Emergency, whose role is to gather and analyze information to communicate it to similar units nationwide in order to be used in the most efficient way possible, resources civil emergency.

The mechanism set up at NATO to limit the consequences is compact and adaptable to events. EADRCC were established so as to ensure an optimal degree of cooperation, collaboration and dialogue to achieve a rapid and coherent response to the manifestation of a crisis situation. From the information provided by the Alliance [31] of the bodies and mode of action to consequence management, we can draw some principles that govern these operations:

- The responsibility to respond to a crisis situation and make management of the consequences is a member or partner states. NATO operations will be conducted under the **principle of subsidiarity**. NATO intervention is performed only when the affected state's ability to cope with the consequences is exceeded, only the conditions under which such intervention constitutes an added value. State affected by such an attack must send a formal request to NATO to receive support from it. It should also be taken into account and that national decisions can be made in most cases, much faster than the alliance, bringing together representatives where it is needed and states affected states can provide support. While it is recognized that the decision can be taken within NATO almost as fast as the national level [32], this is possible if the necessary operations already have a precedent in the alliance. In the management of the consequences of a

terrorist attack with WMD did not exist until the moment this kind of situation involving European civil protection operations. NATO's expertise in this area lies in the knowledge and best practices acquired through simulation exercises and concrete work in theaters. It is therefore possible that the decision at national level, where such events can be faster and more efficient.

- Capabilities engaged in these operations are being coordinated by NATO and the **affected state voluntarily** by members of the Euro-Atlantic Partnership Council.

- Cooperation between civilian and military actions is an elemental aspect of management of the consequences. The very body that drives this kind of activity has in its composition civilians and military members, so as to have an integrated vision of the capabilities and resources we have available. EADRCC has the same rules as civil emergency planning department [33], which guarantees the existence of a unique vision of the event, existing resources and solutions to be adopted. In addition, given that both the joint body (civilian-military) and the civil responsibilities in managing the consequences were the same directory, we notice the prevalence of civil over the military factor.

- Consequences Management runs under the subsidiarity principle and the nature of the forces engaged. The main role remains civilian, military forces are committed only to the formal request from civilian institutions. However, the role of the military is very clearly established, and expertise that they can bring is well known. The military presence is felt much better at NATO level than EU level.

2.2.3. The Military Role in the Operations of Consequence Management

The general characteristics of the structures that work for consequence management, the principles that govern actions and official texts governing the procedure for action and decision-making, it highlights the role that militaries meet in this type of operations. It notes clearly that they do not play the main role in these operations, but the experience they have gained in managing the consequences of war is exploited to the full management plan effects that various natural disasters or man them have on the population. Also, the armed forces may replace civilian forces, where they are blocked by unexpected events. The fact that NATO has a multinational military force provide guarantee of existence of capabilities and resources that can be activated for this purpose.

In 2003, NATO set up a *Multinational CBRN Defence Battalion* to deal with WMDCBRN [34] and its design address and manage the consequences of a CBRN incident. This unit has been declared fully operational within the Istanbul Summit (June 2004) [35]. The main objective of this force is to quickly respond and to provide, on request, consequence management support. The battalion is under the operational control of SACEUR and comprises one evaluation team, a high readiness response detachment, a deployable laboratory for CBRN substances and agents analysis and several companies for detection, identification, and monitoring of CBRN agents, radioactive, chemical and biological decontamination, and for logistic support. We have thus sketched military activities that they conduct this process – analysis, identification, decontamination. It is, therefore, a certain kind of expertise and the tools to capitalize this expertise. The battalion can be mobilized within 5 to 20 days (comparable with the NATO Response Force) for six months. In 2003, 14 states have offered forces for this battalion - Czech Republic, Germany, Canada, Hungary, Italy, Norway, Portugal, Romania, Spain, Turkey, United Kingdom and United States. The command of this battalion is provided by the lead nation.

The lead nation is responsible for coordination with the other NATO members to set up the battalion forces, updating and implementing standard operation implement procedures, and for training and certifying the battalion capabilities to manage the consequences of a CBRN incident. Participating nations must provide their units fully capable to accomplish the missions' assigned, including equipment, human resources and relevant national logistic support for the units offered

CONCLUSIONS

The concept of consequences management is much better outlined in the Alliance. And if NATO procedures of this type have been developed and refined through a transfer of expertise. Experience in efforts to decrease or eliminate the effects of the war was harnessed in management focused on the consequences of population protection in the event of disasters occurring in peacetime.

The institutional framework is clearly defined both in the existence of institutions and the role and principles that drive their actions. Note, however, that in spite of international regulations which stipulate that military factor would have a secondary role in the management of consequences, NATO is a fairly consistent role of these forces.

So, consequence management can not be separated, in the context of the Alliance, by the importance of the military factor. This is due, primarily, the origins of the organization, which was born as a political-military alliance, the armed forces of nature as part of NATO. Secondly, the experience gained by NATO during clashes in theaters is undeniable, which argues that NATO expertise is, above all, a military expertise sort . And third, but not least, the importance of the military factor is justified by the Alliance involvement in the fight against terrorism. If the consequence management refers primarily to terrorist attacks using WMD, the military component of NATO justify their involvement.

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HRM ASPECTS IN THE MILITARY MEDICAL SYSTEM. A CRITICAL VIEW

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In recent years, deep changes due to the ongoing political, economic and social undergone by Romania in the overall reform process of redefining its position in Europe and a firm option on integration in a regional and global security system that satisfy its security needs, has emerged and the military system needs to change, to adapt to new realities, transforming into an entity that is fully supple, flexible, able to be a reliable partner and active in the process of interoperability and joint operations with NATO.

The need to create an army to better meet the new requirements to ensure the sovereignty, independence, territorial integrity and constitutional democracy and the compatibility and interoperability with NATO structures imposed a scientific approach to the theoretical bases of the organization of the military system, taking also into account the experience gained in this respect by modern armies.

Thus, an important aspect of this approach has constituted the analyses of financial, material and human resources available to Romania in this period and the extent to which these resources can be a real support for the redesign and implementation of one new military body to respond to security needs.

In this context, an important part of these major changes in the armed forces was the strategy of reforming and adapting to the current requirements of the military medical system with profound implications not only for the Romanian Armed Forces but for the health system in general, and for patients that address to this system, even if they may come from the national defense, public order and national security system or of any part of the Romanian civil society.

In Romania the right to health is guaranteed by the Constitution as follows: “the State shall take measures to ensure hygiene and public health and organization of healthcare and insurance system for illness, accidents, maternity and recovery, control the exercise of medical professions and paramedical activities, and other measures to protect physical and mental health of person shall be established by law”.

Moreover, the World Health Organization has established clear accountability of governments to their health systems it oversees, it offered a conceptual framework useful for starting outlining targets for health systems and emphasized the need to elucidate the impact that indisputably, health systems have on citizens' health. Al the activities whose primary purpose is to promote, restore or maintain health" and the essential objective of a health system is health insurance. A health system must meet the expectations of the population, which implies respect for the individual (autonomy and confidentiality) and client orientation (prompt and quality provided).

An important part of the health system is, as I mentioned before, the military health system. It is under the authority of the National Defense Minister and is represented in the central structures by the Medical Directorate.

Doing a review of the main tasks of the Medical Directorate, one of the biggest challenges is ensuring competent human resources, composed of staff with highly professional knowledge and skills and additionally attached military values and traditions, with the desire to take constant, discerning and with dedication to both professions of doctor or nurse as well as military.

This challenge is not so easily done in a system where, because of many shortcomings such as underfunding, unfair competition, placing medical personnel among those most poorly paid in the public sector, lack of respect and trust from other social groups and government, corruption default or all of these causes, sometimes make it almost impossible to attract more staff and maintaining it.

Understandably so why, in such a context, designing a strategy, implementation of viable human resources policies or designing an articulated system focused on raising medical care to the demands of patients comparing the state system with the private one can sometimes be impossible.

Not to mention that, there are not too many palpable arguments to convince a medic or nurse to also assume a military career given that the military status that comes with the restriction of rights and freedoms for which no compensation system can par. It might be worth mentioning that wage policies, used usually as an argument to motivate the staff, came to be so badly implemented that for equal conditions of employment, a civil medic in the military system is better paid than a military one and implementation nurses with higher education led to the

creation of a precipice between civilian and military personnel, the first being paid much better, even if, I repeat, working conditions and job descriptions include the same requirements.

Finally, the private system, which has adapted much quicker and faster than the state one to market requirements, continually recruits personnel from highly and multidisciplinary prepared military medical personnel, and provides them with far better than decent work conditions and reasonable wages. Accordingly, we are constantly in front of an exodus of medical personnel to private systems and lack of palpable solid arguments to present to them and make them stay.

What is more, a greater danger is the foreign medical market that is far more attractive even than the private system in Romania. And this entire phenomenon concerns in particular young staff, formed in the state system but with special skills and training above average. The result is that the military medical system constantly loses its human resources given its increasing retirement rates and the decreasing number of replacing personnel.

But as I said the challenge remains a challenge and the Medical Directorate, together with the Human Resources Management Directorate and other factors responsible from MoD, constantly working on new strategies, policies and concepts to recruit, form, train and retain well prepared staff with a proper training, to carry forward the tradition of the Romanian military medical system and raise health standards and level of medical services at a competitive level with other elements of the national health system.

