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# Tunisia's Security Concerns

BESENYŐ János,<sup>1</sup> PRANTNER Zoltán<sup>2</sup>

*Ansar al-Sharia, established in April 2011, is the most prominent Salafist jihadist organization in Tunisia. At the beginning the movement, which sympathizes with the ideology of al-Qaeda, focused its attention on humanitarian and missionary works. Later it did not balk at using violence to enforce religious norms. The conflict between the Ennahda Government and the organization culminated between May and July, 2013. At the end of August the Government finally designated Ansar al-Sharia a terrorist-organization. According official reports, the organization is responsible for planning several unsuccessful attacks during the intervening months. Additionally, Okba bin Nafaa, the military wing of Ansar al-Sharia, has been fighting an open war with the Tunisian Army in the Algerian border region since December 2012.*

**Keywords:** *Ansar al-Sharia, Tunisia, salafist, Jihad, Ennahda, Okba bin Nafaa Brigada, Arab Spring, Ben Ali, dawa, Al-Qaeda, Islamist*

## Introduction

The Salafist jihadist movements have been strengthened significantly in Tunisia after the 2011 Arab Spring. The Ansar al-Sharia (AST), the most prominent local organization, came into existence after three months of the collapse of Ben Ali's regime. The movement, which has unreservedly sympathized with the ideology of the international al-Qaeda terror-organization, emphasized works of mercy and *dawa* (missionary activity) since the beginning. It has taken full advantage of the critical economic conditions of the country and the social tensions that originated from the previous situation. It has not flinched away from using the *hisba*, the enforcement of Islamic doctrines with violence, to achieve its purpose. The conflict between the Ennahda majority government and the organization culminated in the May through July, 2013 period. Finally, at the end of August that year the cabinet declared the Ansar as-Sharia a terrorist organization. According to government sources, the organization has attempted a number of attacks since then. The Okba Ibn Nafaa Brigade, the military wing of the organization, has waged open war on the Tunisian Army in the Algerian border region.

## The Establishment of Ansar Al-Sharia

The Salafist Ansar al-Sharia (Partisans of Islamic Law) was set up in late April, 2011 by Abu Iyad al-Tunisi (also known as Seifallah Ben Hassine) in Soukra, one of the suburbs of Tunis.

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Previously, the founder was one of the Tunisian activists of al-Qaeda in Afghanistan. He was released in an amnesty, like his other Islamist companions.<sup>3</sup>

From the beginning its openly declared aim was to provide those services, that according to its point of view, the government was incapable of providing. The exact structure of the organization was unknown until now. We only know that it is a hybrid organization, consisting of a network of small, local groups in an overall pyramidal structure. According to the available information, the groups average 20 members and enjoy considerable autonomy. It is also common knowledge that the organization has divided the country into three districts (northern, central and southern) in the interests of effective district direction. [1] Only a smaller group of the core leaders has been named publicly beside Abu Iyad (eg. Hassan Ben Brik, the leader of the Dawa Committee, Ahmed al-Akrami, the coordinator of the medical and humanitarian activities of the organization or Sayf al-Din Ben Rayes, who produced the statements and sermons of the group). Supposedly, they are assisted by several individuals in the background. These individuals, who had military experience (eg. Tarek Maaroufi, Sami bin Khamis Essid or Mehdi Kammoun) were subsequently linked to Ansar al-Sharia's violent activities. [2: 10]

There has been no reliable information about the exact size of the organization, because membership figures were regularly underestimated by the governmental authorities and overestimated by its supporters.<sup>4</sup> The first adherents came mainly from the working-class in Bab al-Khadra as well as al-Kambes and Malik bin Anas Mosques. The popularity of the AST grew dynamically, due to its intensive campaign and religious activities in the local mosques. In a short while, mainly desperate youths who were disappointed in the revolution and the regime became the base of the AST (this was contrary to the other Salafist political movements, the Jabhat al-Islah, whose supporters came primarily from a more mature age-group). [4] From the beginning the organization emphasized the importance of propaganda to pass its message to a wide audience. It established the al-Qayrawan Media Foundation (QMF) on April 27, 2011 to popularize its ideology and activities. It ran its own blog and created Facebook pages, and it regularly published in various press forums. The propaganda activity of the AST increased the number of its adherents in Tunisia, and it has attracted the attention of Arab readers of the two most popular online jihadist forums, the Ansar al-Mujahidin and the al-Jahad al-Alami.

Officially it covered its expenses from donations that mainly Tunisian locals offered in the mosques during the Friday sermons. However, it was clear that the funds thus collected were not enough to defray the costs of the organization's various humanitarian activities. Therefore there could be no doubt that its works of mercy were also sponsored by prominent foreign – mainly Saudi and Kuwaiti – foundations. Beside the activity on behalf of the community, it made an intensive campaign to demand the release of such Islamist prisoners as the blind Sheikh Omar Abdul Rahman, the religious leader of the Egyptian al-Gamaa al-Islami-

3 The Tunisian Combat Group was co-founded by Abu Iyad and Tarek Maaroufi in June, 2000. The organization trained volunteers in Afghanistan, forged documents and passed activists from Europe to Afghanistan. Later it was linked to the assassination of Ahmad Shah Massoud, the leader of the Afghan Northern Alliance, on September 9, 2011. The United States designated the group a foreign terrorist organization on December 20, 2004. Abu Iyad was imprisoned by the Tunisian authorities in 2003 and he was released after the Jasmine Revolution.

4 One of the AST's activists estimated the number of members between 90 and 100 individuals in March 2013, which we can accept only with considerable skepticism. [3]

yah or Abu Qatada al-Filistini, the spiritual leader of al-Qaeda in Europe. In addition, it held peaceful sit-ins on several occasions outside the Iraqi embassy in Tunis on behalf of Tunisian activist of al-Qaeda, who were imprisoned in Iraq during 2005–2007. It also demonstrated in front of the Tunisian Ministry of Foreign Affairs, where it demanded that the government intervene in their case. [4] The name of the organization itself shows that the main objective of the Ansar al-Sharia is to strongly promote the application of the sharia in everyday life. The ideas of AST about the new Tunisia were clearly manifested during the nationwide conference in Kairouan on May 20, 2012. On this occasion Abu Iyad urged the reform of the media, tourism and commercial sectors in accordance with Islamic principles. He also felt it necessary to create an Islamic trade union to counteract the powerful and secularist Tunisian General Labour Union. [6]

## The Ideology of Ansar Al-Sharia

There is no doubt that Ansar al-Sharia was strongly influenced by the world-view of al-Qaeda. It supported unreservedly the global jihad ideology of the international terrorist organization. It also posted on its forums the views of Ayman al-Zawahiri and his prominent adherents on several occasions.<sup>5</sup> Despite this ideological affinity, in the beginning the group concentrated primarily on recruiting local volunteers and on its missionary activities (*dawa*). According to their opinion, Habib Bourguiba and Ben Ali established and ruled a profane state that favored secularism and downplayed Islam. Therefore AST considered it its main duty to return to the right way and to enforce strongly Islamic values in everyday life. The long-term aim of the organization was to re-establish the Islamic Caliphate. To achieve that goal, it was ready to cooperate with any organization that had similar ideas.

The Ansar al-Sharia emphasized several times that its aim was not to acquire state power. In contrast to the Egyptian Salafist parties it did not want to participate in internal politics so it did not set up its own legal party. It condemned the state and democracy and in the distributed pamphlets it pronounced the participation in political life a polytheist act. It encouraged fellow Islamists to absent themselves from elections and it warned the participants that they would regret their actions on the Day of Resurrection, because they infringed on God's sovereignty. In addition, AST regularly posted fatwas and videos from popular Salafi jihadist sheiks arguing against democracy, in order to discourage potential voters from voting.<sup>6</sup>

Another important aspect in which it differed from the international terrorist organizations was that although it adhered to the radical interpretation of Islam, it rejected violent jihad in Tunisia. This attitude was not due to the weakness of Salafi jihadist tendencies that had not been able to gain strength earlier in Tunisia. The main reason was that the government had not encouraged the emigration of undesirable persons during the Ben Ali regime. Therefore

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- 5 For example, in a statement AST congratulated the Afghan Taliban, the Islamic State of Iraq, the Caucasus Emirate, the Islamic Maghreb Emirate and the Somali comrades in November 2011. In addition, the group asked God to give victory to the mujahedin, raise the word of Islam, bring together the Muslims and annihilate such enemies of Islam as the Jews, Christians, atheists and apostates.
  - 6 For example, Sheikh Abu al-Mundhir al-Shinqiti's proclamation, which emphasized the un-Islamic character of democratic elections, received great publicity. Another fatwa of the Sheikh against Ennahda also received prominent place on the forums of the organization. In this he characterized the program of the Islamist party as a violation of monotheism, described its secretary-general, Rachid Ghannouchi and his colleagues as heretics and declared the position of the party on jihad, dhimmis, infidels, women and music as a "pollution" of Islam.

the volunteers returning from Afghanistan after the Soviet withdrawal did not carry out such violent acts like their Egyptian, Algerian or Libyan fellows did during the 1990's. [7] It must also be noted in connection with this statement of non-violence that Ansar al-Sharia only rejected an open fight with external enemies of Islam in Tunisia. This must be noted, because the main aims of the organization were missionary activities and the so-called *hisba* – the avoidance of forthcoming wrong; in practice this means the enforcement of religious norms in the Muslim community. According to Ansar al-Sharia's interpretation this entitled them to attack those individuals and institutions that violated those norms.<sup>7</sup>

Non-violent *dawa* at home did not keep Abu Iyad from supporting violent jihad in foreign countries. In an interview in March 2012 he considered legal the struggle in Iraq after the American withdrawal, and that struggle also should have been extended to Iran. For this reason he created a dual strategy in the interest of maintaining non-violence and alleviating tensions in Tunisia. He offered his followers an opportunity to decide whether they wanted to do peaceful missionary works at home, or fight abroad. Those who wanted to fight were sent to Syria, Libya or Mali.<sup>8</sup> At home he consistently endeavored to promote true Islamic morals mainly through verbal persuasion and exemplary behavior among the people. In this regard he shared Sheikh Abu Mohammad al-Maqdisi's thoughts. According to the Palestinian writer with Jordanian citizenship, jihad meant a non-violent aspiration to realize a life style in accorded with Islam. He did not want to persuade the community through the destruction of enemies, but rather through education and missionary works. Other influential theorists of the movement are Sheikh al-Khatib al-Idrisi, who is one of the most prominent Salafi clerics in Tunisia, the imprisoned Abu Qatada al-Filistini, the Syrian Abu Basir Tartusi, Anwar al-Awlaki, who was killed in the end of September, 2011, or Hani Sabahi. [1] The group also reveres Yosri bin Fakher Trigui (also known as Abu Qudama al-Tunisi), who was arrested in Iraq in 2006 and executed in November 2011 for his participation in the bombing of the Shiite tombs at Marqad al-Imamayn Houssin and Hadi al-Askari. AST considered Trigui an illustrious martyr of the movement the equivalent of Osama bin Laden or Abu Musab al-Zarqawi. More than a thousand members of the Ansar al-Sharia carried banners and placards with Islamic slogans at his funeral. [11]

In practice the organization's goal was to offer concrete choices in accordance with Islam for everyday challenges and tribulations. For example AST often organized presentations for winning hearts and minds. During these events notable Tunisian scholars popularized the idea of returning to Islamic values. In addition, during the weekly market it regularly distributed among the people the works of Salafist literature; the activists cleaned the streets as a service to the public; they nursed elder locals in their home, and performed humanitarian work in the refugee camps as well as in the region afflicted by natural disasters. The organization helped those in need with donations of food, medicine and clothes in the backward rural

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7 The first targets of *hisba* were women. Shortly after the revolution, the enraged mobs set brothels on fire in Kairouan, Médenine, Sfax and Sousse. During these attacks the prostitutes were seriously beaten. Later there were frequent cases of women walking in public being attacked, because their clothes were found objectionable according activists' judgment. [8: 4] [9]

8 In the interview with al-Sabah Abu Iyad claimed that there was a sizeable group of young men beside him who wanted to travel to Syria to fight in the jihad. According to Aaron Zelin's research, one year later the number of the Tunisian volunteers was between 150 and 300. In February 2013 alone 26 of them lost their lives. Two months later Tunisian Foreign Minister Othmane Jarandi stated that the Tunisian volunteers who were fighting in Islamist rebel ranks in Syria numbered some 800. Also a local radio station announced that 132 Tunisian fighters were killed during the fighting in and around the city of Aleppo in February alone. [10] [7] [3]

areas that had previously been neglected by the government. AST took maximum advantage of the opportunities of the modern age to form a wide support base. This is why AST continuously reported its activities on the internet and illustrated them with photos. At the same time it also reviewed the events and new issues about various jihadists, supplementing their Facebook pages. [3]

## Warning Signs

There were many warning signs from 2011 that the Salafists were prepared to enforce their Islamist mindset and rebuild the state according to their own design as soon as possible, despite their professions of non-violence on several occasions. The first serious conflict between the government and Ansar al-Sharia occurred on June 26, 2011, when the Tunisian film “No God, No Master” was presented. Like other Islamist organizations, Ansar al-Sharia declared the film apostate. Several dozen activists demonstrated on Habib Bourghiba Avenue against the work that outspokenly criticized political Islam. The demonstrators trooped to the Afric’Art Theater, where the film was being screened. They broke into the building, assaulted the manager of the establishment and destroyed the projection equipment. The police arrested seven individuals after they arrived at the scene. Two days later about 100 Salafist demanded the release of the detainees in front of the Justice Ministry. There was a verbal exchange between the protesters and five lawyers and the latter ones were attacked. One lawyer was so severely beaten that he had to be hospitalized. After the incident the interim government determined to crack down on Islamists and arrested 26 persons, among them several members of Ansar al-Sharia. [12] [13]

Some three months later, as the date of the National Assembly elections was approaching, tempers flared up again due to another film. This time the cause was the Oscar-nominated film *Persepolis*. As a matter of fact, the animated work showed the Iranian revolution through the eyes of a young girl. Abu Iyad especially disapproved of that scene, when God appeared in human form to teach the hero about forgiveness. He incited his fellows against the Nessma private television channel after it had broadcast the film on October 7, 2011. The next day the Islamists tried to set fire to the TV station and the channel owner’s home was raided. [14]

By this time the demonstrations in the capital were usually organized on behalf of women wearing niqabs (which covers the whole body) on university campuses. The protesters attacked with sticks, stones and knives, the riot police tried to disperse them with tear-gas. The street disturbances soon reached the universities as well. The Salafist activists attacked secular minded students and a little group of undergraduates led by Mohamed Bakti practically kept Habib Kazdaghli, the dean of Manouba University as hostage in his own office for weeks, in order to force him to give permission to wear the niqab in classrooms and during examinations. [15] [16] The influence of religious extremism was clearly and alarmingly manifested on March 16, 2012. Thousands of Islamist protesters under al-Qaeda’s signature black banner demonstrated in front of the Constituent National Assembly building in Tunis, demanding the acknowledgement of sharia as the fundamental source of law in the future constitution. [17] The flag appeared again nine days later in downtown Tunis during the demonstration organized by Ansar al-Sharia to glorify the Koran. The demonstrators flew one from the clock tower near one of the busiest crossroad of the capital and demanded the establishment of a new caliphate. The demonstration started peacefully, but violence occurred on

this occasion, too. This time the participants interrupted a performance in front of a theater, and attacked and maltreated the members of the company. [18]

In La Marsa, one of Tunis's suburbs, other disturbances broke out on account of an art exhibition on June 12, 2012. This time Ansar al-Sharia and Salafists were angered mainly by three pictures: one caricatured Mecca, the other portrayed a nude woman and on the third one the artist had spelled out the word "Allah" with strings of ants. Tempers got out of control after the assault on the gallery. Thousands of protesters set alight the offices of the country's main labour union in Jendouba, torched a local court in west Tunis and threw rocks and Molotov cocktails at several police stations. The police again tried to disperse the crowd using tear-gas. By the end of the riots 65 members of the security forces were wounded and 162 people had been detained. [19] [20]

The turning-point with long-term consequences occurred on September 14. The demonstrations began after Friday prayers on account of a film which portrayed the Prophet Mohammad engaged in vulgar and offensive behavior. The disturbances quickly spread throughout the capital when Ansar al-Sharia endorsed the rallying call on Facebook by Islamist activists. The protesters marched to the U.S. embassy in Tunis with sticks, stones and petrol bombs where they forced their way into the building and started systematically plundering it. Some individuals pulled down the U.S. flag flying over the embassy, burned it, and replaced it with the black flag of Islam, while others carried off the valuables. Luckily no one from the embassy staff was hurt, due to the quick arrival of riot police, although at first the attackers resolutely stood on the defensive. Their resistance ended when the police started using live ammunition. The protesters tried to leave the place quickly after they smashed windows and attempted to set fire to several rooms. During this time, others broke into the nearby American School. They set fire to that building as well, after they took away some laptops and computers. On this occasion the clashes resulted in fatalities, and at least 29 people were injured and two lost their lives. The Libyan authorities subsequently linked the events with the attack against a U.S. embassy facility that occurred three days earlier in Benghazi. According to their suspicions, the Libyan branch of Ansar al-Sharia was the mastermind behind the disturbances that resulted in the death of ambassador Christopher Stevens and three other American citizens. [21]

The assassination of the well-known leftist-secular Chokri Belaid on February 6, 2013 was another example of declining public security throughout the country. The opposition leader's death caused disturbances, which were used by some as a cover for looting. Although the police arrested the majority of these individuals in short time, Ansar al-Sharia considered this the opportune moment to mobilize its private army, the so-called Neighborhood Committees.<sup>9</sup> At AST's call to action, its adherents appeared within a few hours both in big cities and in smaller villages, which clearly illustrated the effectiveness of the organization. The activists patrolled on streets in 10–50 member groups waving al-Qaeda's black flag, and administered summary justice arbitrarily against anyone whose behavior they regarded substandard. Although the crisis passed with a few scuffles and the arrest of a thief, the patrols' presence made a big impression on locals who were disappointed with the cabinet's

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9 The Neighborhood Committees were set up on October 06, 2012 in order to fill the security vacuum and protect inhabitants in case public security was to decline within the country. Originally this private organization, which could be considered a de facto non-state controlled martial law force, was to be activated on the first anniversary of October 23 2011 Constituent Assembly Election. Public security was not compromised when the date came, so the committees were not called out.

policy. This, together with social activity for the public welfare showed explicitly that AST would soon form a separate state within the Tunisian state. Ennahda had to do something, because co-operation was growing stronger between the party's hard-line elements and AST, due to the concessions to the secularists in the writing of the constitution. [22]

## The Proscription of the Movement

In the beginning the moderate Islamist Ennahda adopted an extremely tolerant policy towards Ansar al-Sharia after winning the National Assembly elections on October 23, 2011. The party made no secret of its hope that co-operation could emerge between them. It took the initiative and suggested a national dialogue with the salafist's. With this step it expected to prevent the radicalization of fundamentalists who posed a dangerous threat with their illegality and commitment to terrorist acts in the long run. However, the positive proposal had little effect on the Jihadist movement, because several members have viewed Ennahda with considerable skepticism from the beginning. Against these positive efforts the first conflict occurred in 2011, when Ennahda formed a coalition with such non-Islamist parties as Congress for the Republic and Ettakol. The situation became more and more critical in 2012. The number of Salafist demonstrations increased on the street where the marchers protested with violent acts against government policy. The tension culminated in December when Salafists attacked alcohol vendors and mobbed a hotel where they caused serious damage to the furniture. At the end of the month the cabinet responded by inviting those Salafist groups that rejected violence to a new dialogue. It emphasized the importance of the gesture, and at the same time it stressed that it was not going to enter into discussions with those who disturb public order and promised serious sanctions against them. [23]

The relation between Ennahda and Ansar al-Sharia worsened, because the movement's ideological affinity to al-Qaeda, as well as its missionary activities soon became suspect. In government circles AST's ability to recruit adherents in such respectable numbers during a short period caused growing anxiety.<sup>10</sup> The program called *Abna'ukum fi Khidmatikum* (Your Sons Are at Your Service) impressed particularly deeply those who were disillusioned by the government's policies. These people, who had been disappointed by the revolution, observed the work of the organization with growing interest. They more and more saw the care in AST that they had previously expected from the government.

As the charity works of the organization became known throughout the country, the government first targeted its propaganda. Its Facebook-profile was banned on 12 occasions between September 2012 and March 2013, with no effect. The movement emerged again and again to inform its adherents continuously. [3] After the attack on the U.S embassy the cabinet was forced to accept the demand of the political opposition, and numerous Jihadists – among them several Ansar al-Sharia members – were detained to restrain extremists. However, it was soon obvious that the show of force did not have the expected results. Instead of deterring the extremists, it only encouraged them. Many imprisoned Salafists began a hunger-strike as a protest against what they considered an injustice. Two of them died in prison in November, so instead of crushing the Islamists, the cabinet unwittingly gave martyrs to their movement. [25]

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<sup>10</sup> It was a clear indication of the organization's fast growing popularity that only a few hundred persons attended the 2011 conference, whereas one year later the participants' number reached 10 000 people. [24]

Despite the growing danger, the government was still wary of open confrontation with Ansar al-Sharia. Whereas several members of the organization participated regularly in demonstrations against blasphemous issues and acts, according to the authorities' suspicions others did more than this and were linked to violent incidents and weapon smuggling in March 2013. However, they could not prove the charges for a long time, and the organization kept up its activities. Then, without any warning, on 10–11 May the security forces cracked down on members of the organization, who were distributing their books and pamphlets on the streets. In his response Abu Iyad obliquely threatened the government that he would give up his peaceful stand and initiate open violent jihad against it. [25] In its reaction the cabinet banned Ansar al-Sharia's imminent annual congress. Tunis justified the ban by the need to prevent incitement for violent attacks against state institutions. The membership of the organization was highly indignant both at the decision and at the explanation. The disaffected AST members clashed openly with security forces in Tunis and Kairouan on May 19. The protesters threw stones and Molotov cocktails at the policemen, set an armored vehicle on fire, attacked a National Guard posts, closed roads, burned a national flag and engaged in looting. The government gave up its tolerant rhetoric once and for all after the clashes that caused at least one protester's death and injured 15 policemen. Prime Minister Ali Larayedh declared Ansar al-Sharia an illegal organization and for the first time he spoke about AST's alleged terrorist ties and activities when he commented on the events. [27] [28]

The opposition politician Mohamed Brahmi's death on July 25, 2013 and the following mass-demonstrations were a turning-point. On 27 August Prime Minister Ali Larayedh announced at a press conference that there was proof that Ansar al-Sharia was the mastermind behind killing Brahmi and Chokri Belaid and held them responsible for the internal crisis.<sup>11</sup> He also blamed them for the October 2011 assault on the Nessma TV station, the action against the contemporary art exhibition in June 2012 as well as the attack on the U.S. embassy and American school in September 2012, when the lives of more than 100 American citizens' were put in danger. Above all, he emphasized that AST had close links with al-Qaeda and al-Qaeda in the Islamic Maghreb.<sup>12</sup> Regarding the murder of the two politicians he added that the murderers were senior leaders of AST and acted with Abu Iyad's knowledge and approval. To justify the terrorist designation, he stated that the organization was part of the international al-Qaeda network which trained its volunteers in Libya and Syria and received financial support from such Arabic countries as Yemen, Libya and Mali.<sup>13</sup> He accused AST of supporting the armed jihadist cell which was active on the Algerian-Tunisian border region and was the target of the army's month-long operation around Mount Chaambi. Next day the Director of Public Security announced that there was evidence that the secret military wing of the organization planned to assassinate 19 public figures.<sup>14</sup>

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11 According police's sources, both assassinations were carried out with the same weapon that they seized during a raid. [29]

12 Prime Minister Ali Larayedh's announcement was based on a handwritten document, an Allegiance Act, between Abu Iyad and al-Qaeda in the Islamic Maghreb leader Abu Musab Abdel Wadoud. [30]

13 Later Ansar al-Sharia was linked to the group that bombed the vehicles of the National Guard in La Goulette in July. The police managed to arrest two of the perpetrators in Marnaguia in September. During the raid the authorities seized many home-made bombs and a considerable quantity of TNT. [31]

14 Later Tunisian government sources estimated that about 16 individuals constituted the military wing of the organization. It included six who prepared the operations, eight people who executed them, and two others responsible for mobilization and for obtaining weapons.

In its response, announced on September 3, the organization denied the charges and stressed its independence and innocence. It found the terrorist designation an “honor” and threatened the “tyrants” who ruled Tunisia that it would wage war against them. [32] [33] Abu Iyad, who was accused of instigating the U.S. embassy siege and a warrant was issued for his arrest, went underground after the attack on the embassy. Nowadays he is supposedly living in Libya, where he enjoys the protection of Abdelhakim Belhadj, a former Libyan Islamic Fighting Group (LIFG) commander. [30] The United State also accepted the Tunisian cabinet's view in relation with Ansar al-Sharia in the beginning of 2014. According to their judgment, the organization became the most dangerous threat against American interest in Tunisia. Therefore the United States government designated the group and its leader terrorists on January 10. [34] [35]

## The End of the Policy of Non-Violence

The jihadist cell, hiding in the Mount Chaambi region (with which AST was accused of co-operating with) was identified by the Tunisian authorities as the Okba Ibn Nafaa Brigade. The exact structure and the size of the terror-group as well as its leadership are unknown. Nowadays it seems to consist of at least two serrya (company) with rather flexible structures. This was the reason why the group was not paralyzed despite the considerable damage it has sustained during the elapsed month. The injured militants were taken away immediately by their companions during clashes. If the latter was impossible, they decapitated the bodies to avoid identification. Like the Afghan Taliban, the Peruvian Shining Path or the Algerian Armed Islamic Group, they also hid booby-traps under the abandoned bodies to cause further casualties among the security forces. [36]

The cell, whose strength was estimated about 20 jihadist fighters in May 2013, was originally composed mainly of foreign volunteers from the neighboring countries – primarily Algerians and Libyans. Later many Islamist veterans, fleeing the French military intervention in January in North-Mali, joined it.<sup>15</sup> The situation worsened when Ennahda increasingly turned against Salafist groups and reached out to secular opposition parties as a counterweight to the extremists. In response al-Qaeda in the Islamic Maghreb issued a statement on March 17, 2013, calling on Tunisian volunteers in foreign countries to return home and reverse the unfavorable developments in the religion. Many Tunisian veterans, who had earlier fought in Iraq and/or Syria, returned and joined Okba Ibn Nafaa. Others set up another group, estimated 12–15 persons, in the area of el-Kef, 160 kilometers to the north. [38]

There are indicators that the group has been closely linked to the terror-organization al-Qaeda in the Islamic Maghreb from the beginning. According to Interior Minister Ali Larayedh's announcement in December 2012, the cell came under the leadership of three Algerians, who were closely linked to Abdelmalek Droukdel, leader of al-Qaeda's North-African wing. He said that their main goal was to set up camps in the Kasserine region, where recruits could get initial training before sending them to one of al-Qaeda's bases in Algeria

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15 Interior Minister Ali Larayedh announced at a press conference on December 21, 2012 that the authorities had arrested 16 individuals after multiple incidents against Tunisian security services. The detained individuals, including three Algerians and a Libyan, were allegedly linked to the al-Qaeda in the Islam Maghreb and Okba Ibn Nafaa Brigade terrorist-groups. [37]

or Libya.<sup>16</sup> His statement was subsequently confirmed by terrorists equipped with Kalashnikovs, heavy weapons and sniper rifles. They used – and still use – the same tactics in their raids around Mount Chaambi as al-Qaeda in the Islamic Maghreb had practiced in the Kabylie Mountains against the Algerian army: surprise raids against mountainous military posts, then mutilating the bodies of dead soldiers and looting their weapons and uniforms. [39]

The terrorist-group (which had been named after an Umayyad general), first came to the attention of the authorities at the end of 2012. During a raid in Jendouba on December 8 that year the police arrested two individuals, who were supposed to be members of a Salafist group. They also seized a large quantity of explosives and weapons, so an increased alert was ordered along the Algerian border. Two days later the Tunisian National Guard was alerted about infiltration by four armed men in Kasserine Governorate, who sought temporary shelter in the forest near Derneya. They were not willing to surrender when the soldiers called on them to do so, and opened fire when they saw the small strength of the detachment and killed adjutant Anis Jelassi. The Tunisian authorities began an extensive investigation after the death of the officer and arrested seven individuals. On the basis of their interrogation, Interior Minister Ali Rayadh, on December 21, identified the cell for the first time by its exact name and outlined its relationship to al-Qaeda as well as its smuggling and secret military training activity. [38] [40]

Following the incident in which a road-sided bomb injured the leg of a soldier on patrol in the National Park, the Tunisian Army launched a military offensive to eliminate them. There was practically no contact with the group in the first month of the two months-long operation. Before the patrols arrived the terrorists would always escape, leaving behind some booby-traps. The Army's casualties were caused solely by these primitive, home-made devices that had been built using ammonium nitrate fertilizer. Based on the explosives and documents seized in the abandoned camps it was clear that the terrorists had extensive foreign relations and considerable reserves for continuing the fight. The Army's only solution was to pound dangerous areas with mortar fire. The Army declared the mountains cleared at the end of the operation, in which several hundred soldiers took part, three individuals were killed and 27 wounded in the 10 explosions that occurred. [38] [41]

Unfortunately, the Army's announcement was premature. They certainly caused serious damage to the terrorists, but they did not succeed in eliminating them definitively. The cell struck again in the Mount Chaambi area in July 2013. They killed eight soldiers and cut the throats of five of them. The Army launched a new wide offensive against them as revenge, but the offenders again managed to escape. [42]

## Open Jihad Against Security Forces

The Tunisian authorities started an intensive hunt for Ansar al-Sharia and Islamist militants after the proscription of the organization. During 2013 alone 1,347 persons were brought to trial in connection with terrorism-related charges, and more than 8,000 young men and women were prevented from going to Syria to fight. [43] During a police raid in the Raoued area outside Tunis, Kamel Gadhghi, the main suspect of Chokri Belaid's assassination was

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16 He also alleged that the members of the group consisted of inhabitants of Kasserine region and Ansar al-Sharia volunteers. His statement amounted to an open accusation against a legally functioning organization, without any proof. For this reason many people questioned the validity and accuracy of the statement.

killed along with six other terrorists. The clash, in which one member of the National Guard was also killed, gave a lot of useful experience to the security forces. When the suspects were surrounded they not only rejected the offer of surrender, but two of them tried to cause casualties among the policemen with explosive vests on their body. The security forces also found a large quantity of weapons when they searched the building. This suggests that the terrorists probably planned to carry out an attack. [43] A further six members of the banned organization were detained by the antiterrorist unit in the center of Sidi Bouzid on July 10. Two weeks later the security forces arrested Mohamed Anis, “the Prince of Ansar al-Sharia”, who had in his possession considerable funds as well as documents containing terrorist plans.<sup>17</sup> According to the reports, the security forces killed several more members of the organization during October. Due to their intervention, the suicide attempt against French and American embassies at the end of the month also failed. Abdelmalek Droukdel had ordered sleeping cells of Ansar al-Sharia to carry out the attack as revenge for French military action in Mali and the liquidation of al-Qaeda leaders. The security forces also managed to disarm a suicide bomber who wanted to blow up the mausoleum of Habib Bourghiba in Monastir with a considerable quantity explosives in his rucksack on October 30. Unfortunately they could not prevent his companion from carrying out another attack. His bomb, which was concealed in a suitcase, was activated by a mobile phone on the beach outside the Riad Palm Hotel in Sousse on the same day. [46] Luckily no one but the suicide bomber was killed.

Soon after these events the Tunisian authorities began an extensive investigation. They soon arrested five individuals and confiscated a considerable quantity of explosives in Monastir. The suspects revealed during their interrogation that on Abu Iyad's order they had planned to attack the center of the security services, police stations as well as four supermarkets where alcohol was sold. [8] The security services managed to foil another attempt when they arrested a terrorist cell. The six terrorists allegedly wanted to target hotels or bars during New Year's Eve celebrations on Djerba Island, a favorite tourist spot. [47]

Despite these undoubtedly significant results the struggle against terrorism proved to be a remarkable challenge for the Tunisian armed forces. Their limited experience and lack of adequate equipment were serious problems.<sup>18</sup> Their position became even more difficult when they had to divide their limited strength and redeploy forces to the Libyan border region that had suddenly become a danger zone after the revolution in that country. Neither the air strikes, nor the July 2013 offensive could completely eliminate the al-Qaeda group in the Mount Chaambi area. What is more, the militants killed at least 15 soldiers and policemen by October 2013 and killed two policemen in Beja (about 160 km north of the Chaambi region) on October 15, 2013. The security forces lost their confidence in the cabinet as a result of

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17 The actual influence of the banned organization was well illustrated by the fact that the companions of the activists arrested in July started a spontaneous demonstration on the same day at the police headquarters and demanded the detainees' release. The police used tear gas and fired warning shots to disperse the mob. Also on the same day, Salafist extremists clashed with policemen in El Kef. They threw stones at police vehicles and attacked the police station with Molotov cocktails. [44] [45]

18 Rachid Ammar, the commander in chief of the Tunisian army, voiced his concern over the situation. According his point of view, Tunisia, unlike other countries, lacked the economic resources to fight terrorism, so it could easily become a second Somalia. He resigned shortly after making this statement. The Defense Ministry also admitted that the army was lacking equipment with which it could safely clear the mountainous region of the mines placed by the jihadists. [48]

growing casualties. Their unions have organized several demonstrations, demanding the necessary resources to combat jihadist elements as well as laws to protect policemen.<sup>19</sup>

The danger of terrorism increased on January 14, 2014 when Okba Ibn Nafaa merged with Ansar al-Sharia, whereby it transformed itself unofficially into al-Qaeda's Tunisian wing. Abdelmalek Droukdel, the Algerian chief of al-Qaeda in the Islamic Maghreb, appointed another Algerian, Khaled Chaieb (aka Lokman Abou Sakhr) as the leader of a new organization that was soon being referred to as al-Qaeda in Tunisia in the press. The new emir, a former chemistry student turned explosives expert, was among those responsible for the July 2013 Mount Chaambi massacre according to the Tunisian Interior Ministry. In his new position he faced a serious challenge. First of all he had to re-organize the militants who suffered serious losses in the operations of the Algerian and Tunisian Armies during the previous months. In addition, he had to halt the chaos that had developed within Ansar al-Sharia in Abu Iyad's absence. [39] In the last six months he seems to have managed to realize his goals. He recruited and trained new volunteers and managed to avoid capture at the same time. The militants, equipped with rocket-propelled grenades and rifles, made an assault on two military checkpoints near Mount Chaambi on July 17, 2014. The casualties – 15 soldiers lost their lives and at least 20 were wounded in the attack – were the heaviest toll registered by the army since independence in 1956. [49]

Following these events the government set up a crisis group and closed the unlicensed Al-Ensan television and Nour Radio stations, as well as certain mosques, which they claimed had been promoting violence and jihad. [50] Above all, the Tunisian cabinet intensified its cooperation with neighboring Algeria and launched a joint operation to round up Islamists. Despite these preventive measures another raid occurred on July 26, when some 40 Islamists ambushed two vehicles of the army near Djebel Urgha, in Kef Governorate. In response to the attack (in which two soldiers died and four were wounded), the army reacted quickly and arrested more than 10 perpetrators two days later. [51]

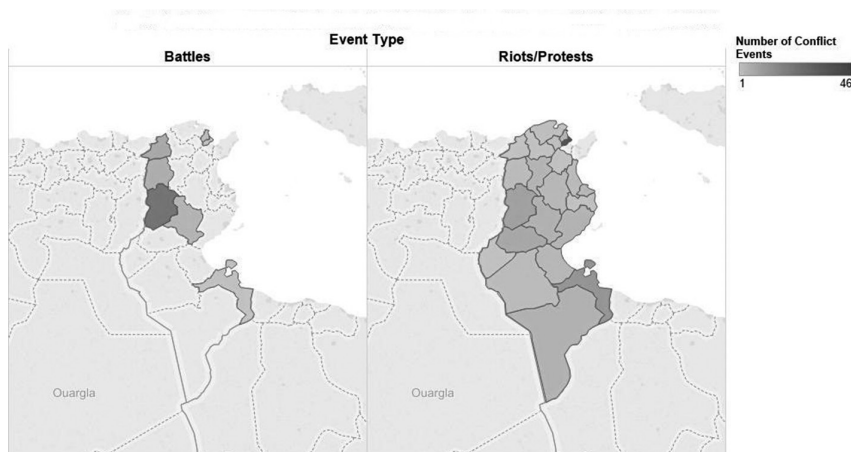


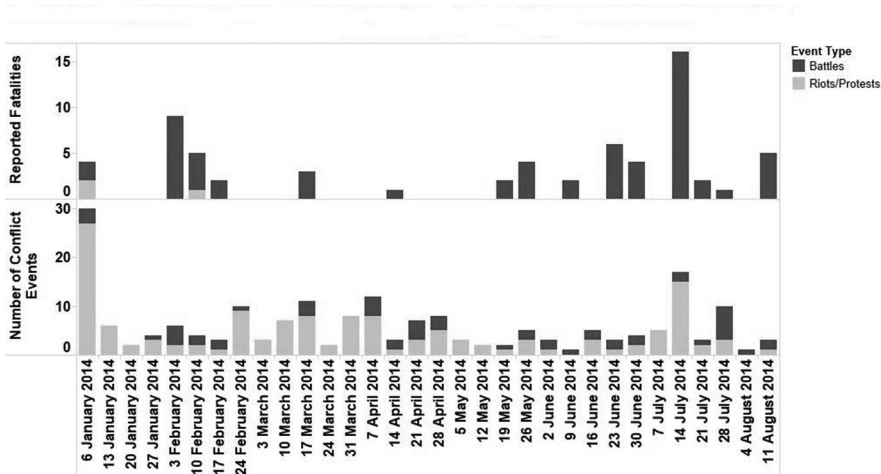
Figure 1. Battles and Riots/Protests in Tunisia by Province, 1 January 2014 – 11 August 2014. [52]

19 The growing disaffection of policemen was openly shown on October 18, 2013, when they did not allow President Moncef Marzouki, Prime Minister Ali Larayedh and parliamentary speaker Mustapha Ben Jaafar to attend the funeral ceremony for the two comrades, who were killed three days earlier by extremists.

## Conclusion

This study has shown how the relationship between Ansar al-Sharia and the Tunisian government gradually worsened. The main reasons were a series of successive incidents, as well as responses and reactions. We can consider Anis Jelassi's killing in December 2012 as the beginning of the war against the state. The attacks on soldiers, together with the deterioration of public order, the murder of the politician Mohamed Brahmi in July 2013, as well as the killing of eight members of security forces some days later put considerable pressure on the cabinet. The Tunisian cabinet had no choice but to designate Ansar al-Sharia a terrorist-organization and declare an open struggle against it.

Today many factors make the fight against terrorists difficult. The jihadists are indistinguishable from the people in appearance and dress, and they enjoy the maximum support among them. They build close cooperation with local smugglers in the barely controlled mountainous region, so they can build up reserves without any problems. The police have lost their prestige after the fall of Ben Ali's regime, so now eliminating the terrorists has become an army task. No wonder that the simultaneous tasks of securing public institutions, keeping public order, controlling a border of several hundred kilometers and fighting against terrorists have proven to be an enormous challenge. The problem is heightened by the lack of such technological resources (eg. enough fixed-wing aircraft, helicopters and suitable monitoring devices) that could compensate for their disadvantage in their personnel strength. Accordingly, in the current situation the measures against the jihadists are not effective. This carries with it the risk that the jihadists will set up bases in the region, where they can train the volunteers unmolested by the security forces, and deploy them later against the institutions and symbols of the Tunisian state.



Graph 1. Battles and Riots/Protests in Tunisia by Number of Conflict Events and Reported Fatalities, 1 January 2014 – 11 August 2014. [52]

The failed attempts in the second half of 2013 are also a cause for concern. In particular, the selection of targets implies that the terror-organization has adopted the tactics employed earlier by Jamal al-Islamiyya's, when it wanted to force its ideas on the state by attacking tourism. Successful pursuit of this strategy would deprive the government of its main source of public revenue, which it needs in order to stabilize the troubled economy – as soon as possible.

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# Diseases and Non-Battle Injuries (DNBI) in HUN Missions Based on EPIHUN Reports

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*The Medical Service of the Hungarian Defence Forces (HDF) has been playing and taking an important role in the elimination and medical stabilization of several regional crisis areas since 1991. These medical protection and “back-ups” literally mean the medical support of our military forces take part in different tasks besides this fulfilling the special tasks of preventive medicine. The medical data collected from the different tasks and missions have been gathered systematically in order to be informative. From 2008 on we manage data collection with a real-time surveillance report system, the so called EPIHUN (Hungarian Epidemiological and Patient Turnover Report), which have been collected from different aspects and analysed from force health protection aspects. With the DNBI data from the system the authors are analysing the preventable diseases morbidity state and tendencies of the EUFOR (European Union Force), KFOR (Kosovo Force), MFO (Multinational Force and Observers) and UNFICYP (United Nations Peacekeeping Force in Cyprus) missions on a 2013 data base. It could be surprising that the morbidity data are very similar to the values seen among military collectives living in barracks during the conscription era of the armed forces. Most DNBI are acute respiratory diseases and diseases of the digestive system, which is important information in medical preparation training before deployment.*

**Keywords:** Force health protection, Hungarian epidemiological and patient turnover report, medical service, Hungarian Defence Forces, analysis of preventable diseases morbidity

## Introduction

The HDF and its Medical Service have been participating in almost every peace keeping and peace support operations in crisis areas all over the world since 1991. In some missions, the Hungarian forces were deployed with their own medical personnel, such as Gulf War I, in AFOR, or the Theatre Preventive Medicine Laboratory in KFOR, furthermore the Multinational Military Hospital in Afghanistan. In other missions, Hungarian medical personnel provided and still supply medical support for multinational forces.

In this article our analysis focuses on non-battle related disease data from EUFOR, KFOR, MFO, and UNFICYP troops' medical indices since 2013. In Afghanistan, a small number of Hungarian troops were imbedded into multinational formations, and their medical support was not provided by Hungarian medical personnel, therefore we have no data processing of these Hungarian contingents.

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Continuous health status monitoring of the personnel both in Hungary and in deployment is a priority area within force health protection tasks for the HDF Medical Service. The Hungarian real-time surveillance system – called EPIHUN – provides deployment health information on a weekly basis. Based on this information it is possible to monitor continuously the actual health status of personnel on deployment. Using validated criteria based on standardized definitions, unified methods and procedures; this system allows data collection, analysis, feedback and also intervention, if necessary.

By certain features we have started collecting data already from Gulf War I. Regarding this period we have obviously focussed especially on combat casualties and their distribution. (Table 1.) However these data also allow the drawing of some conclusions, but – as indicated already in many other analyses – the low number of casualties probably prevent making objective conclusions. Despite this, it is clearly seen here, how comparable the data of casualties treated by Hungarians in Gulf War I and World War II or the Vietnam War are. (Table 1.)