In order to present these, the following chapters will make a broad overview of the system of management of human resources in this field, including all system elements such as: structures and interdependencies, recruitment system, selection system and organization, composition, powers and operation of the selection boards, individual career management and its design, career development, medical and military training courses or by obtaining specific skills, continued employment or reserve and retreat domains. All these processes have particular aspects of the medical field and will be approached broadly, each at the appropriate time.

6. Military health system: structures and responsibilities

1.1. The Medical Directorate

The **Medical Directorate** of the Romanian MoD is the main structure of the military health system and, according to the Regulation on the organization and functioning of the ministry, it has the following main responsibilities:

- policy and regulations on healthcare, veterinary and veterinary health inspection and sanitation state;

- planning, scheduling and coordination of operational medical support and evaluations in the theaters of operations;

- assisting pharmaceutical and medical logistics;

- providing statistics and medical informatics;

- providing medical expertise on military skills to military service.

The Medical Directorate conducts and coordinates the following structures:

- Central University Military Emergency Hospital „Carol Davila" Bucharest;
- Military Emergency Hospital „ Regina Maria ", Braşov;
- Military Emergency Hospital „ Dr. Constantin Papilian " Cluj-Napoca;
- Military Emergency Hospital „ Dr. Alexandru Gafencu " Constanţa;
- Military Emergency Hospital Militar „Dr. Ştefan Odobleja" Craiova;
- Military Emergency Hospital „ Dr. Alexandru Popescu " Focşani;
- Military Emergency Hospital „ Dr. Aristide Serfioti " Galaţi;
- Clinical Military Emergency Hospital „ Dr. Iacob Czihac " Iaşi;
- Military Emergency Hospital „ Dr. Ion Jianu " Piteşti;
- Military Emergency Hospital , Dr. Alexandru Augustin " Sibiu;
- Clinical Military Emergency Hospital „ Dr. Victor Popescu " Timişoara;
- Emergency Clinic Center for Cardiovascular Diseases „ Academician Vasile Cândea" Bucharest;
- Balneophysiotherapy and Medical Rehabilitation Sanatorium „Dr. Dimitrie Cantemir" Bălţăteşti;
- Medical Center Outpatient Diagnostic and Treatment „Academician Ştefan Milcu" Bucharest;

- Military Scientific Research Center for Health;
- Military Health Institute;
- Center for Preventive Medicine;
- Blood Transfusion Center of MoD;
- Zonal Pharmaceutical Center Bucharest;
- Zonal Pharmaceutical Center Sebeş-Alba;

Apart of these we have to take in consideration all the other medicals structures, part of MoD, starting from field units to Medical directorate structure.

If we talk about their activity, some statistics from 2014 are as follows:

-in primary care they were provided over 178 259 consultations and 1045000 medical treatments;

- they were awarded over 1,330,000 consultations and treatments in specialized medicine;

- were provided regular medical control for over 85% of the armed forces;

- in 12 military hospitals with 3229 beds were conducted a total of 126,861 hospitalizations totaling 727,501 hospitalization days;

- was hospitalized over 138,000 peoples and was represented in 80% of insured beneficiaries of Law no. 80/1995 of which 35% were active military personnel:

- 85% of cases registered at the emergency units were civilian personnel outside the military system.

1.2. National Institute for Aeronautical and Space Medicine "General Doctor Aviator Victor Anastasiu" (NIASM

National Institute for Aeronautical and Space Medicine "General Doctor Aviator Victor Anastasiu" is a public institution with legal personality established by the Government Emergency Ordinance no. 4 of 2000, approved by Law no. 279/2001, under the authority and directly subordinated to the Minister of National Defense and is part of the military medical system.

He was founded in 1920 and is the IV-th aeronautical medical institution in Europe.

NIASM has the following responsibilities:

- providing medical and psychological selection and expertise of military and civilian aviation personnel;

- investigating the civil and military aviation bad events, upon request;
- providing scientific research in aeronautical medicine;
- developing detailed technical expert medical rules and psychological capacity to fulfill tasks in aeronautical and space activities safely and effectively;
- organize courses and exams competence in Aeronautical and Spatial Medicine;
- primary care and specialty health assistance;
- providing pharmaceuticals to the insured CASAOPSNAJ;
- represent Romania in international relations involving aerospace medicine.

To get an insight into the impressive volume of work of an institution with about 165 employees, below I will detail some statistical data's from 2014:

- selection and medical expertise to approximately 7,000 military and 1,000 civilian aeronautical personnel;

-regular medical examination for a total of 8,800 people, military and civilians, and executed more than 1,000 psychological evaluations for no aeronautical personnel;

-in primary care they were given 38,746 consultations and medical treatment of nearly 13,000 patients

-in specialized medicine were provided over 158,626 consultations were carried out and more than 15634 medical services and over 9,000 samples and functional investigations.

1.3. The Health Insurance House for Defense, Public Order, National Safety and Legal Authority (CASAOPSNAJ)

Another important factor in the system is the **Health Insurance** House for ministries and institutions in the defense, public order, national security and judicial authority fields with an internal health system and its name is, by law, the Health Insurance House for Defense, Public Order, National Safety and Legal Authority, hereinafter CASAOPSNAJ. In exercise of the powers they conferred by law and his statute, applied and enforced policy and overall strategy established by the National Health Insurance, system health insurance specific ministries and institutions with internal health system from defense, public order, national security and judicial authority.

C.A.S.A.O.P.S.N.A.J. is a public institution with legal personality and its own budget, subordinated to National Health Insurance House (CNAS).

C.A.S.A.O.P.S.N.A.J. is organized and functions based on its status, which respects the statute - approved by the Board of Directors setting the CNAS.

C.A.S.A.O.P.S.N.A.J. operates on the principle of organization and operation of the county health insurance funds in the health insurance system and concludes contracts for the provision of health services to the health institutions from Defense, Public Order, National Safety and Legal Authority fields.

At national level, CASAOPSNAJ has around 1.150.000 insured people.

2. Recruitment, selection, education, training and development in the military medical system

2.1. Recruitment and selection system

In terms of the recruitment and selection system in the field, this is ensured by Military Centers in every county and three Zonal Selection Centers. The data necessary for carrying out their professional recruitment for the military medical system are provided by the Human Resources Management Directorate and Medical Directorate and refers mainly to the number of places that the Medico - Military Institute provides for the annual competition for medical students and requirements necessary to apply. Otherwise, specific activities are the same. College graduates who want to become students at the Medico - Military Institute follow the same selection stages as the other candidates for Military Academies, who must pass skills, mental, physical and medical evaluations and then, of course to be admitted by the military institutions of higher education. This is the direct pathway of recruitment.

The indirect pathway refers to calling in military activity and conferring appropriate ranks in military for civilian doctors or nurse, appointed corresponding to their training.

This activity is regulated by the minister of National Defense order. In accordance with its provisions, for a candidate to be called in a specialized medical activity which cannot be covered in the direct pathway, there must be a staff shortage in this specialty and the candidate meets the conditions set by the law on age and training. Also, the candidate must pass the same physical, psychological and medical tests as the candidates following the direct pathway and, of course, to win the competition for filling vacancies organized under the law.

2.2 Education, training and development

If we discuss about education, development and training, in fact, the Medico - Military Institute is the only military education institution that provides all types of training for the military medical field, and these are the following:

- university medical studies in collaboration with the University of Medicine and Pharmacy " C. Davila " Bucharest, which provides academic education and Medico - Military Institute supplemented by providing military training;
- residential preparation for medical university graduates in university clinics of Central University Military Emergency Hospital Bucharest or from civilian medical system ;
- training courses required for career advancement and promotion to the rank for medical officers. In this area, Medico - Military Institute organizes the following courses:
    - course for medics assigned in military units, required referral to the rank of captain or appointment to positions set out in the organizational chart with the rank of captain;
    - course for medics assigned in large military units, needed to the rank of major or appointment to positions set out in the organizational chart with the rank of major;
    - postgraduate medico-military course for lieutenant-colonels necessary for lieutenant-colonel rank or appointment to positions set out in the rule of organizing with the rank of lieutenant-colonel;
    - postgraduate course leading health services needed to be promoted colonel or appointment to positions set out in the organizational chart with colonel rank.

As regards advance to general and appointments referred to in the rule of organizing the rank of general, medical officers with the rank of colonel can attend College Strategic offered by the National Defense University or specific course offered by the National Military College, if they meet selection conditions set out in the Order of the Minister of National Defense.

- training courses required for career advancement and promotion to the rank for sanitary NCOs. In this domain, the Medico - Military Institute organizes the following courses:
    - health instructor course, necessary to advance in sergeant rank or organizational functions within the positions with the rank of sergeant;

- staff course for referral to the appropriate health chief sergeant -major rank or appointment to positions in the organizational chart provided by the sergeant - major rank;
- management and administration being necessary health referral to the sergeant - adjutant rank or level of appointment to state functions within the organization with the sergeant - adjutant rank;

As regards the advancement to the next rank of NCOs, the Military Career Guide provides no ongoing military career as necessary.

- other courses related with medical or military training.

For military doctors, like for civilian ones, professional training is the most important is, since it is essential to medical career progression and that is divided into two main branches.

The first part of professional training consists of obtaining professional qualifications. It is well known that after graduation, students become military doctors of general medicine and they are assigned in their first position.

To obtain a medical specialization, they need to enroll in 3-5-years residency program. The type of medical specialties and their number is decided by the Medical Directorate to the needs arising from the military health institutions and are published in the newsletter of the army. The exam can enroll graduates of general medicine who fulfill others conditions stipulated by law.

At the end of the residency, the resident may enroll exam or competition in the specialty and obtaining confirmation of specialist title. Thus, they obtain the title of specialist.
They can participate also in competition for filling vacancies published by Medical Directorate for specialist positions in their specialty.

After 5 more years they can participate and pass the exam for principal[11] in their specialties.

Of course there is the possibility to get more medical specialties and that is common in the medical environment.

Moreover, in the medical specialties further training competent and high areas already exist or may be obtained, such as, for example, competence in cardiac ultrasound, in ecHodoppler and further training such as aeronautics medicine or hyperbaric medicine.

[11] The translation for the Romanian word/phrase: “ medic primar” suggested by professionals in the field

Another form of training is the doctorate, which, after a period of at least 5 years of study and guidance, the doctors who qualify and enroll in the doctorate program can support the thesis to the committee responsible and can get their Ph.D. in health Sciences.

The second part of personal training is the continuous professional training. This mandatorily involves yearly participation in various medical congresses, conferences, scientific meetings and seminars organized both at home and abroad and that each is included in a score set by the Ministry of Health.

For every doctor a minimum score is also set and the points are cumulated during annual scientific meetings and congresses attended.

This is one of the important criteria that take into account the issuance of the free practice of the College of Physicians. If a physician has gathered the minimum score in a year, he cannot issue a certificate of free practice.

2.3. Activity of selection commissions

In the Romanian Armed Forces, the activity is regulated by the Minister of National Defense Order no. M. 69/2015, approving the "Norms regarding the organization and functioning of ranking and selection system for career military personnel". Here are defined the relevant committees at the ministry level, their attributions duties, staff structures, technical secretariats which maintain the commissions, the commanders at all levels duties, aiding the rights, obligations and criteria that must be fulfilled by those wanting to participate in the selection.

Thus, for the medical field, the most important selection commissions are:

- Commission for senior positions (generals);
- Commission for senior positions (colonels) ;
- Commission for central structures of MoD (from lt.col.-NCO's);
- Commission's for services – Land, Air Forces, Navy, Joint Logistic Command (from lt.col.-NCO's);
- Others.

The order also sets nominal membership of all commissions of selection. These are composed of officers with higher ranks or at least equal to the maximum level of those who apply, and who occupy important positions at every level of decision to commissions work.

In order to ensure a transparent and fair selection system, activities in the selection process would be, in short, the following:

Military units send, hierarchically, their vacant positions, in order to be published.

Vacancies are published in the monthly newsletter of the Armed Forces, with all the relevant function details: name, rank, military specialty, ranking coefficient and other details deemed important, such as interview or request the approval of the competition, which is very important for doctors for example.

After a certain period of time, those who wish to participate for selection, prepare personal report stating for which position they want to apply.

The personnel structures of the units where the reports were made are required to send the personal documents of the candidates required by the selection commissions.

The personnel structure of the units that published the vacancies is required to submit job descriptions to the technical secretariats.

The technical secretariats of the selection commissions select the candidates according to the legal content of the Order and proposing the selection of the entry meeting the selection criteria and reject those that do not meet requirements.

Also, taking in account criteria established in the same order, the technical secretariats calculate a score for each candidate and prepare summary tables with all candidates and their scores.

Tables with proposed military to participate in the selection, of nominees to be rejected, tables with scores of candidates and personal documents are working documents for selection commissions members, that meet, usually, once a month and establish the hierarchy of candidates.

The decisions of the selection commissions are sent to the military units from where the candidates came, the military units and commanders who have advertised positions and competent commanders appointing candidates on post.

The decisions are enforceable. The competent commanders are required to issue the order appointing the candidate who came in first.

For the vacancies requiring an interview as part of the recruitment process, the military unit who published has the obligation to organize interviews with the candidates communicated by the technical secretariats and to communicate the result of interviews to technical secretariats.

The result is a score from 1 to 10 for each candidate. If candidates fail to take 6 minimum to interview they are declared rejected.

For specific functions such as doctor, or teacher, for whom the post employment competition is governed by national framework, selection commissions are only endorses participation, making sure that those who run for to meet the military criteria.

After that, the responsibility of organizing the contest for filling the vacancy, according to the law is exclusively the attribute of the military unit. The latter will communicate after the contest the result to both commanders of which is to issue orders for appointment to positions and selection commissions.

3. Individual career management

In the design of individual military career, the most important structures and their responsibilities are as follows:

- Specialized departments – prognosis, planning, programming, organizing, coordinating and controlling, and participate in military personnel's individual career management;
- Specially established working groups – selection commissions with duties in legal documents, to facilitate consistent application of the principles contained in Military Career Guide (promotion of values according with competence, hierarchy of candidates of similar levels, decision – making regarding promotion, retention or retirement);
- Authorized personnel – commander counseled military personnel and career manager.

The main duties for Commander are the following:

- periodical dialogues with subordinates (development opportunities, suggest career path);
- monitoring subordinates during the training process, applications and missions;
- annual appraisals, proposal for regarding their further career development;
- counsels subordinates by exchanging ideas, influence in their character and values while professionally guiding them
- monitors subordinates;
- forwards employment needs to superior echelons.

The main duties for Counseled military personnel at individual level are:

- self –assessment of personal skills, needs and expectations;
- analysis of individual career options;

- communication of individual training needs;
- utilization of training and development opportunities;
- adherence to individual career path.

The main duties for a Career manager are:

- counseled group data base;
- ensure clear understanding of standards and performance criteria;
- permanent consultation;
- knows vacancies with requirements and specifications;
- draws up career plans;
- monitors the appointees' integration;
- Identifies training and education needs
- forward selection proposals;
- examines proposals related to prioritized filling in of some vacancies;
- guides individuals.

Individual career management for military doctors is quite complicated. That's because, over the rules of military system, in order to be promoted, they have to meet also the civilian requirements, regarding specialty, continuous training, seniority and specific exams.

3.1 Individual career management for military medics deployed in military field

To provide a full outlook on the progress of a medical officer in his entire career, we must turn to the graduation time and assignment to the first function of a second lieutenant.
From here the choices depending on ambitions, personal opinions, and motivations and values start. An individual can stay in a medical unit and can choose to advance career on this track, aiming eventually at getting specialization in family medicine and working as a family physician for military unit personnel and their relatives and for other insurers have CASAOPSNAJ in the area.

Thus, with time for grade placement and promotion, career courses are required to graduate Ranks, military positions and the required courses for each are detailed in Chapter 2.

3.2. Individual career management for military medics deployed in military sanitary institutions

At this level it is assumed that the doctor followed the residency program, passed his specialty, was confirmed by the Ministry of Health or professional degree and is the holder of a post of specialist. Hereinafter, to advance in rank, to be promoted in a superior or in a position to superior management must meet both conditions result in job description military and specialized.

For example, in rank he will have to undergo compulsory military courses mentioned in Chapter 2.

For promotion to the position (on a higher post) it must meet the legal criteria set by the Ministry of National Defense to enter the race. For this it is validated by the competent selection committee from the ministry, which will determine if it meets conditions related to degree, experience, and other hierarchical level.

If approval for participation in the competition is favorable, he can join the contest for vacancies, if it meets the criteria set by the Ministry of Health related to their specialty, years of experience, quality of services provided before their participation, rewards and sanctions and more. If the dossier submitted is validated, he can participate in the contest in conditions provided by the health ministry order.

3.3. Individual career management for NCOs

For NCOs who work in the medical field, career path it is largely similar to other categories. They are advanced to and forwarded rank depending on the period stipulated by law and whether properly fitted graduated course.

In addition, however, for those working in health institutions, they are approved annually by the professional association of nurses and midwives in Romania that issues certificates for practice. For this endorsement it is required, as for doctors, to meet a minimum score on the annual continuing education. For this, they attend classes, seminars and conferences and other forms of expertise.

4. Prospective solutions underlying some constructive criticism:

Sometimes the easiest, instead of doing something practical and valuable, is to criticize.

Yet this is not the easiest part of my paper work but it is actually a summary of the problems that I faced in the recent years since I have been working in human resources in the military medical system. Some may criticize the character of generality and the entire system would be applicable to the military, but I want to dwell only on those that have a major impact on the medical system.

After of 15 years of human resources and staff I would say that the biggest problem in the military medical system in human resources domain is the lack of an applicable and comprehensive strategy. Of course, as I mentioned in the introduction, it is almost impossible to have it. Social, economic, political environment, the whole Romanian society is changing very rapidly. What do you think today may no longer be applicable from tomorrow and for something that should be applied as soon, bureaucracy and resistance to changer's late enough to be not upgraded permanently. Of course, we need a vision but in such environments who may have it? Who can predict how quickly the medicine will change, who are the new types of medical services and types of resources, what kind of doctor you will need, what will be the future of medical specialties, how will future medical structures look, how many of those attending school will departing, how many are coming in, how many will you need, what funds are there available, what is the impact of factors such as political decisions, social pressures, lack of transparency, low funding and other will influence decisions on your own?