Table 1. Casualties treated by Hungarian medical personnel. [5]

Period	Gulf War/ casualties treated by HUNs %	World War II. %	Vietnam War %
<i>Complex</i>	8,6	11	20
<i>Head</i>	17,2	12	14
<i>Chest</i>	6	8	5
<i>Abdomen</i>	4,4	4	5
<i>Upper extremities</i>	30	26	18
<i>Lower extremities</i>	24,2	39	36
<i>Liver</i>	1,3	Experience based	16 %
<i>Spleen</i>	3		6 %
<i>Pancreas</i>	1,3		5 %
<i>Burn injuries</i>	4,2		3,7 %

Table 2. Comparative analysis of injury types from WWII [7]

Total number of casualties	44 persons	Injured during air operations 15 persons
Operations performed	70 persons	Injured during land operations 15 persons
Died after treatment	2 persons	Injured during temporary truce 6 persons

It is important to note that all operational movements had medical support. The medical support plan was mission tailored to the type of operational activity. Preliminary calculations of the numbers of casualties are an important part of the medical support plan. Casualty calculations have two parts, one is battle casualties (BC) and the other is diseases and non-battle

injuries (DNBI). In the battle casualty (BC) categories are: killed in action (KIA), missing in action (MIA), captured in action (CIA), wounded in action (WIA), died of wound (DOW) and battle stress casualties (BSC). [7]

The main question is: why do we not deal at all with non-battle injuries? Why do we not analyse combat casualties and deaths of Hungarian contingents? Well, to tell the truth Hungary is extremely lucky from this point. There were only 8 persons who died in operations (out of them 5 KIA, 2 DOW and one died of non-enemy action – all of them served in Provincial Reconstruction Team missions in Afghanistan); and 20 other battle injuries since 1991, according to definitions described in NATO Allied Joint Medical Publication-1 (AJMedP-1). The final goal of our analysis is to underline the importance of these disease types.

## Implemented Methods and Terminology

The NATO electronic epidemiological reporting system (EPINATO) integrated all the treatment criteria, like data on medical personnel, patient turnover data, information on medical equipment and consumables. This reporting system had to be adjusted to Hungarian conditions, which led to development of the so called EPIHUN reporting system. The first Hungarian Epidemiological and Patient Turnover Report (in 2003) was a paper-based reporting system, but from 2008 (by instruction of the Hungarian Surgeon general) it became recordable also electronically. The data from all different theatres became visible for medical experts in Hungary in almost real time. Deployed medical personnel of the Hungarian units provide these data for medical staff in the Joint Force Command to the Office of the Surgeon General, where these data are processed and analysed.

The EPIHUN reporting and data processing system applicable regulations are based on STANAG 2535 [6], AMedP-21, [1] – Deployment Health Surveillance and the 253/2008 Instruction of the Hungarian Surgeon General about casualty data reporting of deployed personnel. [2]

Reporting requirements and data processing: data reported by deployed Hungarian medical personnel

- EUFOR (Bosnia-Herzegovina)      Population at Risk 145 people
- KFOR (Kosovo)                      Population at Risk 180 people
- MFO (Sina El-Gorah)                Population at Risk 26 people
- UNFICYP (Cyprus)                    Population at Risk 77 people

In order to analyse frequency of non-battle diseases, we have used patient turnover databases of EPIHUN reports from 2013. After synchronizing these figures we generated a database. We used Microsoft Excel 2007 for analysing the given data and creating the tables. In the course of the analysis we defined the below listed indices:

- a) calculating the distributional ratio of morbidity, with which we analysed the conformation of diseases in different missions;
- b) analysis of data regarding referrals for specialized care, which is indicative for the percentage of definitive treatment provided by general practitioners (only a few patients were referred for consultation, which shows that initial diagnosis by the general practitioners was correct).

The International Classification of Diseases (also known by the abbreviation ICD) provides data about the causes of requisition of the primary health care, along with the confirmation of diseases in different missions.

The data collection is continuous in every mission since Gulf War I, and focuses on systematization and definition of criteria for their implementation. However, it is possible only after the displayed regulations which were issued.

Before making conclusions based on these data, it is necessary to define the terms of incidence and prevalence. Incidence is the number of occurrence of new diseases in a population within a specified period of time (usually within a year). Prevalence is the total number of cases (diseases) in a population within a specified period of time.

Patient turnover data are regularly reported. They do not contain personal or sensitive medical information. The computer program allows easier data recording, categorization of archived disease cases, fast and complex data management. There is no legal obstacle for public releasing of these data.

## Results

In epidemiological analyses it is important to review similarities and differences of conditions. It is essential to assess e.g. differences due to variant geographical locations and their impact on disease prevalence. Two of the four missions shown in Figure 1, have similar prevalence values to the ones found in Hungary, while the other two missions are different, having either positive or negative impact on disease incidence with their Mediterranean, even desert-like climate and geographical environment. We have analysed the impact of thermal stress on disease evolution in each mission. We have not yet analysed the Provincial Reconstruction Team mission in Afghanistan, as it was completed just last year.

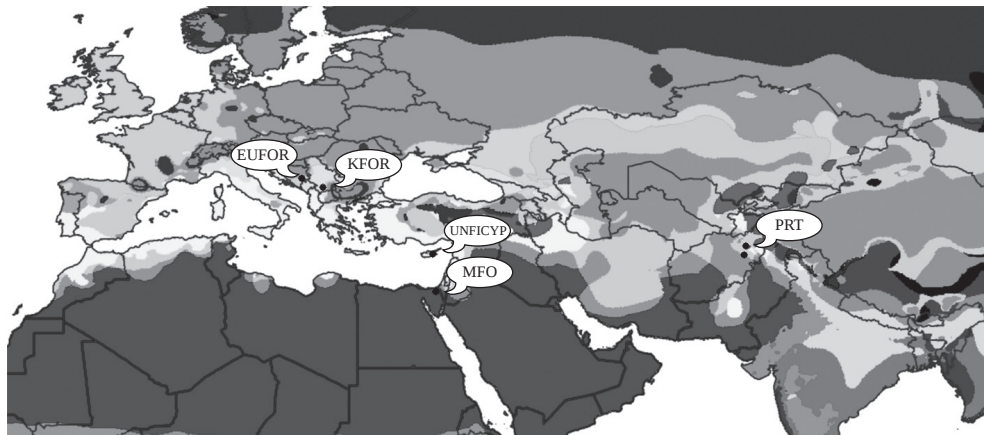
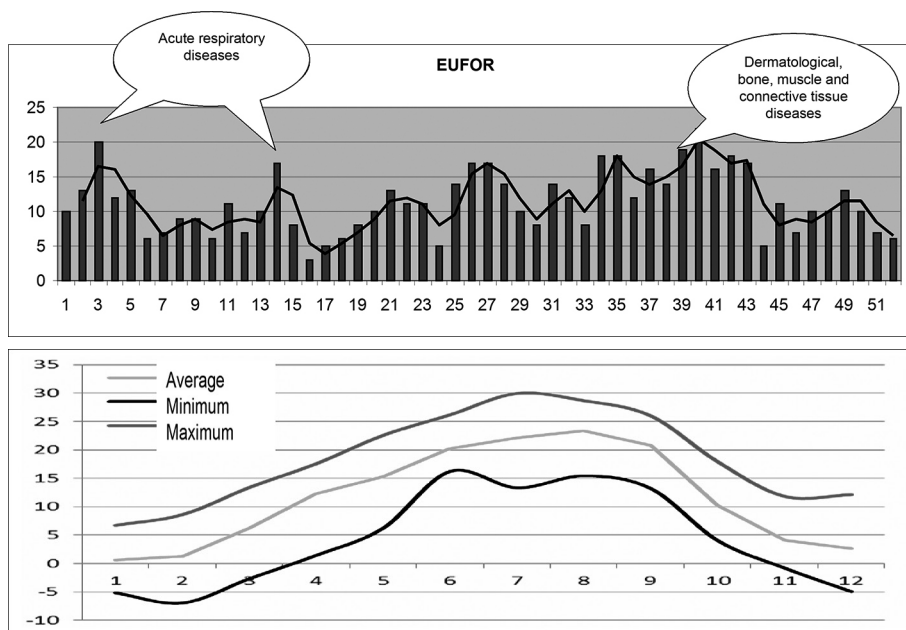


Figure 1. Geographical location of HUN missions. [Edited by the authors.]

## Patient Turnover Data by Missions

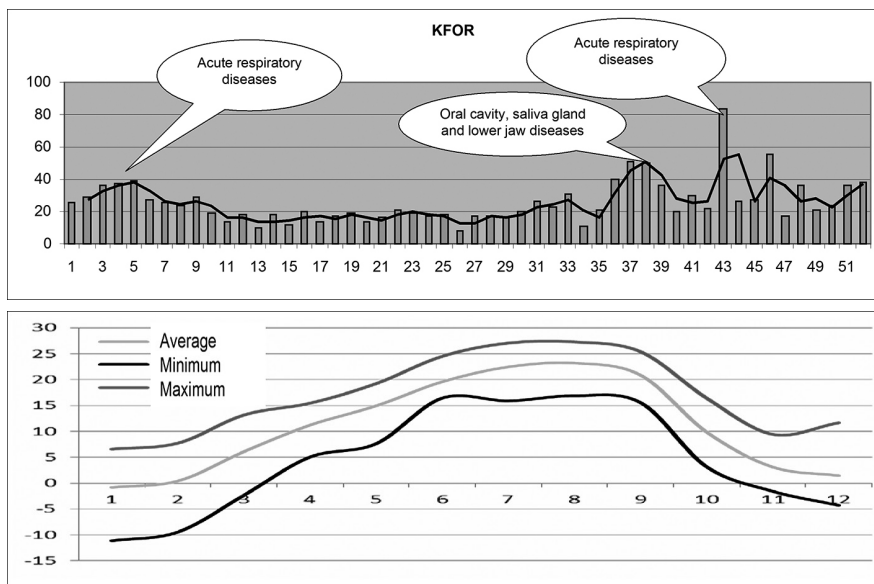
In EUFOR, the most prominent cases were the acute respiratory diseases (27%), bone, muscle and connective tissue diseases (23.5%) and dermatological cases (16%). These three groups of diseases were responsible for 75% of the total patient turnover in EUFOR.

The climate of Sarajevo does not considerably differ from the climate in Hungary. Distribution of diseases therefore is also similar. We detected increased number of acute respiratory diseases when the weather is changing and the temperature decreasing. Dermatological diseases on the contrary appear in warmer periods. (Graph 1.)



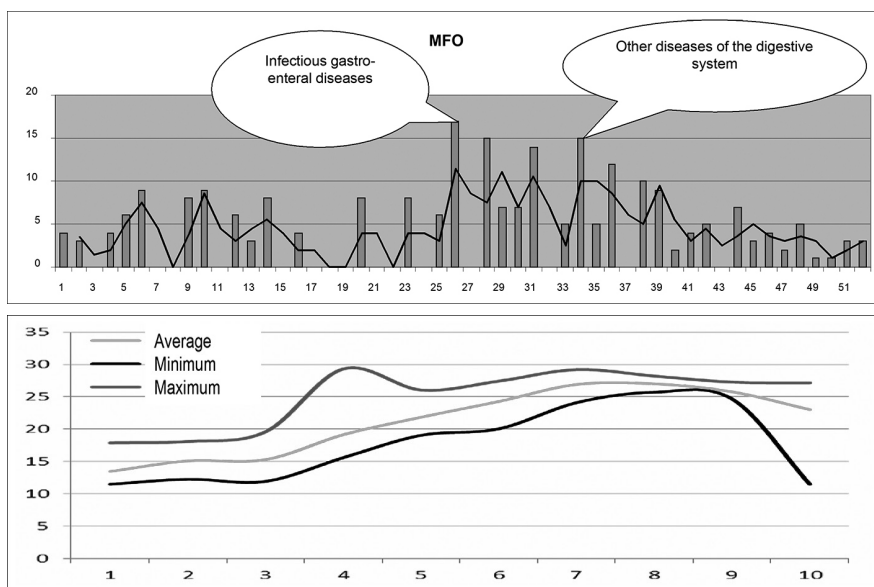
Graph 1. EUFOR total cases per weeks. [8]

In KFOR, 43% of diseases were coded as “any other disease”, which from an epidemiological point of view cannot be evaluated. Acute respiratory cases are responsible for 16.8% of diseases, oral cavity, saliva gland and lower jaw diseases appeared in 13.4% of cases. The climate of Kosovo is also similar to the climate of Hungary. Increase in acute respiratory diseases can be explained by drops in temperature. (Graph 2.)



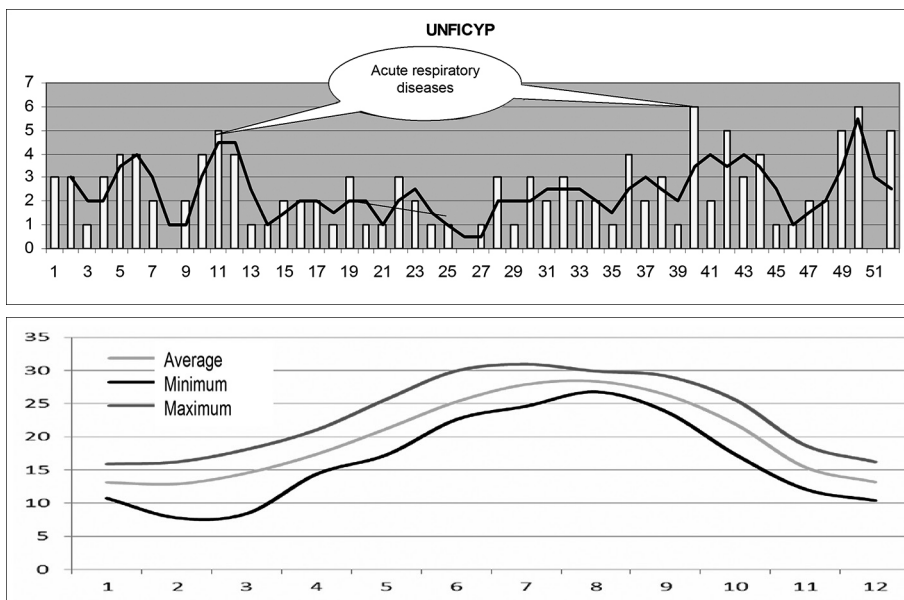
Graph 2. KFOR total cases per weeks. [8]

Only 20% of the total number of patients were Hungarians in MFO. The most frequent cases were “any other diseases”, counting 32%, acute respiratory diseases, counting 17%, infectious gastro-enteral and dermatological diseases; both appeared in 9% of cases. The part of “any other diseases” is too high, and it provides only vague information. High temperatures in desert climate conditions can be held responsible for infectious gastro-enteral and other diseases of the digestive system. There were no reports on epidemics. (Graph 3.)



Graph 3. MFO total cases per weeks. [8]

Among UNFICYP Hungarian personnel, acute respiratory diseases were the most frequent cases (39%), bone, muscle and connective tissue diseases were found in 16% of cases, and dermatological problems in 11.7% of cases. Increase in acute respiratory diseases can also be connected to the changes of weather. It is worth noting that case numbers jumped up before rotation, and were low during the acclimation period, and returned to seasonality afterwards. (Graph 4.)



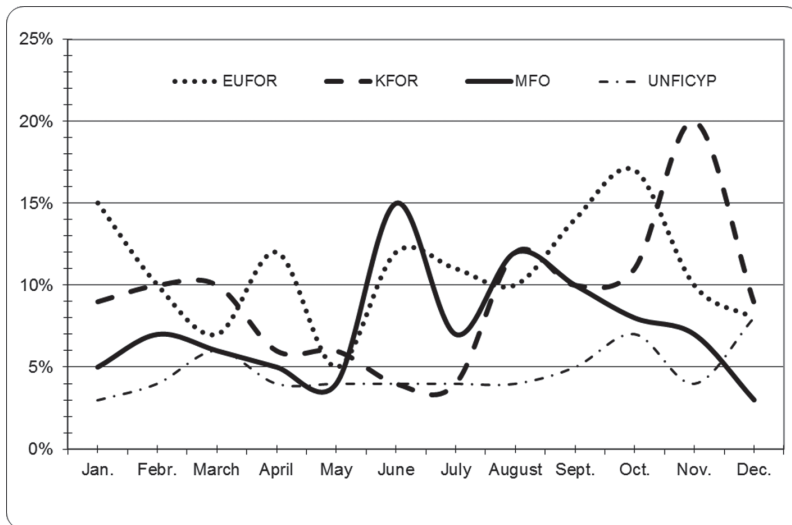
Graph 4. UNFICYP total cases per weeks. [8]

In Chart 2 we show the percentage of first appearance in light of the total number of participants. It is derived from patient turn over data in different missions. The values in *italics* refer to handover periods. The exception is the MFO mission, because we could confirm that their disease incidence grew during the acclimation period due to stress caused by adaptation challenges to new tasks, and also due to the changes in climate and environment. There is another exception also found in the MFO mission. Certain seasonality can be detected during winter-spring and autumn months also. The difference might be explained, if we take into consideration the low number of MFO participants, which result in low relative numbers. (Table 3.)

Table 3. The percentage of incidence (first appearance) ratio of missions per first medical contact in monthly statistics in 2013. [8]

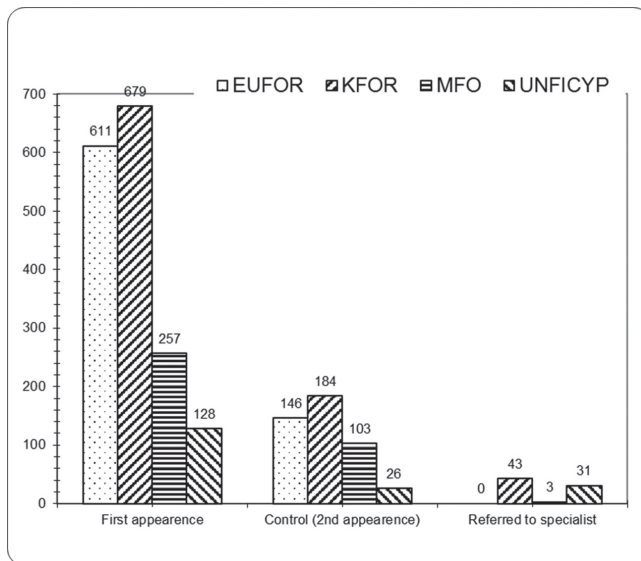
Missions/Pop. at	Jan	Febr	March	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Total
MFO/26	61.6%	50.0%	146.2%	53.8%	65.4%	50.0%	7.7%	42.3%	46.2%	61.5%	80.8%	23.1%	179
UNFICYP/77	11.7%	10.4%	20.8%	19.5%	15.6%	10.4%	18.2%	22.1%	14.3%	16.9%	6.5%	19.5%	143
EUFOR/145	48.3%	42.8%	42.8%	38.6%	43.5%	43.5%	64.8%	32.4%	13.8%	11.7%	9.0%	41.4%	627
KFOR/130	46.7%	51.0%	53.3%	32.8%	30.6%	23.3%	22.8%	60.6%	53.9%	55.5%	38.3%	48.9%	932
Total Nr. Of cases	179	175	212	144	147	126	151	184	140	146	108	169	1881

The percentage of first contacts in light of the total number of participants, derived from patient turn over data in different missions. Seasonality is seen in winter-spring and autumn period as well. We can see the patient turnover data by weeks listed in Graph 5.



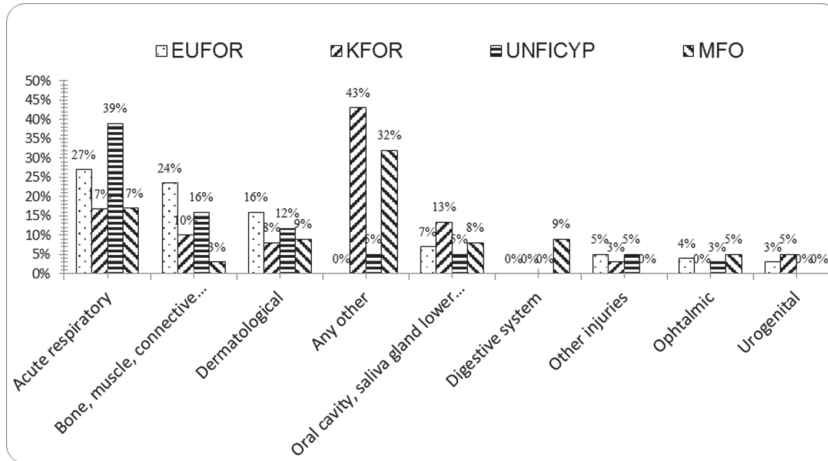
Graph 5. Missions of treatment statistics by months in 2013. [8]

On Graph 6. we show the patient turnover data by missions. It seems that in most cases definitive treatment was possible during first appearance already. A fewer number of patients are called back for control, and even a smaller number is referred to specialists. Only one patient was sent to hospital, both in MFO and UNFICYP.



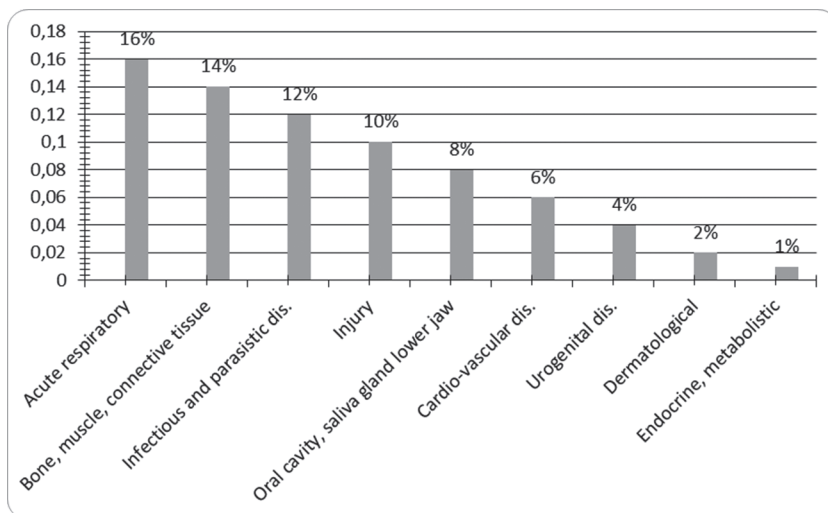
Graph 6. Treatment statistics by different missions in 2013. [8]

Acute respiratory diseases are the most frequent cases in almost every mission, and the low temperature is responsible for it. Bone, muscle and connective tissue diseases are related to sport and other physical activities. The relevance of our analysis is weakened by high share of “any other diseases.” (Graph 7.)



Graph 7. Disease structure by missions. [8]

Comparison of data from deployments and at home provides valuable information for pre-deployment planning. On this slide we show the homeland data of the same age groups as on deployment. Our conclusion is that there is no significant difference in disease structure on deployment (among the analysed missions) and at home. The most frequent cases among the military personnel at home duty stations are also the ones which require acute treatment. [4] The leading causes proved to be: acute respiratory diseases; bone, muscle and connective tissue diseases; and infectious diseases. (Graph 8.)



Graph 8. Prevalence of diseases in HDF. [8]

## Force Health Protection Tasks during the Pre-Deployment Period

Pre-deployment medical training programs are based on medical risk assessment data (evidence based). Health status of deployed personnel is better than the health status of home based personnel (due to strict pre-deployment health, mental and physical screening). The primary prevention on deployments has an emphasized role in assuring mission and combat readiness. In order to minimize the rate of preventable diseases, it is important to provide climate specific training (for prevention of acute respiratory diseases), to develop health oriented and climate specific alimentary practices. Educating on the significance of proper fluid intake, and alcohol and drug prevention is also essential. In the latter case the principle of zero tolerance applies. The tolerable amount of alcohol consumption is declared by mission commanders, and regulated by mission SOPs (Standard Operating Procedures). Training on legal consequences of consuming legal and illegal substances is also part of the pre-deployment education program. To prevent mental disorders and development of combat stress syndrome, a 30-hour psychological training program takes place during the pre-deployment period. [3]

## Conclusions

1. Introduction of the EPIHUN surveillance system provided an opportunity for mission specific pre-deployment training, in order to minimize the proportion of preventable diseases.
2. Distribution of diseases on deployment and at home base does not differ significantly.
3. The high proportion of acute respiratory diseases shows correlation with temperature changes.
4. Training of medical personnel in disease coding can reduce the high incidence of “any other diseases”.

## Summary

Continuous monitoring of the health status of military personnel is one of the most important areas of activity for force health protection. The Hungarian real-time surveillance system – called EPIHUN – provides deployment health information on a weekly basis. These data provide important information on the deployed troop’s actual health status which can be monitored. Using validated criteria based on standardised definitions, unified methods and procedures, this system allows data collection, analysis, feedback and also intervention, if necessary.

In this article we detailed the EUFOR, KFOR, MFO and the UNFICYP patient turnover data by mission, for the year 2013. These data were analysed to detect changes in incidence (first appearance) and in control examination (second appearance), and also in follow-on specialist medical care. It was found that the morbidity index is associated with the operations geographical environment and climate. Nearly 40% of all patients suffered from acute respiratory diseases, bone, muscle and connective tissue diseases, and dermatological cases, which were the most frequent cause for seeking medical care. The results are similar to na-

tional epidemiological data. These DBNI cases are preventable. We can determine the type and frequency of diseases, which have the potential to make important and exact recommendations for primary prevention and training in the pre-deployment period. The so-called patient turnover report's data (EPIHUN) provide valuable information on planning the capacity of the medical supply system, organizing the supplies, calculating and estimating the expected disease burden, force health protection and tracking down the capability of military duties.

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# The Impact of the All-Volunteer Force on Hungarian Officer Training

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*The Government's goal was partly to replace conscripts with volunteer defence and volunteer operational reserves, and contracted servicemembers, however, the differences between the two systems are very pronounced. The author outlines the consequences of these changes on our military higher education.*

**Keywords:** National University of Public Service, Faculty of Military Sciences and Officer Training, salary, military force, education, common modules, officer, all-volunteer force

A decade has passed since the last conscript demobilized in Hungary. The largest and the most difficult period of the transformation of the Hungarian Defence Forces (HDF) came to an end at this moment. The results can already be seen. Hungary, as a member of the European Union and NATO, has a stable security policy situation, it is surrounded by allies, friends and partners. The safety and security of our citizens may be prone to threats originating from conflicts in nearby countries (e.g. Ukraine) and distant nations, and to the strengthening of international terrorism. These risks have to be faced by the Alliance and the European Union, and this struggle is also part of the tasks of Hungary's all-volunteer force (AVF).

## From a Conscript-Based to a Volunteer-Based Force

The first conscripts joined the armed forces of the Austro-Hungarian Monarchy in January 1869. The conscript-based system, in the 136 years up to 4 November 2004 had a continuous impact on Hungarian society, the national culture and the principles relating to national defense. From 1869 to 1890, only a part of the personnel performed active service in the ranks of the defense forces, mainly during basic training and exercises in the autumn. The rest of the staff fulfilled its duty with minor interruptions. 1912 brought changes: active service time was reduced to two years for the entire armed forces. [1]

After the end of World War I and the collapse of the Austro-Hungarian Monarchy, the military clauses of the Peace Treaty of Trianon, signed on 4 June 1920, only allowed the establishment of a recruited force consisting of 35,000 servicemembers, capable only of policing. Only in 1932, was the so-called defense force system, and general conscription re-introduced. In 1939, the Parliament adopted an Act on the use of the Hungarian armed forces in war and subsequently, the development of the defense forces began. One of the greatest disasters for the Hungarian nation was that our servicemembers, during World War II battles on the Eastern Front, took part in the battles and operations under asymmetric conditions, resulting in severe losses. By the end of World War II, the Hungarian armed forces had bled

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out and fallen to pieces. The organization of the People's Army<sup>2</sup> had already begun during the war, after the formation of the Provisional National Government. In 1949, the communist takeover reshuffled the military's objectives, tasks and structure, and the formation of a mass army began. This process was called the development of the Hungarian People's Army. The foreign and domestic political, social and economic developments, started in the second half of the 80s and accelerated at the end of the decade, led to the complete denial of the former social formation. After the democratic parliamentary elections in 1990, the above processes led to the development of the institution of civil democracy and market economy. [4]

The military has not been left out of the radical transformation processes either, of course. Its transformation, which included the upgrade of the inherited values, military doctrine, organizational structure and armament, was characterized by a strong, but not always consistent endeavor. The transformation of the personnel incurred the biggest conflicts, because reducing the number of a 150,000-strong force to less than its one third caused massive movements on the labor market. The implementation of a modern human resources strategy, which took care of the personnel and taking into account the burden-taking capacity of the country, managed to solve this significant problem without larger and protracted conflicts. [4]

The security policy decision of the National Assembly formed the basis of the transformation, according to which Hungary does not regard any single country as an enemy and wishes to live in peace, seeks cooperation with all the states of the world, rejects the resolution of any dispute by force of arms and only deploys its armed forces if an armed attack is launched against the country's independence and territorial integrity. [2]

The analyses of security risks ascertained that Hungary is not threatened by an armed conflict that would reach the level of war threshold, and therefore, it has become possible to break down former hereditary military structures, reduce the number of personnel and military organizations, rearrange the units' geographical location and upgrade leadership. [2]

In the early 90s, following the democratic transformation of Hungarian society and the consolidation of the institutional system, it became necessary to reconsider the country's international cooperation. The leadership of Hungary declared the nation's Euro-Atlantic aspirations and the intention to join NATO and the European Union. In 1994, one of the first steps of this process was joining the NATO Partnership for Peace (PfP) programme. The HDF prepared for the use of NATO procedures, and ultimately NATO membership through joint exercises and peace support operations (IFOR,<sup>3</sup> SFOR<sup>4</sup>).

Joining NATO PfP accelerated the acceptance of the Euro-Atlantic values, the distribution and adaptation of the Anglo-Saxon military organization culture, and the profound grounding of Hungary's accession to the Alliance's military organization. [4]

Hungary became a relatively influential player as a member of NATO, much more important compared to its previous capabilities and capable of managing global conflicts. Joining NATO opened a new dimension of security guarantees and obligations for our country, which entailed the need for qualitative transformation of the military force. [1]

An aggregated result of all these factors: the institution of compulsory military service, peace and wartime military supplement significantly changed after 4 November 2004. The HDF was re-established, built on professional and contract employment relationships, based

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2 The Hungarian Defence Forces were called Democratic Army from 1949 to 1990

3 *Implementation Force* in Bosnia and Herzegovina.

4 *Stabilisation Force* in Bosnia and Herzegovina.

on the principle of voluntary service, in peacetime no Hungarian citizens must perform conscript military service by law.

The Parliament decided on the transformation, back in 1995, to a mixed military system that consisted of voluntary and conscripted servicemembers. After several important steps, on 24 September 2003, the Government adopted a decision on the transformation of the HDF, according to which a further development was envisaged without military conscription.

The Government, taking office in the spring of 2002, assumed in its program that the country's economic capacity allowed the transformation to an all-volunteer force. The decisions of the Defense Review, initiated in the summer of 2002 and completed a year later, made it possible to rationally adjust the number of personnel and the organization of the HDF, to withdraw a large number of outdated military equipment from the system. The purpose of the Defense Review was to re-formulate the mission and tasks of the HDF, based on national interests and objectives, to define the necessary skills, ranking them according to their importance, and to propose to allocate resources to the capabilities. Amongst the main objectives of the Ministry of Defense (MoD), was an endeavor to develop a transparent defense planning, accountability and management in making effective use of the taxpayers' money. International examples show that the maintenance of an armed force, consisting purely of volunteers, is cost-effective in the long run. While personnel costs are higher, the defense management, preparation, training, maintenance and repair of equipment will be less expensive. Foreign examples also show that, due to a higher level of education of the voluntary force, they carry out the tasks of national and alliance obligations alike more effectively. This can be ensured by effective recruitment, a transparent career model for the individual, professional training and creating safe retirement after discharge of the armed forces. [6]

On 14 February 2003, the Government discussed a proposal relating to the transition to an all-volunteer force and made arrangements to start the administrative preparation of the decision. The transition to a volunteer force is actually a response to the security challenges of our era. It contains a significant structural change, a new type of military training, and the preparation of a new military culture. [6]

On 8 November 2004, the Parliament adopted Act CV of 2004 on National Defense and the HDF, and in this context, it amended the (then) Constitution of Hungary (now Fundamental Law). The new Defense Act, in conjunction with the defense of the homeland, only imposes burdens on the population if it is absolutely necessary. Basically, the Defense Act regulated the transition to an volunteer force, and stipulated the new rules of the military force with a changed structure and composition. Volunteer military personnel performing active service in peacetime are regular servicemembers, government servants and public employees, employees under the Labor Code and voluntary reservists, available for service from time to time. [6]

The task of volunteer defence reserves, both in peacetime and classified periods, are to guard and protect military installations and the critical infrastructure, and provide host nation support. This staff is assigned to guard positions of war personnel of military organizations, and in peacetime, it performs the security and guarding duties at the designated facilities of the HDF. They are armed security guards and employees of the MoD Electronics, Logistics and Property Management Plc. They are partly ex-policemen, servicemembers, persons fulfilling security patrol and new employees. [1]

Volunteer operational reserves perform their duties in already existing military organizations or are assigned to units to be established in a classified period, registered in the full board of personnel of the HDF. These reserve positions have paramount importance in ensuring the defense of Hungary. We are dealing primarily with assignments, whose supplement in peacetime with regular personnel is not inevitable or is not ensured, however, their preparation is required to be able to perform their jobs already in peacetime. These reservists can make up for human resource shortages during their active service. Thus, they may be assigned to positions that have not been filled for a long time, or to domestically replace those in operations abroad, or may perform specific tasks occurring intermittently or take part in peace support operations, taking into account their military and civilian expertise, qualifications and suitability.

By suspending conscription, the Hungarian Defence Forces, as a large actual employer in the country, created hundreds of jobs, which contribute to a reduction in the number of unemployed young people. The new tasks of the HDF focus more on international cooperation tasks than before. The valid regulations allow for a multi-stage transition from peacetime operation to deployment activities. Establishing and operating an all-volunteer force means much more than modernization. It includes a new grounding of principles, guiding values, command and control and training methods, deployment and, last but not least, conditions.

After joining NATO and accession to the European Union (EU) on 1 May 2004, Hungary's geopolitical situation and security has fundamentally changed and strengthened. NATO is the most important factor in the stability in Europe, and in the foreseeable future, it is the only political and military regional security institution that is able to guarantee the defense of its member states. Ironically, in our globalized world, Hungary's interests, as a NATO and EU member state, are directly affected by outlying regions. The terrorist attacks on 11 September 2001 against Washington, D.C. and New York have also proved that NATO member states are required to find responses to new security challenges far away from their borders, since Hungary as a member state is simultaneously a participant and also a beneficiary of the political and military system of global security. [2]

The HDF of the 21<sup>st</sup> century must be able to effectively contribute to the changed circumstances, adapting to the new challenges, to enforce the national security interests of Hungary. Therefore, besides an all-volunteer force, a professional force was formed, which, in addition to the implementation of the tasks set out in the Fundamental Law, the ability to effectively contribute to the peace and security in the Euro-Atlantic area. [6]

Another purpose of the military organizational changes is to ensure the fulfillment of the country's commitments to NATO and the European Union. During the review of the system of military tasks of the HDF, a new demand appeared in the form of a contribution to the rapid response capabilities, developed within the European Union. As a result of these steps, Hungary needs a professional military force, with modular architecture, including specialized elements, smaller in numbers and financially sustainable. [6]

The index of public confidence towards the HDF as a national institution, meant to defend the country, has been constantly high since the change of the political system. The country trusted the servicemembers' devotion to their profession, and highly appreciate their skills. However, criticism of the institution of conscription jeopardized the prestige of the entire armed forces. Therefore in 2004 the MoD set a goal, with a simultaneous transition to an all-volunteer force, to consolidate social support, maintain the confidence and agreement of

the population towards understanding the country's international engagement and raise the prestige of a military career. [6]

In the area of public relations, the MoD has strengthened its cooperation with organizations that helped our smooth accession to the EU. In addition, it paid particular attention to cooperating organizations in connection with alliance membership and the liaison with NGOs to promote the cultivation of the traditions of the HDF and the public awareness of the armed forces. Through their involvement, it shows the most basic strategic goals to the public. The cooperation is based on the respect towards each other's sovereignty and, in parallel, the enforcement of mutual interests. The MoD continued to expand its cooperation with the local governments and public education and higher education establishments as well. [2]

As a result of the above changes, it was possible to create a high level of public support for the HDF in 2014, and at the same time, the Hungarian armed forces retained its public recognition due to its international involvements. Hungarian society recognizes the HDF's efforts. Society recognizes that, today, highly skilled Hungarian servicemembers perform their service with international recognition, but unfortunately still with outdated equipment. The training level and preparedness of Hungarian servicemembers is improving and it has been enriched with significant international experience in recent years. Career and contract servicemembers previously merely performed security and guarding functions or other support tasks. They are now able to fulfill real military tasks as well. Our servicemembers demonstrated all of these capabilities in Afghanistan, Iraq and other places in the world. [2]

Hungary's defense capabilities ensure the country's highly regarded contribution to peace and security in the Euro-Atlantic area. The work carried out during the military transformation has also been directed to encourage the Government, according to the Hungarian foreign policy objectives and careful analyses of the current European security environment, to ensure the reliable foundation of the Hungarian military modernization capabilities.

Hungary constantly needs servicemembers assuming the armed defense of the country, professionally prepared, physically and psychologically fit senior officers and officers, non-commissioned officers (NCOs) and contract servicemembers with appropriate knowledge, expertise, high level of training, and also volunteers whose mission is a noble one, carrying the values of patriotism, dedication, courage, sacrifice, camaraderie and solidarity. Only servicemembers, prepared and trained at a high level and who regard their military career as their vocation of life, are able to meet these challenges. These are the people who are willing to endanger their lives and be away from their families in remote missions.

During the structural transformation of the HDF, a radical change was performed at unit level, where the period of stabilization and technical upgrade and salary increase started this year. The most important thing is that, during the next four years, the servicemembers' salaries will be raised by an average total of 50%. From mid 2015, an average 30% salary increase will represent the first step. [2]

Career and contract servicemembers are rightly proud of the work that they performed during international and domestic tasks in mission in recent years; in particular to ensure the preparedness of national defense, in order to achieve the objectives of modernization stipulated by the Defense Review and the transition of an all-volunteer force. From 2015, a period of stability and predictability allows more attention be devoted to, in addition to their official duties, camaraderie, renewal of the service culture, strengthening the cohesive force of military communities, an appreciation of human values, also to respect disciplinary and

ethical norms. The inception of the all-volunteer force provides the ground for the HDF to become more professional in the coming years. [2]

The development of the new military career model began in 2010. Its most important elements compose the human resources strategy of the HDF in the period between 2012 and 2021. Its purpose is the development of a new, attractive and credible military career model. In the framework of the Magyary Zoltán Public Administration Development Program, human resources functions connecting public services have been developed, public administration modules and subjects have been introduced in military higher education. [2] [14]

Currently, there is a clear career path before each servicemember in the predictable advancement system of the HDF. The rigorous evaluation system aims at enabling only the finest servicemembers to serve the defense of the homeland. This is supported by reformed NCO and officer training. In the new promotion system, each servicemember can choose from two types of career paths. The target may be a higher or command position, specialization or expertise in any personnel category. The career model of the HDF supports both career paths. Concerning salary management, personal expenditures do not reach 50% in HDF, in contrast to most of the NATO military forces (there is a NATO member, where this figure is around 70%<sup>5</sup>). [2]

The basis of the current human resources strategy of the HDF is characterized by a credible and attractive military career model, uniform job circumstances and a uniform system of salaries, allowances, subsidies, coordinated with other public service careers. A military career is based on outstanding and regularly checked performance, professionalism and personal motivation. The basis of the performance evaluation system supporting the functioning of the military career model is the joint service methodology. The Public Service Performance Evaluation System (PES) contains an assessment of individual job performance requirements, and the assessment of competence-based work conduct (these are mandatory/identical elements of all three cadre categories), but, besides the afore-mentioned, it assesses the special defense characteristics: physical fitness and military training tasks. The determination of requirements and assessments has been done since the beginning of 2015. The assessment of officers and senior NCOs will be held annually, and occasionally for junior NCOs. The functioning of the PES is supported by a special software in the case of officers and NCOs. In the case of officer cadets and NCO students and volunteer reserve servicemembers, it takes place manually with the help of individual assessment sheets. [14]

The center of the evaluation system is the Military Examination Center of the Faculty of Military Science and Officer Training of the National University of Public Service (NUPS), which serves the unbiased measurement of the general military knowledge of servicemembers. The Military Examination Center, besides supervising and implementing the examinations, coordinates the elaboration of curricula of the examinations, registers the applicants and evaluates the results. [7] [11]

The establishment of human resources (HR) offices also serves to support military careers. [11]

An important component of the military career model is predictable advancement. Every year, an advancement ranking is made of servicemembers who are planning for advance-

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5 In the near future, besides personnel expenditures, technical upgrade will also be funded: in 2015, the upgrade of the HDF Pápa Airbase, the costs of which may exceed even USD 80 M in the coming years. These resources will be allocated by the Ministry of National Economy for the MoD. [2]

ment, compiled by the HR Directorate of the Defence Staff. In the process advancement planning of the HDF – except for assignments in chief warrant positions that are made at local level – central planning is decisive. Appointments to senior positions, coordinated by the HR Directorate of the Defence Staff, are the results of cooperation of competent commanders, professional managers and qualified individuals. If a servicemember no longer has the possibility to advance, he will get the opportunity to use the knowledge acquired to find a job as a public employee, such as a police officer. [2]

One of the most important elements of the model is to create interoperability between public services. Ensuring the opportunity to be further employed, following the closure of an active military career is also a part of the career model. The aim is to provide an opportunity to all military officers who leave the armed forces, to be able to continue as government servants. [14]

Those leaving through no fault of their own may become part of a special group in standby personnel status, the so-called public service reserve personnel, creating the basis for being transferred from cadre (professional) service relationship to another field of public administration. At NUPS the same training and education is provided to police and military officers, and civilian officials through a joint module of up to 15 subjects. Due to this, those graduating, may later work in other fields as well. [14]

## The Transformation of Officer Training

Since the suspension of conscription, citizens' knowledge of home defense has significantly decreased, an increasing proportion of the population does not have any knowledge of the defense of the homeland. This fact incurs the danger that our country's citizens in relation to compulsory military duty, in a special legal order, would not have any knowledge of the obligations imposed on them, and the persons not of servicable age, business organizations and other members of the society will not know their rights and obligations under the Defense Act. This may decrease the defense capability of the country as well, but in a preventive defense situation it would slow down, even in an optimal case, the introduction of a general draft, deteriorating the country's defense capabilities with immediate effect. [7]

It is essential that, from primary to tertiary education, at all levels, both the knowledge concerning home defense issues and the HDF and the knowledge concerning the Fundamental Law in relation appear. [7] [11]

In military science training, in particular, this knowledge must be highlighted. One of the basic aims of higher education is to publicize the significance of home defense, sovereignty, missions, tasks and activities of the HDF, and its role under the Fundamental Law, and through these notions to develop a relationship towards home defense. The system of military higher education will be able to provide such a way, in the long run, in order that professional servicemembers be always familiar with the framework of the legal functioning of the country, and within it, of defense, and to have information on the missions and tasks of the HDF and on the safeguarding of the sovereignty of the country. The development of this training system is the direction that is suitable for acquainting the wider public with knowledge of defense, and at the same time serving the effective functioning of public administration of the country before and during classified periods.