4.1 Lack of a comprehensive and applicable strategy

One thing is for sure, no matter how many questions and unknowns we have, a comprehensive and applicable strategy in the field is required, flexible and reliable policies should be born from it and one of the political agreements should be that on human resources, because all the specialists know but many managers forget that human resource is the best and most important resource. It also needs leaders, managers and HR specialists who know and can apply these policies, who can eliminate losses and that can streamline operations, which help guide organizations towards performance.

And especially, we need to learn from the experiences that we have, had these experiences and transform them in knowledge to build the future. And here I give some examples.

4.2. Civilian transition to military doctors

It is well known that one of the methods of recruitment in the military system is the indirect pathway, as I presented earlier in the paper. The big problem is that civil legislation in the field is not harmonized with the military one.

And I say this because a doctor called in activity is available to the military unit to be placed, because the doctor can occupy the vacancies only after the competition or exam. Providing is for a period of 3 months with the possibility to extend for 3 months with the approval of the Minister. If after 6 months of making available an officer is not appointed it is passed according to law, in reserve.

The problem is the time at disposal to organize the competition. The vacancy must be published in the monthly newsletter of the armed forces; approval for participation in the competition must be obtained from selection commission and these entire activities can stand up to three months, during which expires first disposal and the military unit is obliged to report to the minister to come for the extension of three months. Not to mention the fact that sometimes, being intended function of civil, transformation in military one was to take at least two months.

In parallel, after the issuance of approval to the commission, it may trigger other activities stipulated by civil legislation on the organization of contests and competition for the vacancy in the budgetary system.

In case the participant did not appeal or contest or contest is postponed for objective reasons, the second period of extension expires and the doctor was put in reserve under the law, without grab position. True bureaucracy!

From what I know Human Resource Management Directorate is working on a ministerial order to regulate such kind of situations by organizing the contest before calling in activity and the status of medical officers to do after winning the contest, which has much more logical. But it is still just a project...

2.2. Continuous training issue

Although for civilian personnel this issue is regulated by Law no. 53/2003-Employment Code, for military doctors it becomes a real problem when they have to participate in various forms of continuous training. That's because, for military personnel, in accordance with Law no. 85/1995, they can only receive permits, holidays, sick leave or study leave, in terms listed in

Orders of the Minister of National Defense. And these forms of training are completely ignored and cannot be the reason to get study leave, while they participate in continuous training forms. Thus, they are put in a position to request days from annual leave to attend these forms of training which is completely incorrect. The situation is even more complicated when these forms of training takes place abroad. Again the bureaucracy shows off its beauty! That's because amending or supplementing the military law is so complicated that it can take years and in the permitting process, many changes that are considered less necessary, are simply forgotten to hasten progress documents.

4.3. Uneven and unfair remuneration

Remuneration is uneven, poorly applied and leads to aberrant differences in system between people of the same kind that operates in the same working conditions.

In this domain examples are so many that, as I mentioned in the introduction part, instead of being an instrument of recognition of the hard work and motivation, remuneration has become a matter of dispute, misunderstanding and tensions between groups of employees, with direct impact on their professional performance.

But how did it get here?

In the military system two pay systems operate in accordance with the laws in force, one applicable for civilian staff and other applicable to military personnel. Over these two major systems overlap wage regulations in the medical field, which is applied differently for these two categories of employees.

Or rather, some apply to some and not to others, and always, because militaries are the most disciplined, often are forgotten when it comes to applying all wage increases in healthcare.

For these reasons, inside the health system it is possible to meet the following situations:

- a civilian doctor salary is significantly higher than a military doctor, even if the preparation, age, medical specialty or work conditions are the same. The same happens with civilian nurses who are much better paid than NCOs.;
- nurses with higher education are better paid than NCOs with higher education health, even if the preparation, age, medical specialty and work conditions are the same;

- some nurses with higher education earn more than some members of the Committee Board, such as Administrative Director and CFO accountant, which are senior military positions.

Such examples can continue and it is obvious that these aberrations demotivate people and as I said, creates tensions.

That's because the law is applied correctly but is done badly.

CONCLUSIONS

This paper is not meant to achieve more than it can.

It was meant to be a sneak peek into aspects of human resources in the medical field, and hence I tried an objective presentation of processes and mechanisms of human resources system and the main problems arising during the development of my work and that I seem to have had a major impact on the field. It is also an opportunity to familiarize other specialists in the human resources domain with its particularities and to convince them why this system is somewhat different and perhaps more complicated.

It can also complement, and knowledgeably adjacent for constructing an overview of the field of human resources in the armed forces and can stimulate the interest of specialists, at all levels, in learning more and more concretely the issues within the area, before starting the long road incurred by the construction of strategies and policies in the field.

I hope that at the end of reading this paper, potential readers will have gained something in return for their time invested to read, I hope that not only us but also future generations of specialists in human resources will quickly understand the phenomena, will be more active, decisive and even incisive in the area of the new theoretical approaches and along the course that we just completed, will transform them into real transformational leaders of organizations that will lead.

This would be my true gratitude and I’m firmly convinced that the wonderful teachers that I met here have the same feeling.

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A MODEL OF CONTROL INVENTORY ACCURACY IN THE MILITARY

LTC Marian SĂMARU

Any organization, whatever civil or military, that would like to drive the performance should be focus to protect its own assets (stocks, fixed assets, liquidity).

Protection might come thru discipline and clear rule of acting in day to day activity. As we spoke about driving the performance the periodically follow up should be put in place by setting in time the targets and KPIs to be track.

This paper proposed the steps required to prepare and execute cycle counting and full stock takes of inventory (small inventory, maintenance, consumables, fuel, ammunition), the discipline required to maximize stock accuracy on a daily basis.

It might be a model of internal control applied to all military units around the Romanian territory.

1.Principles of accurate inventory

Accurate inventory figures are a necessary prerequisite for a correctly run military unit. Indeed, inaccurate inventory levels can not only lead to additional costs and negative cash impacts on State Budget as material planning is no longer correct, but they may also be indicative of one (or more) of the following issues (not exhaustive):

- theft;
- inaccurate material consumption declaration;
- wrong bookings or incorrectly declared;
- incorrect reception or transfer of goods, material, small inventory.

Theft indicates that the military unit assets are not secure. Inaccurate and incorrect declaration of stocks generate additional issues for smooth processes & hide issues which must be tracked by management (such as fixing root causes of wrong bookings).

2.Cycle Counting

2.1 Principles

a) Scope: The objective of cycle counting is to maintain a high level of inventory accuracy through a regular count of parts on-hand. A daily cycle counting process should be mandatory which does not mean all part numbers need to be inventoried daily (see ABC classification below - 2.2.1).

b) Products to be cycle counted: All stock items belonging to a unit must be cycle counted (fuel, ammunition, materials, small inventory, others).

- Stock in consignment from other units (such as fuel and ammunition) should also be counted for stock reliability and liability purposes even though they do not belong to the unit.
- Own unit stock located in remote areas, managed by other unit:
  - The third party should be contractually responsible for the stock accuracy and obligated to perform cycle counts.
  - The third party should be liable for any stock variance.
  - The third party provides a monthly report of the stock, this report is reconciled monthly with the owner data.
  - Owner staff is required at least once per semester in order to physically check the inventory through a physical stock take.
- Cycle counting is not mandatory for maintenance parts and consumables. It is up to the unit commander and head of logistic to decide whether a regular count is necessary. In any case, the ABC methodology does not necessarily should be apply here and criteria will rather depend on the history of inventory variances on those parts, their value, the risk of theft, the criticality linked to long lead time…

c) Locations:

The cycle count has to be performed *by location (including external locations)* in order to be able to identify variances specific to each location (warehouse 1, 2, 3... / fuel / ammunition / safety stock / consignment stock at other location).

d) Archiving: All inventory count sheets need to be archived according to legal requirements.

2.2 Process steps

Below are the detailed steps to be followed. A summary matrix is shown in 2.2.10 below with an indication of the responsible functions which is to be strictly followed in order to comply with the segregation of duties.

2.2.1 Define ABC classification

Cycle counts are planned using an ABC principle which might covers all types of stocks. Those are classed as A, B or C, with each class having the following count frequencies [1]:

- A class: counted at a minimum each month;
- B class: counted at a minimum each three months;
- C class: counted at a minimum each semester.

The ABC classification can be calculated by automatic systems or manually. The classification is based on the future consumption value over the next 6 months and needs to be reviewed at least each semester.

The ABC classification is as follows:

- A class: 80% of the value;
- B class: 15% of the value;
- C class: 5% of the value.

In case the number of A parts to be inventoried daily is too high, a derogation to this rule can be formally submitted by the unit to the upper echelons.

2.2.2 Organize & Plan Inventory

1. General principle:
    - in contrast to a full physical stock-take, the activity is not stopped during cycle counting, although care should be made to avoid any stock movement on the parts that are being counted;
    - logistic staff should make sure that the regular inventory transactions such as goods receipts, transfer from warehouse to internal needs, are run prior to the start of the cycle count of the day, particularly for the parts scheduled to be inventoried. This will minimize the variances identified during the count.

2. Unit Specific Procedure: next to this generic procedure, a unit specific cycle count procedure needs to be prepared and deployed within the unit which details the tools used, the threshold levels (see below), the specific functions involved…
3. Scheduling:
    - each part number which is planned to be counted according to the ABC scheduling need to be counted by location and the count must be reported in the system as such (it should be strictly forbidden to book the counted parts in a different location than the one where they were counted – it should be therefore forbidden to create or use a specific location to report the counts and/or isolate the differences);
    - A and B parts shall be counted according to the ABC schedule even if a physical stock take has taken place in the previous month or will take place the month after. The only exception is C parts, for which no cycle counting is required during the month prior to a physical stock take;
    - the part number which was the object of the main variance observed on a given cycle counting day shall be rescheduled within the next 5 working days;
    - when a part which was included in the cycle count schedule of a given day could not be counted, its count shall be rescheduled within the next 5 working days.
4. Work blindly. Cycle counting is a "blind" process: counters should not have information prior to the count on expected quantities or quantities indicated in the system.
5. Threshold for investigation: The unit commander should define the threshold at which the variance on counted parts versus the quantities in the system will be recounted and will be the subject to root cause analysis. As a general rule, the threshold should be +/- 5% of the initially reported quantities in the location for A and B parts but can be different according to a value criteria (like for C parts). Recurring deviations can also be part of the threshold definition.

2.2.3 Count the parts

The counting is performed by the warehouse staff.

The count is based on the unit specific procedure which defines the scheduling document used, the manual forms to be used for entering the counted quantities, the specific functions/grades involved within the warehouse staff.

2.2.4 Input data

The counting team should has hand-written down the counted quantities on the relevant voucher and hands over the voucher to another person in charge of keying-in the count in the inventory module. When the data entry is complete, a document listing the counted part numbers must be printed with the following details by storage location: date, location, part number, ABC class, quantities in the system before count, quantities counted, variance in volume and in value, percentage variance. Vouchers / counting sheets used by the counting teams are kept in a folder as a material evidence of the stock take and archived for the defined period (see 2.1.d).

2.2.5 Check discrepancies

Discrepancies can be explained by the following (list not exhaustive):

- mistakes in reception of goods;
- movements not recorded;
- non-quality movements not recorded;
- wrong number of units per packaging;
- wrong inventory correction;
- theft.

In the case of discrepancies identified due to timing issues (goods receipts, transfers from warehouse to consumption) and clearly traced back with proper supporting documents (delivery note, consumption label…), the appropriate transactions (different from inventory adjustments) must be run under the leadership of the head of logistic.

2.2.6 Recount and validate values

Any discrepancy above the threshold should be recounted on the same day, investigated and explained. If the discrepancy is not confirmed, a third count should be performed to confirm the values and the new values (if any) are to be keyed in the system by a person different than the one who performed the count.

2.2.7 Validate the cycle count results by posting them

Once variances are confirmed according to the above checks, the results need to be posted in the system within the same day. See in the matrix below (see 2.2.10) the functions that are allowed to perform this task. It is important that all variances should be booked including the ones below the threshold (which is only a level defined for verification and corrective action purposes) and including the ones within the -/+ 5% rule.

In all cases, the inventory adjustments should be using specific movement codes in order to differentiate them from normal flows such as receipts, issues, etc.

2.2.8 Analyze root cause(s)

Root cause must be analyzed for the variances. For this, the unit will concentrate on variances which are above the threshold defined by the commander.

Corrective actions need to be identified in order to address the root cause of the variance. It should be recommended that inventory basics should be applied.

2.2.9 Report KPIs

The KPIs that should be reported on cycle counts and their frequency are detailed in the KPIs chapter 3 below.

2.2.10 Responsibility Matrix

As a summary, below are the different process steps and responsible persons. The definition of the threshold and the responsible persons must be clearly defined in the military unit cycle count procedure.

Task	Responsible
1. Define method of ABC classification – supported by the ERP, if any	Proposed by Head of Logistic Validated by Unit Commander
2. Organize and Plan inventory	Head of Logistic
Write cycle count procedure	Head of Logistic, approved by Chief Accountant and Unit Commander
Scheduling: determine which references to be counted (supported by the ABC)	Logistic Planner
Definition of threshold level	Unit Commander
3. Count the parts	Warehouse clerk / Logistic Planner
4. Key-in data in the system	Warehouse clerk 2 (*) / Logistic Planner (*) different than the warehouse clerk who performed the count
5. Check discrepancies	Warehouse clerk / Logistic Planner
6. Recount and validate values	Logistic Planner or any person not part of the warehouse staff (**)
7. Confirm cycle count results by posting them in the system (within the same day)	Logistic Planner or any person not part of the warehouse staff, excluding the chief accountant (**)

Task	Responsible
8. Analyze root cause and address them	All
9. Report the KPIs	Head of Logistic & Chief Accountant

(**) The Logistic Planner cannot perform steps 6 and 7. If he/she perfoms step 6, another person will perform step 7. If he/'she does not perform step 6, he/'she can perform step 7.

Table 1

3.Key Performance Indicators

Several KPIs should be reported to measure the inventory accuracy of the military units:

1.Gross inventory accuracy (Total absolute discrepancy / Inventoried stock value).

- captures the final variance identified for each part number;
- takes the absolute value of the variance;
- add all the absolute values.

2.Net inventory accuracy (Total net discrepancy / Inventoried stock value).

- captures the final variance identified for each part number;
- takes the value of the variance;
- add all the variances.

3.Cycle count accuracy (Number of OK references / Number of references inventoried). OK references should be counted as those within the +/-5% tolerance level within each location.

4.Cycle count compliance: Number of parts inventoried / number of planned parts to be inventoried (for cycle counts only, to be reported monthly).

As the cycle count accuracy is a ratio, this means both its denominator and numerator need to be stored in the system where the calculation is made, in order to be able to do a weekly / monthly aggregation.

Recapitulation of application cases of mandatory KPIs:

KPI number above	KPI name	Applies to Cycle count inventories ?	Applies to Physical Stock Takes ?	Frequency of publication
1	Gross inventory accuracy	X	X	Daily / weekly / monthly / 6 months rolling
2	Net inventory accuracy	X	X	Daily / weekly / monthly / 6 months rolling
3	Cycle count accuracy	X		Daily / weekly / monthly / 6 months rolling
4	Cycle count compliance	X		Monthly

Table 2

CONCLUSIONS

As key points to keep in mind is the fact that the fairness/consistency and equity of the stock accuracy and stock management is linked to the strength and robustness of the teams correlated with good processes of internal control. As consequences, I strongly recommend to implement KPIs in military logistic activity, and also the ERP system in order to facilitate the day to day activity and to protect all resources not only logistic.

By implementing KPIs we might took the benefits of better anticipation for senior managers as long as they have better visibility on the logistic processes. Moreover, we keep people motivated to track the unit objectives thru performance review. In the same time we might be concerned about overloading in some logistic functions.

Implementation of ERP system has as advantage the automation of the processes and as consequences data accuracy improvement. In addition the senior managers have the possibility to get data in real time as long as we are eliminating manual processes. Cost efficiency (manpower

reduction) should be considered as an advantage also. A drawback might be higher cost for ERP implementation.

Cycle count methodology thru ABC might be a very good option to have implemented discipline in all logistic area. Furthermore, stock accuracy on daily basis might improve the logistic control and unit budget.

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THE RELATIONSHIP BETWEEN NATO DEFENCE PLANNING AND NATIONAL DEFENCE PLANNING

LTC Laurențiu-Cristian TATU

The purpose of this paper is to provide an overview of the NATO's Defense Planning Process (NDPP), to outline of the Romanian approach regarding the national defense planning and the relationship between NATO and national defense planning processes.

The reason for providing an outline for both processes is that one process influences the other and vice versa. Another rationale is that it could be a huge waste of scarce resources to plan our own defense without being aware of the defense planning endeavors of the organization we belong. Another aspect is the continuous changing strategic environment in which we are planning our defense, both in Allied and national frameworks, which should trigger a better alignment of both processes in order to meet in the most effective and efficient way the strategic goals of all actors involved.

The last part of the paper emphasizes those activities related to NDPP which are undertaken at national level during different phases of NDPP.

As a starting point, it should be highlighted that the Romanian armed forces have undergone dramatic changes in the post-communist era. We have encountered significant downsizing in terms of military forces, we have reoriented our national security strategies and military doctrines to adapt to the post-Cold War strategic environment, and we have achieved essential elements of subordination to democratic political control. However, we must recognize that the legacy of our membership to the Warsaw Pact have had a long-term impact on our society, national security culture, as well as different policies, including defense policy. The adaptation of the national defense mechanisms, inherited from the communist era, posed a great challenge on defense planners.

Since early '90s, Romania was determined to transform its armed forces in order to meet the new strategic environment. The membership to Partnership for Peace (1994) and the Strategic Partnership with USA (1997) were the important events which triggered the initiation of the transformation of our force structure. Then, the membership to NATO (2004) and EU

(2007) were the most important pillars on which we have planned our defense. During this period, we have dramatically adjusted our internal procedures, legislation, and why not, thinking. The cornerstone of our defense planning is the law on defense planning which provides the legal framework in this field. This important instrument, now in its third iteration, evolved over time, in order to meet the trends in this field and to ensure the coordination of our efforts with those of the organizations in which we are members.

It is worth recalling here the North Atlantic Treaty, the foundation act of NATO, which in Article 3 introduces the necessity of both planning processes meant to coordinate the individual and common defense endeavors in order to meet effectively the defense objectives: "In order more effectively to achieve the objectives of this Treaty, the Parties, separately and jointly, by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack"**[1]**.