Peace support training and public service interoperability became two newly emphasized elements of officer training. The reason for preparing peace support is our country's broad

international participation, as described in detail in the previous chapter. The training sessions go on in the framework of the subject peacekeeping knowledge,<sup>6</sup> the students receive credit points for the allocated lesson hours and the subject is completed by issuing a practical evaluation mark. As of 17 November 2014, the HDF took part with 659 persons<sup>7</sup> in such operations. [12]

In the spirit of interoperability, officer undergraduates prepare themselves during two terms in 250 hours to pass the public administration exam.<sup>8</sup> During their studies for the public administration basic exam, they acquire the general public administration knowledge necessary for their everyday work. [14]

Public service interoperability, the mobilization between cadre categories, is strengthened by a public service common module, since September 2013, which resulted in the teaching of 15 common subjects to cadets. The subject of policing theory and law enforcement instruments provides insight into the concepts of policing and organizational systems. The subject of military operations and military theory deals with strategy. Security studies deal with the European Union and NATO organizations. Constitutional law deals with the Fundamental Law and the Hungarian legal system. The subject of State Organization deals with the operation of these organizations. The subject of Disaster Management Administration teaches the cadets protection against disasters. The subject of National Security Studies deals with the detection and management of risks, threats and dangers related to national security and the national security organisations. The subject of Public Administration Functions and Operation teaches undergraduate officers the duties of public administration. The subject of Political Science describes the social and economic system. General Sociology describes social stratification, mobility, cultures and norms. The subject of Leadership and Management Theory deals with managerial career, organization conflicts, including how to solve them. The subject of Public Service Logistics introduces to officer cadets the basic logistics concepts. Public Services and State Budget Theory advances the student towards understanding academic subjects such as economy and public finances, subsystems and other factors affecting them. During joint public service exercises they practice in real-life situations. [14]

One of the aims of officer training is to enable future officers to fulfill general tasks (e.g. command and control), non-commissioned officers to perform specialist tasks (e.g. communications). Related to this, after specialization, in officer training and after the preparation and adoption of the model curricula, starting from the 2013/2014 academic year, the following three basic courses are offered: military leader (infantry, armored, reconnaissance, artillery, engineering, air defense and chemical defense), military logistics (transport, defense technology, military supply) and military operators (radio-electronic reconnaissance and electronic warfare, military information technology, communications, air traffic control, military flight engineers). If we consider that, at the Military Sciences and Officer Training

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6 For instance, 15 undergraduates of NUPS took part in basic training on 24–28 November 2014 at the HDF Peace Support Training Centre.

7 Based on the lecture “Transformation of the Hungarian Defence Forces”, delivered by Colonel Tibor Jancsek on 4 December 2014 at the 10<sup>th</sup> Anniversary of the All-Volunteer Force in Hungary Workshop.

8 *Public administration* basic exam must be taken after establishing public servant or government servant status: within one year in case of a junior clerk, within two years in case of a desk officer, otherwise the status of the public servant terminates by force of law. During the preparation for public administration basic exam, public servants with different school certificates acquire their general public administration knowledge necessary for their everyday work.

Faculty of the NUPS, only one year ago, 11 basic courses were taught, the trend is clear. The further changes in officer training, associated with the suspension of conscription, are that the subordinate personnel are, at the most, trained but not educated by officers. The subordinates (volunteer reserves and contract servicemembers) are nowadays “employees” and do not serve based on military obligation. The subordinate staff is especially screened for physical, mental and health conditions after entering the files, where proper schooling is only one of the basic criteria. The officer corps may demand incomparably more of the current contract personnel than of the conscripts compelled to be drafted, sometimes struggling with social and educational problems. [14]

Led by the dean, the Faculty of Military Sciences and Officer Training of the NUPS, at present, Hoi carries out the training of officer undergraduates, preserving military traditions and meeting the contemporary challenges, in a cyclic training system, which consists of BSc and MSc level education of military cadets and officers. The Military Examination Center serves for the measurement of general military knowledge of servicemembers. The center coordinates the development of teaching materials of exams in addition to conducting the exams, registers the exam candidates and evaluates their test results. [14]

The dean, within the framework of the Military Leadership Training Institute, the Military Operators Institute and the Military Logistics Institute of the Faculty of Military Sciences and Officer Training of the NUPS, directs education and training, and the military science and technical research. The faculty institutes have highly trained military instructors and advanced specialized classrooms and labs, equipped with instruments of international standards. The senior management staff courses, retraining and refresher courses at the Faculty of Military Sciences and Officer Training of the NUPS also offer a high-level individual specific knowledge basis for the undergraduates. [14]

The Foreign Language Training Centre ensures the acquisition of language skills and the Language Exam Centre conducts examinations. Undergraduates, students and other course participants may reach a general level in English, and under specialized language training, a STANAG 3 level. In French, they may acquire an adequate level in the ARMA<sup>9</sup> language exam. [14]

## Summary

Since the radical transformation of military officer training, and in general, of the defense and public administration system, such a short time has passed that it is yet impossible to evaluate them. For the time being, one may ascertain that they are supported by both military personnel (salary increase, public administration interoperability, etc.) and the society. The brand new evaluation system aims at enabling only the finest and most respected servicemembers to serve the defense of Hungary. The purpose of this article is to summarize the legal processes, public and defense administration, and the main objectives of the Ministry of Defense as well. By these processes Hungary became a relatively influential factor in NATO, especially much more influential through its capabilities of managing regional and global conflicts. This radical transformation has opened new dimensions of security guarantees for Hungary, which is highly important during the present regional conflict in Europe.

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9 ARMA is an accredited bilingual military professional language exam system, which is available in nine languages (English, French, German, Italian, Croatian, Serbian, Slovakian, Russian and Ukrainian).

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# Welfare Theories in Family Politics

KRISTÓ Katalin<sup>1</sup>

*The welfare state is one of the most frequently used social science terms that causes arguments or political discussions. The role of the state in the development of its social role has changed through time, and parallel with this, the term welfare state has changed too, as well as theories regarding the welfare state. In this study, the author's main goal is to summarise the different theories of the welfare state. Following this, a special approach will be shown in terms of the categorization of the welfare state to show its role in a special welfare: i.e. in what ways does it support families. This view has not received much attention in detail in the literature so far.*

**Keywords:** welfare state, family politics, social politics.

The welfare state is one of the most frequently used terms that causes arguments or political discussions. It is a phrase from social science. Many times it is mistakenly thought of as a term connected to a developed economy and high standard of living. Nonetheless, it is also true that states which provide high standards of social welfare do possess these two things. There are many definitions for the welfare state but there is not one exact term that is agreed on in the literature. The welfare state refers to a state that takes responsibility for its citizens' welfare on a given level, for their social safety based on a system of earnings and social services. [1]

The role of the state in the development of its social role has changed through time, and parallel with this, the term welfare state has changed too, as well as regarding the theories of welfare state. In this study, the author's main goal is to summarise the different theories of welfare state. Following this, a special approach will be shown in terms of the categorization of the welfare state to show its role in a special welfare: i.e. in what ways does it support families. This view has not received much attention in details in the literature so far.

Lebeaux and Wilensky started to categorize the role of state according to their role in the welfare system in 1956. They created two groups to differentiate residual and universal welfare states. In the residual state, the social role of the state is reduced to a minimum because it concentrates only on a safety net for the poor. Opposed to this, the universal or institutional welfare state offers public programmes to many social groups and the main goal of the state is to provide the social welfare services itself. Lebeaux and Wilensky saw these two categories as progress from the residual towards the universal with the latter becoming a dominant one. [2]

In 1980 Korpi had a theory for a marginal and institutional model, but he saw these regimes as able to exist side-by-side, not necessarily one developing into the other. [3]

Chronologically however, the most well-known and one of the first attempts at categorizing is connected to Titmuss, who defined three types of welfare state types in 1958, from which Lebeaux's and Wilensky's residual state theory comes from. So, Titmuss' resid-

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ual theory is as described above. The second is the system of “industrial based efficiency”, that focuses on social security and appurtenance, so the welfare system has a huge role in this model. Titmuss defines the third model as the “institutional redistributive” welfare state where the state takes responsibility for the goodwill of its citizens. [4]

Following very closely in Titmuss’ footsteps is Gosta Esping-Andersen, one of the most frequently quoted typology derives from him, and he also – similarly to Titmuss – differentiated between three different models: the welfare model of the northern states and the liberal and continental welfare model.<sup>2</sup> [5]

Upon creating these models in 1990, Esping-Andersen examines the state’s socio-political features and to a lesser extent the family side, although in his work we can find references to family politics. Because of criticism on his gender-based work, in 1999, he reworked his study and thought of children and women too. He calls our attention to the risks of economic competition and the welfare system if the burdens on the family, but more importantly on women, are not lifted by the state. (In this study, the author looks at the reworked typology.)

In Esping-Andersen’s theory, groupings are based on the three pillars of welfare: the role of the state, the family and the market and how spread the programmes and institutions are of the welfare state. Those Northern European countries where the state’s social role is very strong are placed in the Northern European group. Prevention is put in focus by this model meaning that the citizen should remain an active part of the labour market as long as possible, but even should he/she fall out or he/she will be eligible for a wide range of social allowances. [6: 235] Esping-Andersen highlights, that the mentioned “activation policy reduces unemployment as well as doubling the positive effects of services given to families: it enables women to have children and to have a career as well to maximise the ratio of the employed.” Esping-Andersen puts Ireland and Great Britain in the “liberal” welfare model, similar to the United States, which supports the solution that the market offers: it urges private welfare service and minimises the responsibility for market setback. In this model, the role of the state is residual and focuses on those in need and is restricted to services for the “registered” poor citizens. Benefits are linked to being active in work which does not help the unemployed, and to get these rights women with small children need cheap institutions to take care of their children.

According to Esping-Andersen, in most of the countries in Europe the classic family welfare responsibilities are typical. This family-concentrated feeling is strengthened even more by the dominance of social insurance. In this model, the most important thing is the safety of the main (usually male) breadwinner’s role.

The “family’s exceptional welfare role can yield against risks of social exclusion but at the same time it has a negative effect on women’s endeavours for economic independence. It can be shown, that the most important factor of the family-based welfare-system is the low birth rate.” [7]

Nowadays however the categories set up by Esping-Andersen cannot be taken as a generally used model since less and fewer countries can be categorised into one type. Still, this

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2 Gosta Esping-Andersen in his work entitled *The Three Worlds of Welfare Capitalism*, published in 1990 described the three types of welfare states as corporate, social democrat and liberal. He uses the categories quoted by us in his developed work, entitled *Social Foundations of Postindustrial Economies* and published in 1999. Later, because of criticism about his work, he supplemented these categories with two more, the Mediterranean and East-Asian model.

model is perfect for showing that welfare services can be categorised into a system and therefore give us some idea of the sociopolitics of the given country.

Although Esping-Andersen's model is still one of the most frequently quoted typology, it has been criticised many times from different directions. In 1991, Castles and Mitchell defined a fourth type to go with Esping-Andersen's three existing ones, naming New Zealand, Australia and Great Britain, and named these a radical welfare system. According to these authors, state division is only true for the poorest and people most in need as well as stating that the states in this group have the lowest welfare spending, but with equal salary. [8]

Leibfried in 1992 examined the welfare states along two main lines: the development of the social citizens and the success of the system in its fight against poverty along a dimension. Leibfried also found the solution in a fourth type which in the early stages he called an elementary welfare regime, and put the South European welfare systems in this group. [9]

In 1996 Ferrera also developed a system of four grades with the names of Anglo-Saxon, Bismarck, Scandinavian and South European. [10]

Korpi and Palme had five types by 1998 and defined these categories as independent state financed, corporate with basic safety. [11]

Most of the criticism relating to Esping-Andersen relates to gender and these are the criticisms with the help of which we gradually get to the attempts to categorize the welfare states of family politics. The absence of gender roles was heavily criticised by Lewis, Ostner, Orloff, Siaroff and Sainsbury.

Jane Lewis and Ilona Ostner differentiated the welfare states based on how well they are built on the classical man and woman role dichotomy, more specifically, the man as the breadwinner and the woman as the carer. The classical "male breadwinner model's" features are the following:

- the man's salary is enough to satisfy the family's needs;
- both parties' social rights are connected to the man;
- typically it is the man who gets the financial benefits from the state;
- the state does not take the burden of taking care of the dependent family members responsibility from the woman. [12]

Orloff in his work in 1993 defines the theory of Esping-Andersen as having categories that reflect the standards of men; however a welfare state means different things to men and women as well. When speaking of women, one should speak of the access to work and the opportunities of an independent household in connection to the analyzing of welfare state's effects. [13]

Siaroff in 1994 – also based on a gender based approach – in addition to the three classical types speaks of a fourth one as well, that is about the late mobilization of women, and can be seen in Mediterranean and Asian countries. [14]

The Lewis-Ostner line of thought was developed further by Sainsbury who pointed out that the male-breadwinner model is one dimensional and is not able to tell a difference between the welfare regimes. Sainsbury defines two models: as opposed to the male-breadwinner model she defined an individual model in which the man and wife share the family's financial needs and the nurturing of the child as well. [15]

Later Sainsbury talks about the two-earner-model, emphasising the role of the state in the employment of women. [16]

Lewis' research later focused on home care. This work by women could mean taking care of children, volunteer work in a civil organisation, taking care of the elderly or a disabled relative but also includes taking care of ("whole" men) other family members. Whether to pay women for this work or for the government to organize this work in an institution is a fertile ground for arguments to this day, as the latter would enable women to be available on the labour market. [17]

In the centre of Korpi's typology is the equality of chances between nations. In the two dimensional model the family policies are differentiated based on whether they support the traditional or two-earner model. So we can see that Korpi has modelled his categories based on Lewis' one dimensional, male-earner model and on Sainsbury's later, two-earner model. Based on this, the author differentiates three family policy regimes. He lists among the supporters of the classical family model France, Austria, Germany and Belgium. Among the two-breadwinner nations he puts Denmark, Sweden, Norway and Finland. Finally, he identifies Australia, Great Britain, New Zealand, Canada, the United States of America and Japan as liberal, market-oriented states that implement family politics. [18]

Haas was the next person who developed further Lewis' theory of home care with his system of parental leave and women's labour market, grouping the nations of the European Union's 15 existing states of the time. Haas differentiates between four types: privatized, family oriented, market oriented and intensive model. In the privatized, or in other words non-interfering model, nurturing is a women's role and work is a man's role and thus very much divided. The Southern European countries grouped in this model allowed parental leaves only in 1998 in a limited number because of European Union recommendations. In these countries, the employment rate of women is very low and the rate of unemployment among them is double that of men. In the family oriented model fertility is in the centre, the employment of women is average but the institution of parental leave exists (typically three years with few perks). Austria, Germany, Belgium, Luxemburg and France are in this group. For countries in the market oriented group parental leave did not exist before the European Union introduced it and the state does not support institutional child care. In spite of this, the employment of women is quite high, especially among part-timers. This can be best seen in Great Britain, Ireland and the Netherlands. In the Scandinavian countries, equality both in the job market and in care is given to both parents. To enable this, a high standard of institutional childcare ensures freedom for the parent as well as childcare leave for both parents (with a high substitution ratio). [19]

Wall's model has a similar logic to Haas' parental leave system. This model typifies the institutions based on three main aspects in order to resolve the dilemma of the family and work. The first is the division of paid and unpaid work within the family, the second is the design of motherhood as a social aspect and the third is the cultural dimension between the working parent and the welfare state. Based on the above, he sets apart six types by analyzing nineteen European countries. The first type is characterized by a one-year parental leave (Sweden, Denmark, Iceland), the second is the group of countries that support parental choice (Finland, France, Belgium), the third is home care focused (Germany, Hungary, Czech Republic), the fourth model is characterized by short parental leave and part-time work (The Netherlands, Great Britain), and in the fifth category the emphasis is on a short leave and the male's role as breadwinner (Italy), and finally, the sixth model supports the return to full-time work (Portugal). [20]

The improvement of the theory of “familism” is by Leitner,<sup>3</sup> and it marks the welfare regimes according to how the state solves the care of the child, the elderly and the handicapped within the state – market – family triangle. (Familism is defined as a social structure where the needs of the family are more important and take precedence over the needs of any of the family members.) Leitner separates four models. In the first model, explicit familism, the state acknowledges only the responsibility of the family in the carer’s role and encourages care at home with no alternatives. The second type is optimal familism which also promotes home care but in this model there is room for alternative solutions too. In the third category, implicit familism, the state does not support the families in how they care for their loved ones and does not provide any alternatives. The fourth model’s main aim is defamiliarization, where the state creates services where the burden is taken off the family’s shoulders and resolves the issues by creating institutions to care for those who are not able to care for themselves. [21]

Bettio and Plantenga created five categories with care in the centre of attention but also focusing on children’s and elderly people’s care. In the first group we can find the countries where the state shifts every task to the family, especially the women. As a result of this, the state prefers pecuniary care to services, and this shuffle favours the elderly opposed to small children. Typically South European countries belong in this group (except Portugal). For countries in the second group home care, or in other words informal care, is also very important however these children have a chance of services given to them by the private sector whereas for the elderly it is this state that provides the services. According to the duo, this is true for Great Britain and the Netherlands. The third cluster consists of Austria and Germany, where the care of the children is left to the family but they are supported by the state in financial terms. Belgium and France are in the fourth group where the state is providing more and more institutional support for both children and the elderly. In the last group are the Scandinavian countries where the institutionalised care for children and the elderly is universally available and the role of the family as caretaker is minimal. [22]

Thévenon classified the countries into five groups during his work examining the OECD (Organisation for Economic Cooperation and Development) countries in 2011. Scandinavian countries belong in the first group where continuous and high level of care is provided for parents raising children under the age of three (Denmark, Finland, Iceland, Norway, and Sweden). France, Germany, Luxembourg and Belgium belong in the second group where the financial support is typical but the model of two breadwinners is less popular. Anglo-Saxon countries give less natural allocation to working parents with young children, but instead high financial support is available to families raising pre-school children.

Countries in the fourth group have the chance to get paid leave in a very limited sense and the childcare opportunities are not so wide spread. According to the theory, south European countries belong here along with Japan and Korea. Eastern European countries are in the fifth group where typically the means-tested services are in the limelight while less emphasis has been placed on policies enabling women to combine motherhood with paid work. According to Thévenon Hungary stands out from this group because it offers a wider range of support to families with small children, the maternity leave is the longest here and financial support is generous as well (although according to the author, the poorest families get the least of this). [23]

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3 Leitner starts off from Kammermann and Kahn’s two element theory that differentiates between explicit and implicit family politics.

A very common criticism of theories of welfare states and models of family policies are that every such grouping is static since these models are not able to handle systematic changes in time. This static state is resolved by Pfau-Effinger's model of 2010 which separates three different types. The family politics in the first category are based on the man as the breadwinner with the state providing wide-spread support during childhood ages 3–6, but the allowance for children under the age of 3 is much slimmer. In this group parental leave is limited with no extra paternal leave for the father. In the second model equality for women is ensured by a wide-spread childcare system. In this type, universal childcare is available to the parents, yet parental leave is not so common and thus it not a necessity for fathers. The third type is quite flexible as it allows several options for parents with young children and the family policy practice of gender divisions. The differences between these theories are the fact of paternal leave which does not exist in the first case. Pfau-Effinger investigates the Finnish, German and Spanish states' political history, the changes in tools and categorizes based on the change in goals. [24]

By looking through the welfare states and their family policies we can see that each author has his own typology even if it differs in only some small detail, like the name of the regime or the groupings of the countries.<sup>4</sup> The models of family policies concentrate on the two questions of the classical family model or the the two-earner-model. From this, we can conclude, that the most important question in the literature on family politics is the role of the woman, the mother, how this role changes and in what way it influences the rethinking of the institutions. As a result we see how important it is to be able to choose between the different services. Therefore over the years, the importance of choice has become more and more important, whereas in the past it got hardly any attention at all.

Makay and Blaskó also draw our attention to this very fact. "Over the last years more EU members have modified their system regarding financial support for parents with young children. The main direction of the latest modifications is regulations relating to having a choice of financial support. In the background is the idea that by providing flexibility to mothers they will be able to harmonise work and motherhood." According to the authors, every family support theory can be considered flexible that gives a chance to the parent (in particular to mothers) to be able to decided how much time they would like to spend at home with their child and in what way they would like to achieve this as well as when and how they would like to go back to work. [25: 50] In other words, the family support system enables the free choice for the parent to finally not have to choose between work and the family and the state support will accommodate the family's choice. The authors agree that the flexible or partly flexible system of financial child support works well in many European Union countries, the most flexible considered to be in Belgium, the Czech Republic and France.