2. An overview of NATO Defense Planning Process

2.1. The general context

The NATO member states are committed to provide, individually or together, the forces and capabilities needed for NATO to fulfill its security and defense objectives. The NATO Defense Planning Process (NDPP) is the primary tool designed to identify the required capabilities and promote their timely and coherent development by Allies.

An effective defense planning process is crucial to deliver the collective political, military and resource advantages anticipated by Allies. By participating in the NDPP, and without compromising their national sovereignty, member states can harmonize their national defense plans with those of NATO to identify, develop and deliver a reasonable share of the overall capabilities needed by the North-Atlantic Alliance to be able to undertake its full spectrum of missions and operations.

The NDPP is designed to influence national defense planning efforts and identifies and prioritizes NATO's future capability requirements, allocate those requirements to each member state as capability targets, facilitates their implementation and recurrently assesses progress. It provides a framework for the harmonization of national and Alliance defense planning activities aimed at the timely development and delivery of the entire range of capabilities, military and

non-military, necessary to meet the agreed security and defense objectives which are consistent with NATO's Strategic Concept.

The NDPP is a coherent and integrated process in which member states choose to participate to deliver the required capabilities in the short, medium and long term. It supports a capability-based approach but provides sufficient detail to assist participating countries and the Alliance to develop the forces necessary to undertake the full spectrum of NATO missions. Concurrently, it is sufficiently flexible to respond to the needs of both individual Allies and the Alliance, informs and guides national defense plans, provides transparency, promotes multinational approaches and offers opportunities to take advantage of the best practices.

Efforts to enhance the NDPP, by making it more flexible and responsive, continue. The defense planning process evolves continuously. In 2009, initiatives were taken to improve the harmonization of the planning domains and Allies were encouraged to integrate their national defense planning activities to complement NATO efforts. Existing processes were adjusted and then reviewed on a regular basis in view of the changing security environment.

2.2. NDPP phases

The NATO Defense Planning Process consists of the following five main functions or steps which are mainly sequential and cyclical in nature, conducted over a period of four years, although the frequency of the individual functions may vary and the step of facilitating implementation is a continuous activity: 1. establish political guidance; 2. determine requirements; 3. apportion requirements and set targets; 4. facilitate implementation; and 5. Review results **[2]**. The NDPP steps are depicted in Fig. 1.

During *Step 1*, it is developed a single, unified political guidance for defense planning which sets the overall aims and objectives to be met by the Alliance. It convert guidance from higher strategic policy documents, such as the Strategic Concept (the current in place being the 2010 Strategic Concept), in sufficient detail to direct the defense planning efforts of the planning domains in order to determine the capabilities required.

Political guidance aims at defining the number, level, size and nature of the operations the Alliance should be able to conduct in the future which is commonly known as NATO's Level of Ambition (LoA). It also defines the qualitative capability requirements to achieve this LoA.

Hence, it guides the capability development efforts within member states and NATO. It provides the associated priorities and timelines to be used by the planning domains **[2]**.

Political guidance is normally reviewed every four years. The most recent was published in July 2015.

Fig.1: NATO Defense Planning Process Steps

During *Step 2* of NDPP, the Strategic Commands (Allied Command Operations and Allied Command Transformation) and the planning domains, taking into account the guidance provided through the Political Guidance, identify the complete set of capabilities considered necessary to meet the quantitative and qualitative ambitions. NATO's capability requirements (current and future) are consolidated into a single list called the Minimum Capability Requirements (MCR). ACT has the lead in determining the requirements. An important process is in place to determine the required capabilities, namely the Capability Requirement Review. This process is transparent, structured, comprehensive, and traceable and uses analytical tools alongside relevant NATO expert analysis. Subsequently, the Strategic Commands (SCs) conduct a comparison between the MCR and existing and planned national, multinational and NATO owed capabilities potentially available for Allied operations, and identify the resulting shortfalls in required capabilities which prevent NATO from meeting its LoA. This complete set of shortfalls form a subset of the MCR which will be used by the SCs to derive a set of priority shortfall area taking into account the risk associated with each shortfall. This process takes place

every four years. In addition, out-of-cycle activity for particular capabilities can be undertaken in specific circumstances.

During *Step 3*, target setting apportions the Minimum Capability Requirements to Allies (either individually or as part of an agreed multinational undertaking) and NATO entities in the form of capability target packages. The apportionment process follows the principles of fair burden-sharing and reasonable challenge.

The Strategic Commands (with ACT in the lead) develop a capability target package for each Ally consisting of existing and future capabilities, every target having associated priorities and timelines. Capability targets are expressed in capability terms and are flexible enough to allow innovative solutions to be developed.

Once all member states have been consulted, the International Staff takes the lead of the process from the Strategic Commands. Target packages are forwarded to member states with a recommendation of which targets should be removed or retained. Allies evaluate these packages during a series of Multilateral Examinations and agree a capability target package (commonly referred to as Blue Book) for each Ally on the basis of "consensus minus one". This means that a single Ally cannot reject what otherwise would be a unanimous decision on its own capability target package.

Agreed target packages are subsequently forwarded to member states for submission to their defense ministers for adoption. There is also prepared a summary report which includes an assessment of the potential risk and possible impact caused by the removal of targets from packages on meeting the Alliance's Level of Ambition.

Phase 3 of the NDPP ends once the Allied Defense Ministers approve the capability target package of the Alliance, which have been previously validated by the North Atlantic Council in permanent session, and consisting of individual capability target packages for every Ally and the capability target package to be implemented by collective approach ("capability target package for the 29th Ally") **[2]**.

Step 4 of NDPP assists national measures, facilitates multinational initiatives and directs NATO efforts to satisfy agreed capability targets and priorities in a coherent and timely manner. Unlike other steps in the process, this step or function is continuous in nature **[2]**.

Step 5 of NDPP seeks to examine the degree to which NATO's political objectives, ambitions and associated targets have been met and to offer feedback and direction for the next

cycle of the defense planning process. Step 5 provides an overall assessment of the degree to which the Alliance's forces and capabilities are able to meet the political guidance, including the NATO Level of Ambition. It is carried out by a Defense Planning Capability Review which scrutinizes and assesses Allies' defense and financial plans.

Every two years, Allies complete a Defense Planning Capability Survey which seeks data on Allies' national plans and policies, including efforts (national, multinational and collective) to address their capability targets. The survey also request information on the national inventory of military forces and associated capabilities, any potential relevant non-military capabilities available for Allied operations and national financial plans.

Thereafter, assessments for each member state are produced. They compose a comprehensive analysis of national defense plans and capabilities, including force structures and defense priorities. These assessments also include a statement by the Strategic Commands regarding the impact each country's plans have on the ability of ACO to conduct missions. They may also include recommendations which seek to redirect resources from areas where the Alliance has a surfeit of capability, to deficiencies areas.

The assessments are submitted for examination to the Defense Policy and Planning Committee (DPPC) for review and approval during a series of multilateral examinations. In parallel with and based on the Strategic Commands' Suitability and Risk Assessment, the Military Committee develops a Suitability and Risk Assessment. It effectively provides a risk assessment on the military suitability of the plans and the degree of military risk associated with them in relation to political guidance for defense planning.

On the basis of this and the individual assessments, the DPPC prepares a NATO Capabilities Report, highlighting individual and collective progress on capability development as it relates to NATO's Level of Ambition **[2]**.

2.3. Current status and future evolutions

The renewed NDPP was introduced in 2009 and has completed its first cycle. Being aware of the lessons learned from the first cycle and recognizing opportunities for process improvements, Allied Heads of State and Government decided at 2012 Chicago NATO Summit to enhance the NDPP. The enhanced process aims to improving responsiveness (whilst preserving the focus and validity of the military requirement) and high-level visibility (providing

a strategic understanding of the risks associated with uncommitted capability targets). This work is continuing, with improvements being implemented during the second planning cycle which commenced in 2014. The improved process will allow a deeper connection between the NDPP and all existing capability building initiatives, such as Smart Defense (SD), Connected Forces Initiative (CFI) and the Framework Nations Concept (FNC), the desired outcome being an increased accent on multinational solutions to capability requirements. Nevertheless, the enhanced process will address better the medium and long term planning and also an improved way of translating into practice the "fair burden sharing" principle used when it comes to apportion requirements and set targets.

Regarding NDPP enhancement, there are innovative options for capability development along three lines of effort. The first line is concerned with refining the process, focusing on the visibility improvement and clarity of the outputs for the nations, particularly at the senior political level. The second line aims to improve the relevance of products to best support the Alliance and nations in their decision-making processes. The final line relates to a deliberate effort to extend the planning perspective, with a view to enabling the Alliance to be better prepared in the long-term.

3. An overview of the national defense planning process

3.1. The legal framework for national defense planning

Defense planning, essential part of the defense policy, represents a complex of activities and measures that aim to protect and promote national interests, defining and accomplish the Romanian national security objectives in the defense field.

The legal framework for Romania's defense planning is the Defense Planning Law no. 203/2015. The current Defense Planning Law provides both the insertion of experience gained in the participation in the NATO and EU defense planning processes as well as to facilitate the implementation of the new NATO defense planning process which has been established since 2009, as provided by the Outline Model for a Defense Planning Process.

Promoting this new defense planning law illustrates Romania's political commitment to support increased transparency and coherence of NATO and EU defense planning processes, as well as the strengthening the cooperation and coordination in capability development between

the two organizations, given that those countries which are members of both organizations have one single pool of forces available and committed to both of them.

The new defense planning law advocates for the defense planning process efficiency, based on capability development, aiming integration of NATO's defense planning domains and its coherence with NATO and EU defense planning processes, and taking into account the provisions of NATO's Strategic Concept and Political Guidance, as well as, the Capability Development Plan of the European Union **[3]**.

Being aware of the necessity to adapt our defense planning legal framework, the MoND started the process of development of a new bill, in early 2010, immediately after the adoption of the Outline Model for a Defence Planning Process, the document which describes the new NDPP. Even though, the process of drafting the new law was slowed down by factors external to MoND, in 2015, when the new law entered into force, it provided significant amendments in several areas. In line with NATO terminology, a "capability" was defined as being "the ability to perform the actions required in order to achieve desired objectives. The establishment of a capability takes into account a group of actions and measures in a broad perspective including doctrine, organization, training, materiel, leadership, facilities, personnel and interoperability elements" **[2]**.

Another aspect is that Romania's commitments to NATO and EU may involve civilian capabilities, which most likely will exceed the Armed Forces' capabilities and legal responsibility. The new legislation addresses this issue by creating the legal framework for non-military capabilities development, by government bodies other than the Ministry of National Defense, which can nevertheless provide assistance.

This new law envisages a more effective management, by refining the content of the Defense Planning Guidance (the departmental planning document establishing the general objectives and priorities of the Ministry of National Defense, specific objectives and directions for planning domains, specific objectives and capabilities for all MoND Major Programs and the budgetary layout). MoND Major Programs are better defined; their directors' responsibility is restated based on experience gained in the last decade. The timetable for both national and department level planning documents is now aligned to the amended national fiscal and budgetary legislation. Concurrently, a more effective informing of high level senior defense decision makers is foreseen through the implementation of an annual report to the Supreme

Council of National Defense on the level of implementation of MoND objectives and NATO commitments. In my individual opinion, this is the most important new provision of the defense planning law because it raises the matter of defense planning to a higher level, increasing the awareness on this field of senior defense decision makers.

For a clearer picture, it is worth mentioning that there are other laws which influence the national defense planning. One of them is the Public Finance Law no. 500/2002 which establishes the procedures of building, management, use and control of the public financial resources. These procedures are related to the time-frame, responsibilities and authorities involved in public finance administration. Simultaneously, it establishes the legal framework for budget construction on programs **[4]**.

Another important law is represented by the Annual Budget Law which yearly approves the budgetary credits broken down on budgetary chapters and budget holders.

A third important law, the Law no. 346/2006 on the organization and functioning of the MoND, ascertains that the Department for defense policy and planning ensures the defense integrated planning **[5]**.

The defense integrated planning is the main process designed to transform and modernize the defense field and comprises all the programs, actions and measures initiated by Romania to identify, develop and prepare military and non-military capabilities required to accomplish the defense missions and objectives in order to accomplish the obligations that arise from Constitution and law, accomplish Romania's obligations within NATO, related to collective security and defense, guarantee the Romania's participation to European Union Common Security and Defense Policy and to fulfill the commitments in the defense field, regarding international cooperation with other nations, within international organizations or in other situations regulated by international law.

To accomplish its commitments, Romania develops and maintains an unique set of capabilities which imply the existence of an integrated defense planning mechanism – the planning, programming, budgeting and evaluation system.

3.2. National defense planning documents

The Romanian defense policy is based on the national level defense planning documents, which are the National Defense Strategy and the Government Program. Based on the provisions

of the national level defense planning documents, subsequently, the departmental level planning documents are issued (the White Paper of Defense, the Military Strategy, the Defense Planning Guidance, the MoND Major Programs and the Annual Plans). In accordance with these documents, and following the procedures established in the Defense Planning Law, the Ministry of National Defense (MoND) sets out its major programs and priorities in the Defense Planning Guidance (DPG) which is updated annually. The national defense planning documents and their succession is presented in Fig. 2.

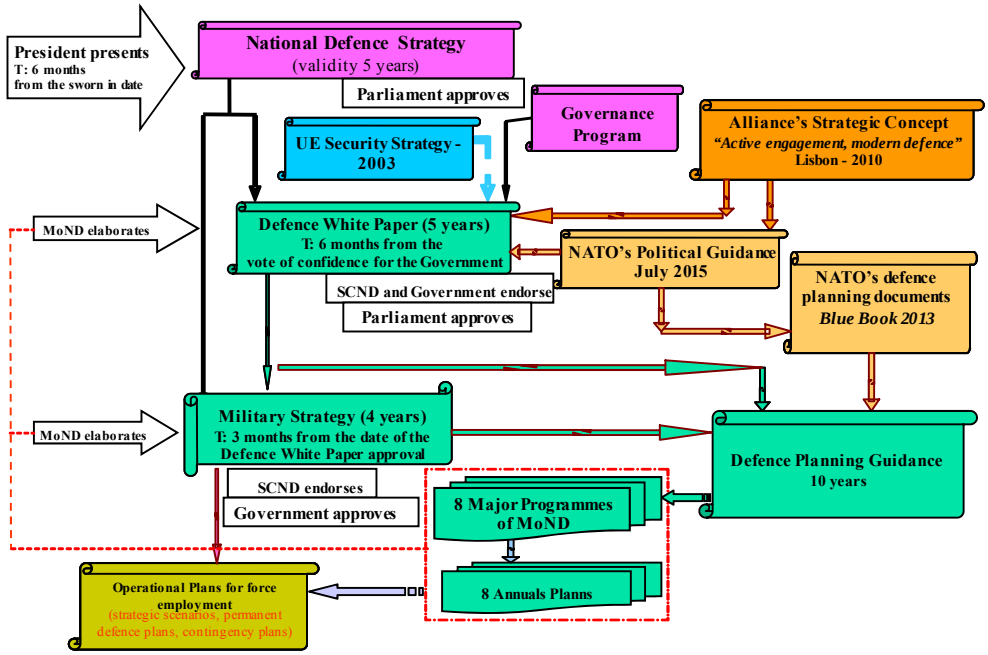

Fig. 2: The national defense planning documents and their succession.

The most recent National Defense Strategy was issued in 2015 and it substantiates the defense planning at national level. It sets the national values, interests and security objectives, provides an evaluation of the international security environment and identifies the potential risks, threats and vulnerabilities. It also establishes the defense strategic objectives and priorities and sets directions to guarantee Romanian national security in the defense field. It is issued by the president, it is presented to Parliament within 6 months from the sworn in date and approved by the Parliament in plenary session. It covers the medium term (5 years), being aligned with the presidential mandate, but also contains long term provisions.

The Government Program, the current one issued for the timeframe 2013-2016, enshrines the Romanian Government defense policy during its mandate. It settles the ways of action in the defense field.

The Defense White Paper's goal is to accomplish the National Defense Strategy provisions and to fulfill the defense objectives established by the Government Program and in accordance with NATO's Strategic Concept. This important planning document establishes the defense policy objectives and directions to fulfill them, provides specific tasks and requirements for the Romanian Armed Forces, and directs the capabilities development process. It also provides an integrated defense resources management policy and sets a strategic expenditure profile. It covers the medium term (4 years), being aligned with the governmental mandate, but also contains long term provisions. It is developed by the MoND, endorsed by the Supreme Council for National Defense and it is presented for Parliament approval within 6 from the vote of confidence granted to the Government.

According to Law no. 203/2015, a new Defense White Paper could be issued in another circumstance, specifically when a new National Defense Strategy enters in force. Following provisions of the 2015 National Defense Strategy, and taking into account the current security environment, the MoND issued a new Defense White Paper which has been sent for Government endorsement in the third quarter of 2015.

The National Military Strategy aims to set up the operational concepts, objectives and options to be carried out by military means and specific actions in order to fulfill the defense policy objectives. Concurrently, it establishes the Romanian Armed Forces missions and settles the probable military risks and threats, the national military objectives, the defense capabilities and their priorities. In the same time, it provides the force structure and guidelines the Armed Forces composition, configuration, training and endowment. It is developed by the MoND based on the National Defense Strategy, Defense White Paper and NATO and EU relevant documents provisions, and it is approved by the Government within 3 months from the Defense White Paper date of approval.

The Defense Planning Guidance represents the main departmental defense planning document aiming to develop and maintain the necessary capabilities in order to accomplish the defense policy objectives. The Defense Planning Guidance establishes the MoND general objectives and priorities and the specific objectives and directions for the defense planning

domains. It also enshrines the major programs, their managers and their structure, the specific objectives and capabilities for each major program, the dynamics of the capability development, the training and readiness associated tasks, as well as the specific stipulation and resources to enable each major program to accomplish its objectives, within an integrated offered the planning, programming, budgeting and evaluation system, operational since 2002. It covers a 10 year timeframe and is updated annually by the MoND, based on the provisions of Defense White Paper, Military Strategy and relevant NATO and EU documents. According to Law no. 346/2006, it is issued by the Department for defense policy and planning and, after consulting General Staff and Major Programs, it is endorsed by the state secretary for defense policy and planning. Subsequently, it is debated and adopted by the Defense Planning Council within its decision, and approved by national defense minister by order.