The Hungarian family support system is considered rather rigid, but an important flexible feature of this system is that fathers can also apply for the support. Another advantage is that from 1 January 2014 the so called Child Support Extra means that should the parent return to his or her workplace a year after of the child's birth, the original financial support will still be available for the full period. This still does not make the Hungarian system flexible, but it is a big step forward in order to achieve it.

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4 Not to mention the latest research in connection with the welfare states which concentrate on how globalization effects the typology of the welfare states, or the coordinated mechanism of the European Union's social security systems or spontaneous harmonization.

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# The Info-Communication System Requirements of the Deployable Rapid Diagnostic Laboratory Support “Sampling Group” II.

FARKAS Tibor,<sup>1</sup> HRONYECZ Erika<sup>2</sup>

*The purpose of the authors of this article is to present the information connection system of a sampling group which supports the professional activity of a deployable rapid diagnostic laboratory. Considering the above, the authors of the article investigate the applicable technologies, the possible technical devices and give suggestions for the implementation. This article follows the article published in AARMS. [1] The article is made with the support of project TGYDGL09 “Deployable Rapid Diagnostic Laboratory”.*

**Keywords:** biological laboratory; communication system; land warrior; communication network

## Introduction

The basic skills and requirements of the info-communication sub-system of the sampling group and its information connection system have been presented in the first part of our article. Subsequently, a possible solution of the external communication of the group (laboratory-sampling group relation) has been presented. Continuing the research, in this article we examine the abilities and the possible solutions of the internal communication of the group.

The internal communication contact of the activity of the laboratory supporting sampling group is one of the subfields of the mobile, deployable biological laboratory. The sampling group installs in a specified, designated area and executes the sampling procedure. The process is controlled by a leader who has to be in continuous communication connection with the sampler or samplers during the sampling procedure.

Accordingly, the channel (link) which can be used in different terrain conditions provides appropriate communication support. The task can be executed in open terrain or in terrain with objects, between buildings or in buildings, so we have to choose a transfer technique or technology which can be used in such varied conditions.

The connection realizes a continuous voice communication in order for the communication of the instructions and a one-way video communication for the implementation of the monitoring of the activity. In order to do more precise task execution – which can be analysed later – it is necessary to provide the video and voice recording and to take pictures of the sampling process.

In view of these needs it is necessary to implement a system which is able to build up a complex wireless communication link to ensure a fast and reliable connection in variable

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terrain conditions with voice and video signal transmission. It is important to have reserves, therefore the transmission of short text messages can also be used to support the tasks.

Based on the requirements the communication link must be able to:

- bridge small and medium distances;
- establish voice and data connection (video, still image);
- fast installation and connection;
- reliable transmission of information;
- appropriate permeability. [1]

## **Basics of the Internal Communication of the Sampling Group**

The internal communication of the sampling group has to be established as previously described. The group begins to carry out its duties, the process of sampling after the deployment to the specified area. Then they divide into two groups.

One part (the leader) manages the activity from the deployed area. This person has to be in continuous connection with those who carry out the other sub-tasks, the actual sampling activity. The professional management of the sampling group needs an online connection which is able to establish a connection in all terrain conditions. Besides the open terrain, it has to be able to maintain the communication between buildings, possibly from buildings depending on where the sampling is done.

The sampling process can take several hours (Approx. 6–8 hours) which can affect the future task performing of the group. After arriving the biological assets are installed and the samplers prepare for the sampling. Besides the protective and sampling equipment, it is necessary to provide the appropriate communication tools which are able to meet the communication needs described so far. [2]

Therefore, as previously listed, we need a way of connection which provides the appropriate voice, image and video transmission but – compared to the direction of the “external” bio-laboratory – a significantly smaller distance must be provided in this case.

The simplest communication solution is the radio communication link. Its great advantage is its fast connection, suitable for voice connection and possible data connection between various terrain conditions. It can be realized as described above. In addition, the radio voice connection is the most appropriate way to establish voice communication. For the transmission of images and moving images it is necessary to apply a technology which is able to reach a higher speed. The solution can be an IEEE 802.11 standard (Wi-Fi) technology which operates in 2.4 GHz; 3.7 GHz; 5 GHz range and which can be suitable for data communication by taking the effective range into account (see on Picture 1.). The technologies which operate in two different frequency ranges can complement each other without any interference in the system.

802.11 network standards										
802.11 protocol	Release <sup>[5]</sup>	Freq. (GHz)	Bandwidth (MHz)	Data rate per stream (Mbit/s) <sup>[6]</sup>	Allowable MIMO streams	Modulation	Approximate indoor range <sup>[citation needed]</sup>		Approximate outdoor range <sup>[citation needed]</sup>	
							(m)	(ft)	(m)	(ft)
—	Jun 1997	2.4	20	1, 2	1	DSSS, FHSS	20	66	100	330
a	Sep 1999	5 3.7 <sup>[A]</sup>	20	6, 9, 12, 18, 24, 36, 48, 54	1	OFDM	35	115	120	390
b	Sep 1999	2.4	20	5.5, 11	1	DSSS	—	—	5,000	16,000 <sup>[A]</sup>
g	Jun 2003	2.4	20	6, 9, 12, 18, 24, 36, 48, 54	1	OFDM, DSSS	38	125	140	460
n	Oct 2009	2.4/5	20	7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2 <sup>[B]</sup>	4	OFDM	70	230	250	820 <sup>[7]</sup>
			40	15, 30, 45, 60, 90, 120, 135, 150 <sup>[8]</sup>			70	230	250	820 <sup>[7]</sup>

• <sup>A1 A2</sup> IEEE 802.11y-2008 extended operation of 802.11a to the licensed 3.7 GHz band. Increased power limits allow a range up to 5,000 m. As of 2009, it is only being licensed in the United States by the FCC.  
 • <sup>B1 B2</sup> Assumes short guard interval (SGI) enabled, otherwise reduce each data rate by 10%.

Picture 1. IEEE 802.11 Network standards. [3]

To achieve this, the carrier vehicle of the sampling group must be equipped with the right tools which should be installed after the arrival. For a more precise and efficient connection, the sector antennas should be placed in the right direction to ensure the optimum connection with the samplers. Then the leader can manage the sampling through the established connection. The achieved connection works on a similar principle to the connection system of the “digital soldier – land warrior”.

The digital soldier is the best-equipped soldier of the battlefield who connects to the theatre of war with computers, wireless communication and by using GPS. The personal communication system provides the ability to perform all the tasks with the appropriate support such as the digital map, picture and voice commands, messaging options. [4] In order to achieve the above mentioned, they have to possess complex information technology and a communication system which allows the detection, the communication and the integration to the digital battlefield. One part of the equipment is the *helmet sub-system*, which includes a computer interface which ensures the map display and the images of the cameras placed on weapons through a mini-display. As a sub-part of it, the microphones and the earphones allow voice communication. The second sub-part is a *control unit*, which provides the changing of the display image, the radio is manageable with it, and it also allows the transmission of data. The *weapon sub-system* consists of several components. Besides the firearm, its component is the laser distance meter which helps to determine the distance of enemies and other landmarks. The thermal camera provides overnight image, the digital camera sends continuous pictures to the soldier. The data of the distance meter, the camera and the thermal camera are transmitted to the leader (superior) with the help of the control sub-system which is the next sub-system. The *control sub-system* includes the control unit for the video image of the weapon and the multi-functional radio device.

# LAND WARRIOR

Staff Sgt. Brian Tidwell of B Company, 4th Battalion, 5th Infantry Regiment wears the Manchu version of Land Warrior. The 4-9 recently completed a year in combat in Iraq. They were the first unit to take the sophisticated command and control system into battle. Leaders equipped with Land Warrior say the system helps cut through the fog of war with a constant flow of information they've never had before.

GRAPHIC BY CHRIS BRONZ/STAFF  
PHOTOS BY BOB CLYBURN/STAFF

## GPS ANTENNA

**Dimensions:** 3" diameter  
**Weight:** 0.24 pounds  
This flat disc attaches to the soldier's load-bearing equipment and connects Land Warrior to satellites overhead to allow the soldiers to pinpoint his position and the locations of other Land Warrior-equipped soldiers.

## SOLDIER CONTROLLER UNIT

**Dimensions:** 6.11" (L) x 3.47" (W) x 1.47" (H)  
**Weight:** 1.13 pounds  
The soldier control unit acts as a "tactical mouse," allowing the wearer to access Land Warrior features such as maps, graphics, satellite imagery and messages with the touch of a finger.

## CPU

**Dimensions:** 9.0" x 7.25" x 2.77"  
**Weight:** 1.5 pounds  
The central processing unit contains a microcomputer processor for managing information flow, sending and receiving text messages and storing digital maps, graphics and images.

## PELTOR HEADSET

**Weight:** 1 pound  
This is a standard audio headset with a microphone used by combat units. It plugs into Land Warrior for use with the voice radio.

## HELMET-MOUNTED DISPLAY

**Dimensions:** 7.13" x 1.88"  
**Weight:** 0.42 pounds  
This component resembles a miniature computer screen that allows the soldiers to view the terrain before him, track the location of his unit members, mark objectives, read text messages and view other mission-related information.

## NAVIGATION SUBSYSTEM

**Dimensions:** 7.84" x 7.25" x 2.95"  
**Weight:** 1.15 pounds  
This contains the GPS and digital compass for use in land navigation for tracking the wearer's positioning and heading on a map as well as the positions of fellow Land Warriors.

## HELMET INTERFACE ASSEMBLY

**Dimensions:** 3.63" x 0.75"  
**Weight:** 0.45 pounds  
This component links the Helmet Mounted Display to the other components of the Land Warrior System.

## VIEW OF BACK PANEL INTERIOR



## BATTERY

**Dimensions:** 8.66" x 3.54" x 2.57"  
**Weight:** 2.14 pounds  
Each Land Warrior equipped soldier carries two rechargeable Lithium Ion batteries, each capable of supplying 10 hours of power.

## LAND WARRIOR RADIO

**Dimensions:** 8.66" x 3.54" x 2.57"  
**Weight:** 1.45 pounds  
This is a voice and data radio system for communicating from squad and platoon level and up to higher headquarters level. Soldiers can send text messages and mission planning materials in addition to using it for voice communications.

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Picture 2. Complex control and communication system of land warrior. [5]

Similar to the theoretical structure of the presented (possible) digital soldier, the info-communication equipment of the samplers can be constructed to achieve continuous connection with the governing member of the sampling unit. With the help of the resulting system after the deployment and the starting of the sampling process, the governing person is in a continuous connection with the samplers, can coordinate their work, gives them instructions and gets a complete picture of the progress of the activity to ensure a successful operation. [6]

Based on the analysed and examined technologies and procedures, it is important to elaborate and define the system of requirements for a specific type of device. Accordingly, the next chapter presents the internal and external communication connections of the sampling group.

In summary, it can be seen that voice and data communication are particularly important for the sampling group which – due to the convergence – appears as a basic requirement in several areas of communication nowadays. In order to successfully perform the task it is necessary to ensure sufficient amount of information, so that the activity will be carried out at a proper level without reducing its effectiveness. It is also needed to provide sufficient information for the leaders and thus to be able to give back up with appropriate information.

## The Implementation of the Communication of the Sampling Group in a Possible Version

After the installation the sampling group executes the collection of hazardous samples as defined. The system which provides a complex voice and data exchange is used as communication support. With the application of technologies and technical tools – based on the requirements and capabilities – the emerging needs of services can be completed.

The forwarding of two-way voice and one-way (toward the leader) images between the professional leader of the group and the samplers are a requirement. Its complement can be the exchange of short text messages which can be used as a duplication of a two-way voice-connection. The antenna installed on the central side (deployment area) makes it possible to establish a Wi-Fi connection within the coverage area. This contact provides a two-way connection which enables the system to exchange files and to run an IP-based chat program for a text on-line connection. In addition, if a “smartphone” is handed over to the samplers, the documents and pictures taken with it can be transmitted as well. This, of course, has significance as a complementary function, as a secondary connection.

The above described complex system can only provide the voice-, image- and moving image-based connection. In our opinion, a short-extends communication system like this is composed of several complementary layers.

The first layer is the *subsystem of terminal equipment*. The terminal equipment allows the visual recording of information and different forms of data inclusion. These include the camera, monitor, speakers, sensor, possibly data entry facilitating devices. It is important that the selected terminal equipment support the needs and that the forwarding information should be available in good quality.

The second layer is the *application layer* which – similar to the upper layer of the ISO-OSI model – carries out the management of upper-level protocols, presentation, encoding and control of dialogs. This system includes a variety of applications.

The *layer of services* determines what services the system can provide to the users with the help of the terminal equipment and the communication systems for example the web-service, cooperation, moving image display and transmission of text messages.

The elements of the *connection layer* (communication layer) are the communication tools and accessories of the system. The radios, antennas, satellite equipment effectuate the exchange of data and information. The communication tools always have to meet the needs of the users such as the form, the speed and the security of the information exchange and the quality and the quantity of data.

The last layer is the *standards and procedures layer* which includes the procedures and methods of the operation of the entire system. It guarantees the possibility of linking the several elements and the interoperability between them.

Considering all these, the elements of the complex system serving the internal communication of samplers are:

- Operator workstation (Sampling Leader):
  - micro server;
  - radio system;
  - visual surface;

- video server;
- antenna kit.
- Personal sampling equipment:
  - camera;
  - radio;
  - audio unit;
  - power supply;
  - antenna.

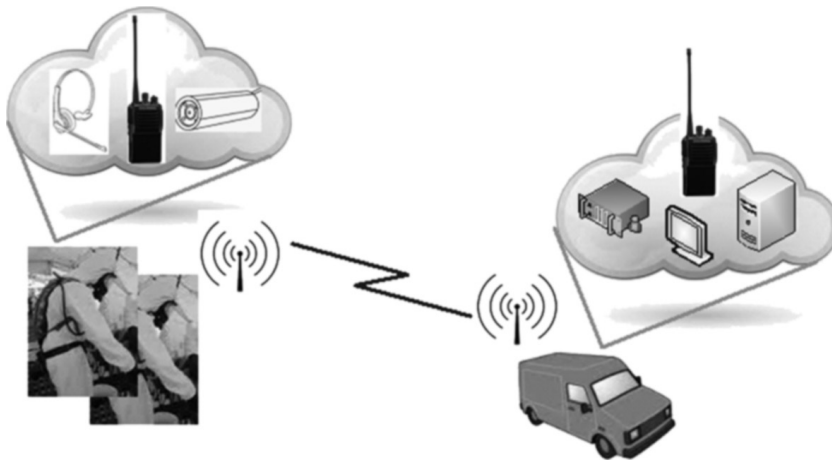


Figure 1. The sampling groups inner communication (between the main chief and the samplers). [Source: own]

The wireless technology provides the connection between the two endpoints. The antenna installed in the “operator” side can be – in terms of its type – a sector radiating or a circle radiating antenna which depends in each case on the location of the operation. The sampling activity can be supported and the efficiency of task performing can be increased with the appropriately chosen technology.

The system is able to establish a communication channel and to transmit the data as above mentioned. The complex structure of the system allows the connection.

### ***The Sub-Units Providing Two-Way Voice and Video Connection***

The most important element of the system is the VTQ ORCA radio system through which a one-way video and a two-way voice transmission can be realized. In addition, short text messages can be sent between the stations in the 9.6 kbps speed serial channel.

The receiving unit is an excellent complement of the transmission of the video sign. This tool was developed primarily for the media and the television and therefore it forms a perfect unit for the establishment of the continuous voice and moving image connection. The great advantage of the system is that it provides high image quality also at low signal levels. The formation of the tool is suitable for stable installation (in rack cabinet) and also can be placed in motor vehicles.

The main feature of the unit:

- 230–400 MHz frequency;
- COFDM (Coded Orthogonal Frequency Division Multiplexing ) modulation;
- H.264 compression;
- low (40 ms) time delay;
- built-in audio capability;
- easy handling OSD menu;
- 19" formation (standard);
- video antenna interface;
- mono audio output;
- two-way transmission of voice communication;
- two-way RS232 connecting interface for camera control;
- AES (Advanced Encryption Standard) (256Bit) or 3DES (Triple Data Encryption Algorithm) (168Bit) encryption.

The VTQ unit must be connected to a projector unit, a monitor, through which the leader can manage the sampling and continuously follow the activity.

Another element of the system is the micro server which connects to the VTQ unit. The server provides the digital processing of the signals. The incoming signal comes from the camera via a radio system to the VTQ. It goes through on a video digitizer unit where the video image can be displayed with the help of a web browser.

The importance of the server is that the moving image can be recorded by it in digital form (mpeg4) which is made during the sampling and the images can be made in .jpeg format as well. Another big advantage of the server is that these recordings can be transmitted on Ethernet interface and on-line moving images also can be transferred. The "Alvarion" Ethernet microwave antenna, or another, for example the VSAT (Very Small Aperture Terminal) antenna, can be used. Thus, the process of sampling can be followed not only by the leader of the activity but by the leader of the bio-laboratory or by the central leadership.

The other station of the system is the system of the units fitted to the sampler. The sampler establishes a connection with the operator with the help of a vest, a camera and a headset fitted to the protective clothes. The vest includes the transmitter unit for the transmission of the video signal and the transceiver unit for the voice transmission. A battery is placed in the vest for powering it with a capacity for 2–3 hours in continuous use. These devices provide a comfortable fit for the sampler without inhibiting the process of sampling.

The unit sends baseband CVBS PAL (Colour, Video, Blanking, and Sync Phase Alternating Line) video and voice signals for the central unit via the VTQ ORCA COFDM video and audio transmitter (receiver). The signals are transmitted/ received through the antennas fitted in the vest.

A further ability of the system is the transmitting of text messages and providing an online chat via the radio surface. It can be implemented by a hand-mounted keypad or a smartphone device which can be an appropriate backup connection between the sampler and the leader. If the distance allows, a Wi-Fi connection can also be formed but only at 2–300 meters distances with 802.11 technologies. The distance can be increased using WiMAX technology or with the application of steerable antenna. Of course the functions of the text messages can have increased significance when voice based communication is not possible. The radio unit of the system can be operated by circle antenna, the Wi-Fi unit by circle and sector radiating antenna.

## Conclusion

The first step of the task of the deployable rapid-diagnostic laboratory is sampling. After the deployment of the laboratory the sampling process must be initiated this is a long and complex process and needs professional support.

The samplers collect the samples from the specified field stage or contaminated area. The samples are sent to the bio-laboratory where the analysis is carried out. The biological test are easier if they have more information. This information has to be transmitted via the communication system of the bio-laboratory.

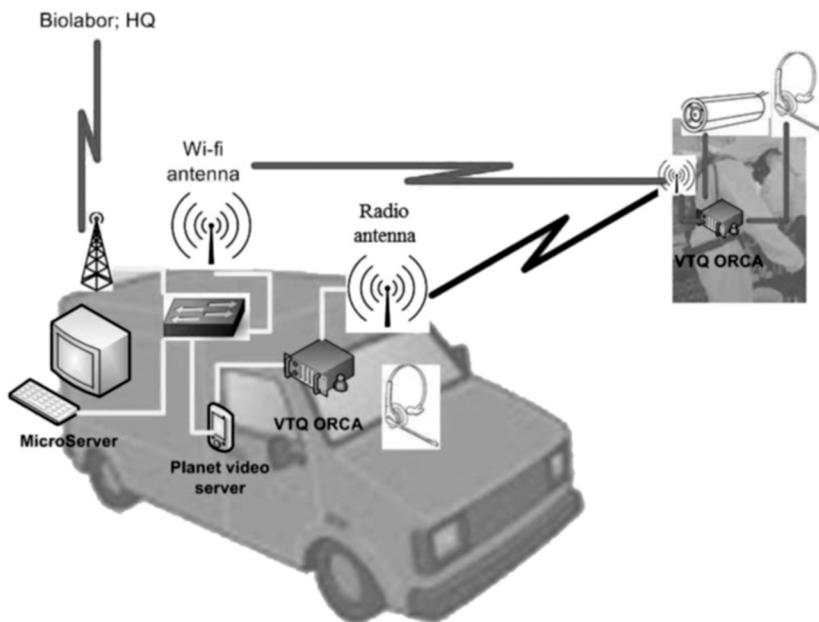


Figure 2. The complex communication and information system. [Source: own]

In terms of the information connection of the sampling group it defines two main directions. One is contact maintaining with the bio-laboratory, the other is the connection in the group. The process of the group's activity can be supported with the above described system principles. The established complex info-communication system is able to transmit voice and data and capable of supporting the sampling procedure which is the basic element of the successful task execution. It is important to highlight that the data transmission for the bio-laboratory or possibly for the higher level of management can be realized with this system. With the continuous development of the professional field and with the appearance of the new needs the system requires further development. This should certainly be taken into account in the planning of the system. The used technical tools and technology could be developed according to the needs.