Based on the Defense Planning Guidance provisions the MoND's major programs are developed in order to develop and maintain those capabilities needed to meet the defense planning objectives. They cover a 10 year time-frame and are annually updated by the program managers' specialized structures, based on the Defense Planning Guidance. The MoND's major programs consist of all actions and measures undertaken to modernize, endow, train, deploy and sustain the assigned missions during peacetime, crisis, siege and war. They also encompasses those actions and measures undertaken to guarantee personnel's welfare, logistic support and stocks, to create and maintain the needed infrastructure for military operations within NATO or other cooperative environment. The last, but not the least, they provide the resources annually allotted to carry out the actions and measures mentioned above. Currently, within MoND, there are eight major programs, three for the Services (Land, Air and Navy) and five for support and auxiliary (Logistic Support, General Staff/Strategic Command, Central Administration, Defense Intelligence and International Representation).

Annual plans are issued by the major programs managers based on that specific major program provisions for the first year of the program, the budget allocated for that year and the budget execution for the previous year.

3.3. The main MoND stakeholders involved in defense planning

In order to ensure a prolific integrated defense planning process, besides national bodies involved in defense planning mentioned in Section 2, almost all central structure of the MoND and especially the program managers are deeply involved all defense planning activities.

The Defense Planning Council is the senior decision-making body appointed to adopt all strategic decisions related to defense planning. It is chair by the minister of national defense and includes the state secretary for defense policy and planning, the state secretary for relations with the Parliament and public information, the state secretary for armaments, the secretary general of the Ministry of National Defense, the chief of the General Staff, the director general of General Defense Intelligence Directorate, the director of the General Staff, the head of Legislation and Legal Assistance Directorate, the chief of Land Force, the chief of the Air Force, the chief of Navy, the Joint Logistics Command commander, the head of the Defense International Cooperation Directorate, the head of the Financial – Accounting Directorate, the head of the Human Resources Management Directorate and the head of the Internal Audit Directorate.

However, given the responsibilities and composition of the Defense Planning Council, within this body are addressed specific issues arising from different defense planning domains, and are taken decisions impacting the entire system of defense planning at national level.

3.4. Current evolutions in national defense planning

I venture to assert that a first positive outcome of the new law on defense planning, namely the senior decision makers involvement, was observed so far. In the light of the 2014 Wales Summit declaration on resource allocation which provides that each NATO nation should devote 2% of their gross domestic product to defense, from which 20% should be allocated for procurement and associated research and development, in January 2015, a political agreement was signed by all Romanian parliamentary parties in order to reach NATO's benchmark of 2% of GDP by 2017 and maintaining this level for a decade. This political commitment is crucial to ensure predictability for the Armed Forces modernization policy and also a pledge to respect our commitments within NATO, regardless the commissioned Government.

Furthermore, in order to better cope with the current and mid-term resource challenges and taking into account the instability and unpredictability of the Allied Eastern flank security environment and the emerging threats, in order to establish a balanced defense organization, as a

result of Russia's aggression against Ukraine, the MoND developed the "Program on the transformation and modernization of the Romanian Armed Forces until 2027 and beyond", which has been endorsed by the Supreme Council for National Defense in June 2015. The goal of this program is to enhance the operational capability of the Romanian Armed Forces and is based on resources provided by the above mentioned political agreement.

In accordance with the above mentioned program, very ambitious goals were set for the future Romanian Armed Forces. I am personally convinced that these important and striving goals will be met only in the presence of the most senior political commitment in the defense planning field which should be correlated with an increased awareness, involvement and proven responsibility of the defense planners, especially from the major MoND programs specialized structures, including their program managers.

4. Correlation between NDPP and national defense planning

4.1. National activities undertaken during Step 1

In this phase, Romania, along with other allies, participates in the development process of the Political Guidance by submitting national perspectives on the content of the document and support national viewpoints in all discussions taking place in different fora, both at expert and decision level, consultations having as main objective to reach the consensus on the final document.

4.2. National activities undertaken during Step 2

During this phase, Romania delegate experts from the Ministry of National Defense to participate in a series of workshops meant to provide transparency for member nations over the requirements identification process, the modalities used to determine the necessary capabilities needed to meet the Allied Level of Ambition and the ways used to determine the deficits.

4.3. National activities undertaken during Step 3

During this phase, member states, including Romania, delegate representatives to participate in some workshops designed to apportion the capability requirements. Within these workshops, the endeavors of the Defense Planning Staff Team are focused to match the

identified needs with the existing capabilities in Allied inventories, addressing initially only the quantitative aspects and subsequently both quantitative and qualitative aspects. In the same time, it should be completed the distribution of capability requirements which will be consequently incorporated into draft capability packages proposals and addressed to Allies in order to determine the level of acceptance and national position for each target proposal.

Following receiving the draft capability targets package for Romania through the Permanent Representative of Romania to NATO, the Ministry of National Defense (in cooperation with other ministries in the case of targets whose implementation exceeds the jurisdiction of the Ministry of National Defense) develops Romania's national position on the acceptance and implementation modalities. The national position is then submitted to NATO's authorities and is subject to discussion and consultation during a bilateral meeting. In this meeting, NATO authorities may provide further clarification on the requirements at the request of Romanian representatives and the Romanian experts can provide further explanation of the national position.

Also, during this phase, Romania participate, both as an evaluated member state (with a team of experts from capital) and as a member state (with representatives from the Permanent Delegation of Romania to NATO) in multilateral meetings in format "28 minus 1" meant to agree the final capability target packages for every Ally. These meetings are designed to discuss all member states' positions and their level of acceptance for their specific capability target package, by applying the principle of reasonable challenge, aiming that the Alliance's needed capabilities to be covered by the commitments undertaken by Member States through capability targets.

4.4. National activities undertaken during Step 4

In this phase, which is the only one continuous activity within the NATO Defense Planning Process, Romania develops implementation plans for those capability targets which have been pledged to NATO during Step 3 and initiate their implementation through the major programs of the Ministry of National Defense.

Our commitments to NATO could be implemented either solely in national framework or in multinational, joint or collective approach inside NATO.

In my opinion, Step 4 is the cornerstone of the entire process, when plans and commitments should become reality. The most important bodies and actors in this stage are the MoND's major programs and their managers, alongside senior decision makers. Any pledge to NATO or other national activities subscribed to national defense are implemented through the MoND's major programs.

In order to have an effective planning, programming, budgeting and evaluation system, all pledges to NATO should be accurately considered in each phase of this system. Hence, we should have stated a clear strategic vision emphasizing our commitment to meet NATO capability targets in the defense planning documents both at national and departmental level, documents issued in the planning stage. Secondly, an important emphasis should be provided in the programming phase, when the major programs are developed based on the provision of defense planning documents. Another important step, the budgeting, should follow the same reasoning, providing the necessary financial resources needed to meet the agreed targets. Finally, the results of the process should be carefully analyzed in order to measure the effectiveness of all defense activities and to deliver an accurate feed-back to the next iteration of the process.

4.5. National activities undertaken during Step 5

Following receiving the Defense Planning Capability Survey issued by NATO's authorities, Romania, through the Ministry of National Defense, develop and submit to NATO's Defense Planning Staff Team the national response to DPCS. Through its answer to this questionnaire, Romania provides NATO authorities with information on national particularities and national priorities, forces and capabilities available and committed to NATO, including participation in current operations and NATO Response Force, and its national plans to meet the agreed capability targets undertaken and also information on the resources available for their implementation.

Subsequently, representatives of the Ministry of National Defense, upon the request of NATO's authorities, answers to a series of questions to clear up any questions emerged after analysis of the Romanian response to DPCS. Then, a preliminary assessment for Romania is produced by the Defense Planning Staff Team based on the national response to DPCS. This assessment is then analyzed during a bilateral meeting in Bucharest and agreed in a multilateral meeting in Brussels.

CONCLUSIONS

To sum up, today's NDPP provides the nations with a robust planning mechanism within a very complex strategic environment. It should be mentioned that Romania has been a stronger supporter of the new NATO Defense Planning Process and its subsequent enhancement, meant to make it more transparent, coherent and effective, as being the primary defense planning tool which facilitates the alignment of national defense plans with Allied ones, in order to meet the common objectives of all parties involved.

Romania also supports an increased transparency, coherence and harmonization to the maximum extent of NDPP with the similar EU process, as well as strengthening the cooperation and coordination in capability development between the two organizations, this bearing in mind that those countries which are member of both organizations have a single set of forces available for them.

Nevertheless, the planning, programming, budgeting and evaluation system, used properly by adequate specialists and decision makers, will facilitate an effective management of the integrated defense planning process not only in order to accomplish our commitments in different fora, but also to transform and modernize the defense field in order to develop and maintain military and non-military capabilities required to accomplish the defense missions and objectives that arise from Constitution.

REFERENCES

[1] – The North Atlantic Organization Treaty, Washington D.C., 4 April 1949;
[2] – PO(2009)0042 - Outline Model for a Defence Planning Process;
[3] – The Law no. 203/2015 on Defense Planning;
[4] – The Law no. 500/2002 on Public Finance;
[5] – The Law no. 346/2006 on the organization and functioning of the MoND.