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# Old Monarchy in the New Cyberspace: Empirical Examination of Information Security Awareness among Austrian and Hungarian Enterprises

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*Information security awareness is part of organizational culture, a way of thinking and behavior which ensures that the employees of the organizations are committed to acknowledging the legitimacy of security measures, they abide by them and they also make them known to others and enforce their application. After collecting empirical data from 280 Austrian and 470 Hungarian employees of different companies we concluded that the level of information security awareness of managers and employees in the Austrian and Hungarian business sector depends on company size. The level of this type of awareness can be regarded as good in the case of corporations both in Austria and Hungary. A good level of information security awareness was observed among the Austrian medium-sized enterprises. However, in a fifth of their Hungarian counterparts, the employees need further trainings in this area. Security problems can be traced back to poor organization at a fifth of the Austrian small-sized enterprises, a third of the Austrian microenterprises, and three-quarters of the Hungarian microenterprises. In 20% of the Austrian and Hungarian enterprises, employees have distressing gaps in their knowledge in this area, furthermore, it can also be concluded that employees with higher digital literacy have a higher level of information security awareness in Austria compared to the Hungarian business sector.*

**Keywords:** *Information security awareness, Austria, Hungary, Business sector, Enterprises*

## Introduction

As our information society develops, in other words, as more and more individuals, companies and governments use information communication technologies (ICT) – computers, information systems, mobile phones, intelligent sensors, internet applications, etc. – the more we are exposed to the new challenges of cybercrime, cyberterrorism, cyber espionage and – as far as governments are concerned – even to cyber warfare. [8] [19] The concept

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of the famous second part of the Terminator series “Judgment Day” and other Hollywood “end-of-the-world” movie scenarios where computer systems are attacked are not fictions anymore; there are real world examples of government conflicts exploited online, corporations’ hacked for stealing commercial information, and hundreds of thousands individual bank accounts compromised. [11] Kovács and Krasznay in their visionary article describe how the so called critical infrastructure – energy, water, transportation, electronic media and commerce – could collapse in Hungary if she was exposed to a systematic cyberattack from hostile enemies. [12]

The answer to these new ICT challenges are naturally new technologies, but regardless of the fact that many organizations have deployed hardware and software-based protection such as firewalls, proxy servers, anti-virus software, and password management, incorporating these technology-based solutions have not significantly decreased the security risks of organizations. As some research has found, risks and attacks are evolving to elude many current technology-based protections. [3] According to the 2005 Computer Crime and Security Survey conducted jointly by the Computer Security Institute and the Federal Bureau of Investigation, virus infection is still the most common security risk (73%), but insider abuse has come up to the second most common security risk item (47%), more common than denial of service attacks (32%). [6] Inadequate security awareness of users – the human factor in security – seems equal, if not, more important than technology. [5] [15] Anecdotal experiences of a leading training firm in Hungary show that these observations are especially true for small and medium-sized enterprises, as central regulation of security which is systematically used by larger corporations is less typical of them. [13]

Our intention has been to contribute to this stream of research basically by providing empirical evidence for the relevance of information security awareness (ISA) in corporations. For increasing generalizability we have chosen companies of different sizes in Hungary and Austria, the research design has enabled us to compare ISA in two different yet similar economies. On the one hand Austria and Hungary have been closely integrated in the EU through their history, culture and intertwining business relations. On the other hand, both the level economy and information society are different in the two neighboring countries which according to our hypothesis impacts ISA.

The structure of the paper is as follows. First, we introduce the concept of information security awareness and our instrument to measure it. Then we describe the key characteristics of the Austrian and Hungarian information society together with the descriptive data of our company sample. In the third section we discuss the results of our surveys and finally we draw conclusions and suggest further extensions of our research model.

### ***The Conceptual Model of Information Security Awareness***

According to Muha, *information security* is related to the protection of data that are stored either in the form of drawing, writing or by communication, information technology and other electronic systems, or treated in any other way. [7] [16] *Information security awareness (ISA)*, on the other hand goes beyond information security, it is part of the organizational culture, a way of thinking and behavior which ensures that the employees of the organizations are committed to acknowledge the legitimacy of security measures, they abide by them and they also make them known to others and enforce their application. [2]

In order to measure the construct of ISA we use the work of Illéssy, Nemeslaki and Som who suggested dividing ISA into three main dimensions: [9]

- *Organizational dimension* where the organizational habits and procedures are measured.
- *Individual dimension* where a general knowledge of the organization and working habits are measured and analyzed.
- *Infrastructural dimension*, which includes opinions about the general security and concrete IT systems of the organization.

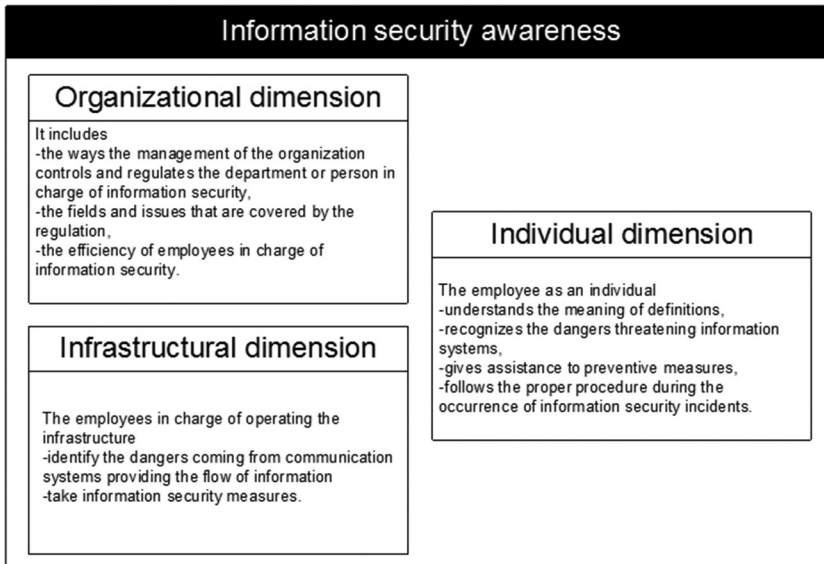


Figure 1. The construct of ISA. [9]

In Figure 1. we depicted the general model of ISA which in that form can serve as a measurement instrument about employees' perception on different dimensions of security.

In *organizational dimension* the following items can be tested:

- the ways the management of the organization controls and regulates the department or the concrete person in charge for information security;
- the fields and issues that are covered by the regulation;
- the efficiency of employees in charge of information security.

Both external (eg. legislation, standards, policy impacts) and internal factors (eg. regulations, the direct instructions of management, human resources management) have effects on organizational awareness. [10]

The *individual dimension* measures the IT knowledge, skills and abilities of the *employees*. Only those employees can make proper use of ICT who consciously apply information technology tools. In the specific case of information security awareness, it means that the employee:

- understands the meaning of the definitions;
- recognizes the dangers threatening the operation of information systems;

- gives assistance to preventive measures;
- follows the proper procedure in case of an information security incident.

Thirdly, *infrastructure dimension* covers partly communication (network) systems, devices and resources providing information flow between local information environments, and partly those organizational tools and resources which provide basic or value-added (information security etc.) services. [18] In view of the above, the infrastructural dimension includes the employees in charge of operating the infrastructure who:

- identify the dangers originating from communication systems providing the flow of information;
- take the necessary information security measures.

Our model also suggests a normative approach to ISA; organizational, individual and infrastructural efforts should provide protection against *sources of danger* and to minimize risk causing breaches in information security. Sources of danger could be anything which results in a non-desired change in the function of one or more components of the information system. [17]

In order to classify employees into ISA categories we have used the Security Awareness Survey (SANS) questionnaire which was designed by information security experts in the US in 2012. [22] According to this the respondents are classified into five risk categories: [22] [9]

- employees belonging to the *first category* are aware of the security principles as well as the dangers, they are well-educated, their everyday behavior meets workplace safety rules and guidelines;
- employees found in the *second category* participated in some kind of information security training, they are also aware of the dangers, but do not fully follow the relevant safety principles and rules;
- *third category* represents the group of average risk, those employees, who are aware of the dangers and know that they should keep some basic safety principles but they are in need of further education on the subject. They do not recognize IT incidents and do not know what to do in such cases;
- the employees included in the *fourth category* are neither aware of the dangers and safety principles, nor of the security regulations in their organization;
- finally, employees belonging to the *fifth category* are not aware of the dangers and do not comply with the security regulations, either.

We intended to get further insight and verification of ISA by comparing ISA “categories” with employees’ general ICT awareness which is described by their ICT literacy. For its general use in the literature, we used the concept of *digital literacy* which often overlaps with other similar notions (eg. information literacy, computer literacy), and can be applied as a suitable umbrella term. [14] Steve Covello identified more subareas and classified information literacy, media literacy, communication literacy, visual literacy and technology literacy as part of *digital literacy*. [4] He recommended five categories into which users can be classified:

- *excellent* if the users recognize information needs, they have long shown excellence in managing IT networks, they have reached a high level of hardware and software management, and finally they are well aware of the dangers and they can also protect against them;
- *good* if the users almost always recognize their information needs, they use network communication devices, they are excellent at certain areas of hardware and software management, and also familiar with the field of information security;

- *average* if the users need some help to recognize their information needs, they use network communication devices with assistance, they suffer from some shortcomings in the area of hardware and software management, they make occasional mistakes in the area of information security;
- *bad* if the users do not recognize their information needs because of lack of training and experience, they are not able to use network communication devices sufficiently, they have great deficiencies in the field of software and hardware management, and they are incapable of identifying network threats and dangers;
- *very bad* if the users have no idea about their information needs, they lack even basic knowledge on the use of network communication, and they lack any software and hardware skills.

During our research design we included measurement for *ISA* and for *digital literacy* constructs and classified employee responses into the appropriate categories both in the Austrian and Hungarian sample. In the following section we describe this part of the design and the characteristics of our two datasets.

### ***Comparing Austrian and Hungarian Companies in ISA: Methodology and Sample Characteristics***

The analysis of the level of *ISA* in the Austrian and Hungarian business sector is at the centre of our research. Its primary purpose is to determine the conditions of information security awareness in both countries, in different size categories. We assume that the level of *ISA* in the business sector depends on:

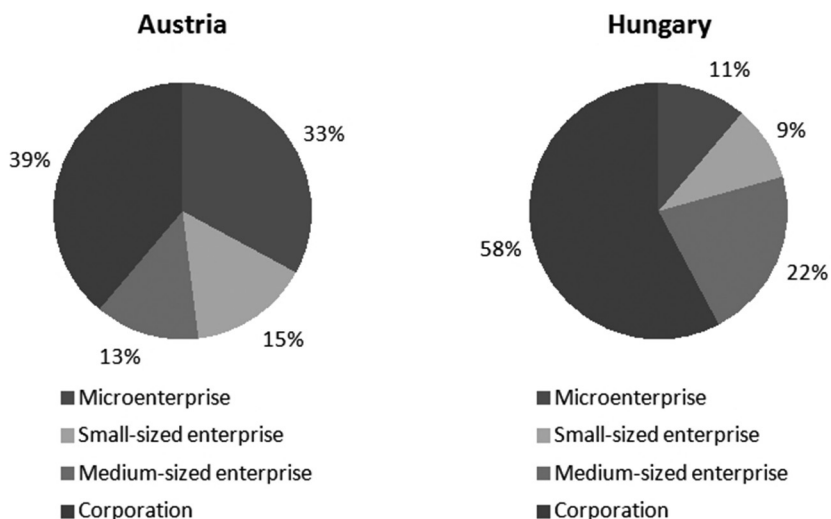
- company size and;
- the economic and information society development level of the country.

Our assumptions are based on the following research results: [21]

- a quarter of the Hungarian corporations still neglect IT audits;
- the strategic importance of information security has already been recognized by Hungarian corporations and enterprises but in terms of actual measures, they are still behind countries with a higher level of IT development such as Austria;
- in comparison to the international trends, the issue of information security is given less attention by Hungarian corporations and enterprises.

The classification of the parts of the *business sector* and of the size of enterprises in Hungary is determined by Act XXXIV of 2004 on The Small and Medium-Sized Enterprises and their Development. [1] The act defines the concepts of microenterprises, small and medium-sized enterprises as well as corporations.

The basis of our primary research was SANS which had already been developed and used. [22] The questionnaires were filled out both online and in a paper-based format with the help of the students at Karl Franzens University in Graz in Austria and at the University of Miskolc in Hungary, regardless of the demographic and employment data of the respondents. The questionnaire was filled out by 280 persons in Austria and 470 persons in Hungary until November of 2014. The number of respondents employed in the Austrian business sector was 152 persons and 116 persons in Hungary.



Graph 1. The division of the respondents to the questionnaire on information security awareness in the Austrian and Hungarian business sector. [Source: own]

Since we had no previous insights into the conditions of ISA in the business sectors either in Austria or in Hungary *exploratory research* was the suitable approach, and the analysis of the filled-out questionnaires was executed accordingly.

For comparative analysis we have to note that added value of corporate ICT use is very different in the two countries. [20] Added value at basic prices can be simply defined as the difference between gross output (at basic prices) and intermediate consumption (at purchaser prices) and can be decomposed into the following components:

- Compensation of Employees;
- Gross Operating Surplus;
- Mixed Income;
- Other Taxes on Production less Subsidies on Production. [20]

Compared to the EU average of 27 countries, the average added value of the Austrian enterprises was higher by 70% with EUR 530,000 in 2012. In contrast, the average data of the Hungarian enterprises did not exceed EUR 87,000 which was equal to only 27% of the EU average.

Table 1. Average added value by size categories in Austria and Hungary in 2012. [20]

Country /thousand EUR/	Micro-enterprise	Small-sized enterprise	Medium-sized enterprise	Corporation	Average
EU27	71.56	880.52	5,250.82	61,900.78	311.77
Austria	124.19	1,042.24	7,640.42	64,716.60	530.42
Hungary	16.70	315.22	2,269.61	29 495.48	86.58

The added value of microenterprises in Austria reached 173% and a modest 23% in Hungary in relation to the EU average. It mounted up to only EUR 17,000 in Hungary and EUR 124,000 in Austria per enterprise, which was nearly 7.5 times higher than the Hungarian data in 2012. The added value created by small-sized enterprises was eight times higher in Austria (EUR 1,042,000) and 18 times higher (EUR 315,000) in Hungary compared to microenterprises. The added value generated by the Hungarian medium-sized enterprises was only slightly over 40% of the average of the European Union (EUR 2,270,000). In the meantime, the added value of the medium-sized enterprises in Austria exceeded the EU average by 45%. Regarding the performance of the Hungarian enterprises, the corporations operating in the country lagged behind their Austrian counterparts to the least extent. The added value per enterprise in Austria was three times higher in the case of small- and medium-sized enterprises and two times higher in the case of corporations compared to their peers in Hungary. [20]

We also see large differences in the state of the information society according to the EGDI (E-Government Development Index) measured by the UN. [23] EGDI has three components with equal weights: OSI (on-line service index), TII (Telecommunication Infrastructure Index) and HCI (Human Capital Index). Leading countries in the world according to most recent data are the Republic of Korea (1), Australia (2) and Singapore (3) and in Europe they are France (4), the Netherlands (5), the UK (8), and Finland (10).

*Table 2. Comparison of Hungary and Austria in EGDI ranking UNPAN, 2014. [23]*

	EGDI	2014 rank	2012 rank	Change (2014–2012)	Category of EGDI
Hungary	0,6637	39	31	–8	Middle
Austria	0,7912	20	21	+1	Very High
EU Average	EGDI = 0,7300				
World Average	EGDI = 0,4712				

In Table 2. we compared AT and HU in EGDI ranking and we can notice that both the actual position and category of the two countries (AT = 20, HU = 39) are different, but also the rate of development is more dynamic in AT then in HU (while AT has improved one place, Hungary has dropped eight between 2012 and 2014).

### ***The Situation of ISA in Austria and Hungary***

Looking at the findings globally, it can be stated that in two categories (corporations and medium-sized enterprises) in our sample in Austria, the rate of organizations belonging to the safest category is more than 20%. Somewhat surprisingly, better results than that are shown by the corporations as well as the medium-sized enterprises in the Hungarian sample. The ratio in their case reaches and exceeds 30%. The findings of the second category, where the employees are aware of the possible dangers but they do not keep all the regulations, show a rather unified picture: three-quarters of the corporations, medium-sized and small-sized

enterprises in Austria belong to this category. As for the Hungarian small-sized enterprises, 100% of them fall into the second category and the same can be said about more than three-quarters of the microenterprises. A quarter of the Austrian small-sized enterprises, half of the microenterprises and three-quarters of the Hungarian microenterprises can be found in the third category where the employees definitely need further training on information technology. Moreover, there are some employees who are not aware of the dangers of information technology at 3% of the Austrian microenterprises.

Table 3. The qualification of information security awareness among the Austrian and Hungarian enterprises. [Source: own]

Name	Austria					Hungary			
	First category	Second category	Third category	Fourth category	Fifth category	First category	Second category	Third category	Fourth category
Corporation	20%	77%	2%	0%	0%	31%	61%	8%	0%
Medium-sized enterprise	29%	71%	0%	0%	0%	30%	50%	20%	0%
Small-sized enterprise	0%	75%	25%	0%	0%	0%	86%	14%	0%
Micro-enterprise	8%	43%	48%	0%	3%	0%	59%	33%	8%

Comparing ISA in the business sector in the two countries, it can be stated that Austria performs better in the size category of microenterprises and medium enterprises, while Hungary shows better results in the size categories of corporations and small-sized enterprises.

83% of the Austrian corporations said that they maintained an *IT security department*. High rates are achieved by the Austrian medium-sized enterprises (70%) as well. The highest rates, however, are shown by the Hungarian corporations with 90%. They are followed by the medium-sized enterprises employing less than 250 people (84%), then the small-sized enterprises (36%). The lowest rates are produced by the Hungarian (30%) and Austrian (14%) microenterprises with low levels of capital and human resources.

In terms of the *organizational dimension*, only the Hungarian corporations produce good results, appearing in the top two risk categories.

Table 4. The qualification of information security awareness in the Austrian and Hungarian business sector based on the organizational dimension. [Source: own]

Name	Austria					Hungary				
	First category	Second category	Third category	Fourth category	Fifth category	First category	Second category	Third category	Fourth category	Fifth category
Corporation	4%	71%	25%	0%	0%	17%	72%	11%	0%	0%
Medium-sized enterprise	0%	47%	53%	0%	0%	17%	44%	30%	9%	0%
Small-sized enterprise	0%	29%	52%	19%	0%	0%	25%	75%	0%	0%
Micro-enterprise	0%	14%	43%	36%	7%	0%	25%	42%	25%	8%

It was surprising to see that a quarter of the Austrian corporations fell into the third risk category. Furthermore, nearly a fifth of the Austrian small-sized enterprises and more than a third of the microenterprises pose a serious threat in terms of security. The same can be said about a quarter of the Hungarian microenterprises. In addition, 7% of the Austrian microenterprises fall only into the fifth category.

It is important to examine in each department *whether there is a regulation on the use of IT tools* or if they apply general rules that also include the use of IT tools. A third of the respondents in Austria and a quarter of them in Hungary could not say whether there were such policies in their workplace. This rate reaches 46% in the case of the Austrian small-sized enterprises. Nearly half of the Austrian microenterprises and more than 80% of their Hungarian counterparts reported that they did not apply any regulations relating to information technology. On the other hand, half of the Austrian corporations and two-thirds of their Hungarian peers used specific IT regulations and guidelines. It can also be said about a third of the Austrian medium-sized enterprises that a quarter of them had IT-related issues within their general regulations. Half of the medium-sized enterprises in Hungary also included their IT rules into their general regulations. In the size category of small-sized enterprises, 40% of them in Hungary and a quarter of them in Austria had some sort of written regulation on the use of IT devices.

Two-thirds of the employees at the Hungarian enterprises were satisfied with the standard of the *training* they received on information security, contrary to this, the same rate was only 28% in their Austrian counterparts in 2014. The rate of employees satisfied with the training on information security reached 40% in the category of microenterprises and small-sized enterprises, 60% in the medium-sized enterprises and 70% in the corporations in Hungary. As for the Austrian business sector, worse rates were measured. Nearly a third of the respondents in the Austrian microenterprises, small and medium-sized enterprises reported that they received appropriate training on information security. A fifth of the employees at Austrian corporations reported the same.

Another part of the organizational dimension is the examination of *access to certain websites* and their regulation at the workplace. In general, it can be said that more than 80% of the corporations in Austria and more than 90% of them in Hungary regulated accessible content

on the Internet while the same rate was 20% at microenterprises in both countries. Nearly 40% of the small-sized enterprises in Austria and 55% of the medium-sized enterprises had such policies. 30% of the small-sized enterprises in Hungary and 35% of the medium-sized enterprises had regulations on the accessibility of certain websites and they were kept by the employees. It is surprising that employees did not keep the regulations at a fifth of the corporations in both countries.

A further part of the organizational dimension is *the regulation of mail delivery systems*. In this case it is also true that the rate of regulation increases together with the size of the organization – both in the number of employees and in terms of asset value. There are regulations on the use of mail delivery systems at 70% of the Austrian corporations and three-quarters of the Hungarian corporations. In contrast, only 10% of the microenterprises in Austria and Hungary regulated the use of mail systems by their employees. Nearly half of the small and medium-sized enterprises both in Austria and Hungary did not regulate the use of mail systems.

The idea behind *the emergence of cloud computing* is that information procession is much more efficient if it is done through centrally coordinated computer data storage systems accessible through a network. It is also a part of the *organizational dimension*. The term “cloud” is derived from the representation of the Internet network diagrams and is used to indicate the unknown or irrelevant parts of a system. Nearly 45% of the respondents in the Hungarian business sector – and 30% in Austria – did not know whether the use of cloud computing services is regulated at their workplace. Corporations both in Austria and Hungary either did not allow at all or only to a small degree permitted the use of cloud computing. A quarter of the Hungarian microenterprises and 55% of their counterparts in Austria said that they were authorized to use such applications as Dropbox and Google Drive for storing institutional or business data. At half of the small-sized enterprises in Hungary and at a third of their peers in Austria, the use of cloud computing is forbidden. The lowest rate of use was measured in the category of medium-sized enterprises in Hungary with 16%. The same rate did not exceed 10% among the corporations in Austria.

When examining *the individual dimension*, basically the general IT knowledge of the respondents is measured. It largely depends on the practice the employees had earned in previous years as well. The respondents mentioned an average duration of 16 to 18 years in Austria and 15 to 17 years in Hungary with regard to the use of computers. In terms of using the Internet, however, the average duration mentioned by the employees was an average of 12 and 14 years in Austria and 10 to 13 years in Hungary. If the daily use of computers is examined, we can conclude that the employees working in every company size category spend between 6 and 8 hours a day in front of the computer on average in both countries. From this, it can be concluded that, regardless of the size of their company, the respondents in the sample have similar practice and experience in this field.

Based on the individual dimension, the response rate in the first categories exceeded 50% in the case of the Austrian and Hungarian corporations and medium-sized enterprises, which is very favorable. Still, it is a bit alarming that 5% of the employees working at corporations in Hungary and 2% of them working in Austria were not aware of the dangers and safety principles.

Table 5. The qualification of information security awareness in the Austrian and Hungarian business sector business and public sector based on the individual dimension in 2014. [Source: own]

Name	Austria					Hungary			
	First category	Second category	Third category	Fourth category	Fifth category	First category	Second category	Third category	Fourth category
Corporation	62%	16%	20%	2%	0%	54%	29%	12%	5%
Medium-sized enterprise	72%	6%	22%	0%	0%	50%	36%	9%	5%
Small-sized enterprise	24%	52%	24%	0%	0%	0%	78%	22%	0%
Micro-enterprise	28%	43%	26%	2%	2%	0%	75%	17%	8%

It was an even bigger problem for microenterprises in Austria where 2% of the respondents fell into the fifth category, although at a quarter of the Austrian microenterprises and small-sized enterprises, there were responses falling into the first category. It can be seen from this, that the results were better in Austria in every size category from the perspective of data security.

As another interesting *part of the individual dimension*, it was also asked if the employees noticed when their workstations were hacked into. Hacking into a computer or computer system occurs when someone unlawfully enters or, by violating their scope of authorization, stays in the system by either breaching or circumventing its protection. More than 80% of the employees working in corporations in Hungary thought that they were able to notice when their workstations had been hacked into. In contrast, only a quarter of their peers in the Hungarian small-sized enterprises thought the same. In the case of the other examined Austrian and Hungarian organizations, a rate of nearly 60% could be observed.

Another important element in the framework of the individual dimension was the proportion of employees *voluntarily granting their company passwords* to other users. Respondents from the Austrian small-sized enterprises (40%) and the Hungarian medium-sized enterprises gave their company passwords to other users in the largest rate (40%). In contrast, employees working in the Hungarian small-sized enterprises were the most reluctant to give their company passwords to others (10%). At a quarter of the remaining Austrian organizations the practice of granting company passwords voluntarily also occurred.

A corresponding question to the previous one was whether *the respondent's boss had ever asked for their company password* or not. Surprisingly, such a case has already occurred at almost half of the Austrian small-sized enterprises. The same can be said about nearly a quarter of the corporations in Austria. A low prevalence, around 15%, was experienced in the case of the Austrian and Hungarian microenterprises, and the Hungarian medium-sized enterprises and corporations. The rates were measured between 20 and 25% in the remaining surveyed size categories.

Time and again, rumours start spreading about renowned portals being hacked into and unauthorized access to the passwords of hundreds of thousands or even millions of users coming to light. In reality, it represents a serious security risk if many people use *the same*

*password* everywhere. Within the context of the individual dimensions, we examined how cautious the respondents were in this regard. 15% of the respondents in Austria and a tenth of them in Hungary stated that they *used the same password* at work and in their private life as well. 15% of the Hungarian microenterprises and a quarter of their Austrian peers did not use the same password while there were just a few people at the Hungarian small-sized enterprises and the Austrian corporations (9%) who used their private password in their workplace.

If we look at the organizations where *there are rules to change passwords and whether they actually change them*, it can be stated that half of the Austrian microenterprises and small-sized enterprises as well as two-thirds of the Hungarian medium-sized enterprises did not have any rules or regulations to change passwords and they did not actually change them. In contrast, almost 90% of the Austrian and Hungarian corporations introduced certain regulations for changing passwords and their employees actually kept those rules sometimes even without having any regulation on the change of passwords.

The illegal *installation and use of software (software piracy)* as well as downloading files for personal use also has to be examined within the concept of the individual dimension. Software piracy and downloading files for personal use were typical of three-quarters of the Hungarian microenterprises, a quarter of the medium-sized enterprises and 60% of the small-sized enterprises in 2014. In Austria, these rates were lower, half of the microenterprises, a third of the small-sized enterprises and a tenth of the corporations reported that their employees downloaded files for personal use.

In the responses given to a number of questions related to the *infrastructural dimension*, a lack of knowledge or the overvaluation of some infrastructural parts appears quite frequently. Such a statement can be the one according to which the information stored in the employee's computer is of no value for hackers. More than a third of the employees working both in the business and private sector were convinced that their computers were not targeted by hackers. In contrast, the same rate was only 10% in Austria in 2014. A fifth of the Austrian micro and small-sized enterprises, and less than 5% of the medium-sized enterprises and corporations thought that they were not a target of this type of attack. In Hungary, nearly half of the micro and small-sized enterprises, a third of the medium-sized enterprises and 36% of the corporations thought the same.

In Austria, corporations achieved the best ratings in the *infrastructural dimension of ISA* with a rate of nearly 60%. Even the Hungarian corporations could reach a good rate of responses, falling into the first category by reaching 37%. However, in the case of the Hungarian medium-sized enterprises, due to a fifth of their employees' responses, the classification into the third category means that they would need further training. The same rate was 5% for the Hungarian corporations and 13% for the Austrian microenterprises.

Table 6. The qualification of information security awareness in the Austrian and Hungarian business sector based on the infrastructural dimension. [Source: own]

Name	Austria			Hungary			
	First category	Second category	Third category	First category	Second category	Third category	Fourth category
Corporation	58%	42%	0%	37%	57%	5%	2%
Medium-sized enterprise	45%	55%	0%	29%	52%	19%	0%
Small-sized enterprise	30%	70%	0%	11%	56%	11%	22%
Micro-enterprise	35%	52%	13%	17%	75%	8%	0%

As part of the *infrastructural dimension*, the availability of *installed, updated and licensed antivirus programs* was also examined. More than 90% of the employees working in the surveyed Austrian and Hungarian organizations said that they had antivirus software installed on their computer.

Another question we sought to answer was whether *the employees found a virus on their computers*. A computer virus is a program that hides its own copies in other executable programs or documents. It is mostly malicious, having the capability of making other files useless or even completely destroying them. Nearly a fifth of respondents claimed to have encountered a computer virus during their work. A higher proportion was found in the case of the Austrian microenterprises (46%) and small-sized enterprises (22%), and the Hungarian small-sized (45%) and medium-sized enterprises (36%). The lowest rate was found in the Austrian corporations public institutions (6%). Nearly 8% of the employees working in the Hungarian microenterprises could not say if they had ever found such undesired programs on their computers.

Within the framework of *the infrastructural dimension*, the *frequency of automatic updates* was also examined in the business and the public sector. Nearly 70% of the surveyed Hungarian organizations and 60% of the Austrian organizations used the function of automatic updates. 6% of the Hungarian corporations, a tenth of the small-sized enterprises, 12% of the Austrian microenterprises, 9% of the small-sized enterprises and 20% of the medium-sized enterprises working in local governments and 40% of them working in other local government organizations could not tell whether there was an automatic update function on their own computers at work.

It can be concluded that a close relationship can be observed between the information security awareness and the digital literacy of employees. As for Hungary, each respondent having poor or bad digital literacy fell into the third risk category. Based on the responses, 40% of the employees with poor IT skills fell into the third one, while 60% of them fell into the second risk category. More than threequarters of the employees relying on some assistance to recognize their IT needs fell into the second risk category, a fifth of them fell into the third, and only 8% of them could be classified in the first category. Surprisingly, employees with good and excellent IT skills were mainly found in the second category in the largest number. Only 7% of employees having good digital literacy could fall into the first risk category while a third of them were in the third one. Sadly, less than a fifth of the employees with excellent IT skills fell into the third risk category in terms of information security in Hungary.

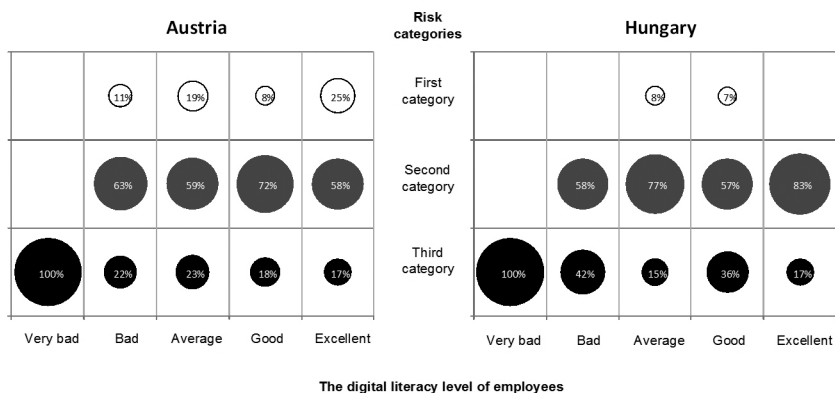


Figure 2. The connection between global risk categories and the digital literacy of employees in Austria and Hungary. [Source: own]

A quarter of employees having excellent digital literacy in Austria can be found in the first, the remaining 60% of them fall into the second category of global information security awareness. A tenth of those who have good digital literacy belong to the first category, three-quarters of them fall into the second but 18% of them get into only the third category. A fifth of the employees in bad need of some assistance in information technology have excellent, 59% of them good, and a quarter of them average digital literacy in terms of information security awareness. Each of the employees having bad digital literacy fall into the third risk category.

## Conclusions

In our study, we reviewed the conditions of information security awareness in the Austrian and Hungarian business sector as well as their positions relative to one another.

It is true about both countries that the level of information security awareness is lower in the case of enterprises belonging to smaller size categories, when compared to the larger ones. IT regulations and training on information security are more frequent, accessibility to certain websites and the use of mail delivery systems are regulated, and password changes are required at corporations. In the case of micro and small-sized enterprises, it is hardly possible to find an organization or person that is entitled to deal with information security issues, regulations on IT are mostly missing, and they rarely participate in training in information technology. Access to certain websites and the use of mail delivery systems are also rarely regulated. Because of the lack of training, considerably fewer employees know about cloud computing in the enterprises employing less than 50 people in comparison to their counterparts working in bigger enterprises. It is also typical of the microenterprises that their employees are less likely to give their passwords whether they are forced to do so or not. When comparing the two countries by size categories, differences can hardly be found in terms of information security awareness.

As for the organizational dimension, the Hungarian enterprises performed better in all size categories. It can be traced back to a lower level of regulation and a more critical attitude towards training shown by the employees in Austria. A good level of information security

awareness was observed among the Austrian medium-sized enterprises with less than 250 employees, however, in a fifth of their Hungarian counterparts, the employees need further trainings in this area. Security problems can be traced back to poor organization at a fifth of the Austrian small-sized enterprises, a third of the Austrian microenterprises, and three-quarters of the Hungarian microenterprises.

In terms of the individual dimension, the Austrian enterprises came up with better results in every size category. Password changes are more frequent and the practice of illegal installation and software use occurs less often. Employees working in a fifth of the Austrian and Hungarian enterprises have distressing gaps in their knowledge in this area.

As far as the infrastructural dimension is concerned, the Austrian small and medium-sized enterprises outperformed their Hungarian peers in every size category. Furthermore, it can also be concluded that employees with higher digital literacy have a higher level of information security awareness in a surveyed country, and the rate of employees with excellent digital literacy is also higher than it was measured in Hungary, resulting in a more favorable level of information security awareness compared to the Hungarian business sector.

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# Violation of Humanitarian Law and Infringement of Human Rights in the Last “Colony” of Africa

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*On the surface, Western Sahara is one of the most uninteresting regions of Africa, but anyone interested in international law, can easily find many exciting issues to explore. After a brief historical review, the author will try to examine the abuse of human rights and, the infringement of international humanitarian law which were committed by the parties during the fight for freedom of the Sahrawi people. The essay also analyses the circumstances of the refugees.*

**Keywords:** *Western Sahara, Sahrawis, Polisario, humanitarian law, human rights, status of refugees*

## Introduction

The last colony of Africa is one of the most hidden places on Earth, located at the Atlantic coast of the Sahara desert. The area seems to be worthless, but it lies at an intersection of different interests, causing many armed struggles. Despite the sparse population and the inhospitable desert environment, many rich phosphate quarries can be found. The Atlantic coast is strategically important. This was recognized not only by the Spanish colonizers, but the neighboring countries, Morocco, Mauritania and Algeria, as well. Algeria is a supporting actor in the modern history of the region, but Morocco and Mauritania have actively participated in the conflict, following Spanish rule. The two neighbors became occupying powers after the withdrawal of the previous owners, which resulted in armed conflict among the intruders and the *Polisario* which is fighting for the freedom of the Sahrawi people.

The war in Western Sahara is the root of many of questions based on international law. In this paper I am trying to answer two of them, namely the violation of humanitarian law and the infringement of human rights committed by the parties, and I am also trying to examine the situation of the Sahrawi refugees, who have been forced to leave their homeland.

## The History of Sahrawis and the Road to the Conflict

According to the records of the international community, the disputed area is one of the last areas unable to ensure its own government. [1] The territory of the country is around 266 thousand square kilometers, mostly covered by desert. The number of inhabitants is just over 580 thousand. [2] [3] As is usual in the Maghreb countries,<sup>2</sup> the indigenous population of Western Sahara belonged to the Berber tribes. These groups of nomad shepherds reached a

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2 The Arabic word means West, it is used as a generic term for the Arabic languaged states – Libya, Tunisia, Algeria, Morocco, Western Sahara and Mauritania – in the Atlas Mountains, Northwest Africa.

low level of state organization when they created tribal alliances. [4] The Arabs conquered these lands, and organised the northwest territories of Africa into a new Islamic state, which included almost the whole Iberian Peninsula. Under the rule of the Almoravid and the Almo-had Empires,<sup>3</sup> the Berber tribes transformed their religion into Islam and adopted the Arabic language, as a new dialect, named the Hassaniya. [4]

After the Reconquista, strengthening Iberian states, Portugal, Castile and Aragon, made the first expeditions exploring the northwest coast of Africa. Later on the Lusitanian and Spanish sailors established the first colonies on the Isle of Madeira and its archipelago, and on the Canary Islands. From the new possessions the Europeans easily made contact with the people of the Sahara. [5]

Northwest Africa was always poorer than the most visited and exploited Gold, Slave and Pepper Coast along the shores of Gulf of Guinea, so the Europeans started to colonise relatively late. It became a Spanish colony only in 1727, when the king of Spain and the sultan of Morocco, Mohamed ben Abdallah signed a treaty in Marrakesh about the division of the territories and the Sahara zone of interest. [5] The contracting parties not only decided about the division but also established the common goal to take action against pirates threatening the nearby coastal waters, and regulated the rules of fishing. [2] [3] The conditions served the Spanish interest, because the sultan did not have the power to prevent piracy. The pirates barely recognised the authority of the sultan and lived their life according to their own habits and customs. [2] [3]

Other European nations who took part in the colonization of the poorest continent on Earth divided the black continent during the Berlin Conference in 1884. [6] In the Maghreb Region France had almost all of the exclusive rights, so Madrid had to cooperate and negotiate with Paris about the effective rule over Western Sahara and about the borderlines which separated the Spanish and the French sphere of interest from each other. The parties established an agreement on the 27<sup>th</sup> of June in 1900, later on they amended this twice, as the result of their negotiations. [5]

After drawing the boarder lines, Spain wanted to extend their authority so far as the boarders were determined. The native people tried to prevent the success of the quick Spanish advance, blocking the path of the invaders. By the year 1938, Spain finally occupied the whole territory of Western Sahara. During this long term the Europeans were cumbered not only by the Sahrawis, but civil war as well. The Iberian troops occupied strategically important settlements, and they controlled the motile tribes by using well equipped patrols continuously. [2] [3] At that time the number of the occupying troops was 13,486. [2] [3]

After the invasion of the country, the Spanish government started to exploit the resources, and fishing in the coastal waters also began. A new city was founded where the seafood processing and packing plants were established. Later on this city, named Laayoune (El Aaiun), became the capital of Western Sahara. [4] The volume of fishing at the beginning of the fifties exceeded 26 thousand tons, which was held in cold storage, and after processing the products were exported. [2] [3] After their discovery, by geologist Manuel A. Medina, phosphate mines were explored and mapped. Phosphate excavation was started in the forties. Because of the high purity, the investors expected a high rate of return. [2] [3] The scientists found not only phosphate, but petroleum as well. While the Spanish government spent a huge amount

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3 The Almoravids were a Berber origin dynasty which ruled Maghreb from 1062 to 1147, and were followed by the likewise Berber Almohads.

of money on the exploitation of the phosphate mines, they did not try to dredge up the oil, because the predictions said that it would be at a financial loss. [2] [3]

Not only Spain was interested in the exploitation of the treasure of the soil, but the neighboring countries, which were on the road to independence, as well. Especially Morocco wanted to take over the control of the raw materials in Western Sahara. During the Bandung Conference in 1955, territories under colonial rule and other third countries took a commitment in face of colonialism and imperialism. In the next 20 years many of African countries liberated themselves from colonial rule and joined the group of non-aligned states. Five years later, in 1960, the General Assembly of the United Nations adopted resolution 1514 (XV). That was the *Declaration on the Granting of Independence to Colonial Countries and People*.<sup>4</sup> One of the most important principles proclaimed the “*necessity of bringing to a speedy and unconditional end colonialism in all its forms and manifestations.*” [7] The signatories of the treaty declared the right to self-determination, which is also one of the human rights and all the exploitation, subjugation, domination is against this basic principle. [7] This fundamental right was limited immediately, because it is in conflict with other elementary terms of international law such as the right to territorial integrity. Right to self-determination could not lead to the harm of border of a sovereign countries, it is forbidden to use as an argument of territorial claims. [8] The right to self-determination is a kind of “one time or disposable” instrument for nations living under the yoke of colonialism. The international community declared twice in two different documents, that “*any attempt aimed at the partial or total disruption of the national unity and the territorial integrity of a country is incompatible with the purposes and principles of the international law.*”<sup>5</sup> If any nation has taken advantage of this particular right, they are not allowed to “fission” further more, so sovereignty comes before the right to self-determination. [7] There are plenty of such antinomic rules in international relations, which are indicative in the first place of a collision of interests. These colliding rules also prevent and overwrite the prevailing legal norms.

This phenomenon is being observed in the case of Western Sahara. After the liberation of the colonized nations, the Sahrawis also wanted to establish their own state, but their intention was contrary to the interest of neighboring countries, Morocco and Mauritania. The antagonism of the right to self-determination can be explored in the conflict of Western Sahara and Morocco, over and above it has got a special complexion. There is no doubt, that the Sahrawis have got the right to self-determination, and to establish and operate their own state, but the practise of these rights has been delayed, because after the end of Spanish rule, the Moroccan started. As shall be explained further on, the Moroccan invaders look upon the Sahara territory as their own property, and they understate the Sahrawi right to self-determination, interpreting the named right as an anticolonist postulatam. [9] It is clearly understandable, that the emancipated African countries are opposed to any further aspiration for division of their territories. The European colonizing powers drew the borders in the age of imperialism and did not respect the different ethnic groups. Later on this decision led to serious armed conflicts and civil wars, because the new African powers wanted to prevent further separation.

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4 *Declaration on the Granting of Independence to Colonial Countries and People (14. 12. 1960)*

5 The formulization is almost from the composition of the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights.

## From Colony to Occupation – the Root of the Conflict in Western Sahara

In the sixties, the international community tried to put pressure on Spain to finally permit the referendum where the Sahrawis will decide about their further destiny. The Franco-regime was desperate about the situation in Spanish Sahara, and the main decision-makers secluded themselves from any talk of liberation at that time. Their arguments were firstly the phosphate-mining and fishing. [4] The Spanish dilemma and the emancipation of former African colonies gave hope, flavoured by a measure of nationalism, to the inhabitants of Sahara who created the first organisation in 1967. It was the Movement for the Liberation of Sahara,<sup>6</sup> which was led by a journalist and Koranic teacher, Mohamed Sidi Ibrahim Bassiri. [10] His profession of faith extended fast, reached not only the provincial population but the citizens as well, who served the Spanish occupants. Those people who served in the Spanish legionary military or as police officers were watched by the Spanish secret services. [2] [3]

The Movement intended to liberate the Sahrawi territories by using peaceful methods and thus organised a demonstration on the 17<sup>th</sup> of June in 1970. The demonstration was broken down by the enfilade of the Spanish garrison. [2] [3] At the beginning of the seventies, independence movements found supporters in the neighboring countries. On a rhetorical level Morocco was the first, and sharply protested against the Spanish rule, because the Spanish government was unwilling to execute the decolonisation process. The intention behind the attitude of the westernmost Arabic country was aimed at the annexation of Western Sahara, although a scenario for the annexation did not exist at that time. However, on the eve of liberation of Rabat from French rule, a so-called “Greater-Morocco” concept had already been created, which was worked out by the politician Allal el-Fassi, who was also the first hierophant of this theory. According to this the borders of one-time Almoravid Empire had to be restored, including the Sahrawi lands. [10] In 1965 the uncle of the Moroccan king, Moulay Hassan Ben Driss founded a party struggling for the liberation of Spanish Sahara, with the assignment of initiating and lobbying, to facilitate the holding of a referendum. [10]

In Morocco the expected referendum was looked on with optimism. The king and the government believed that after they secede from Spain the Sahrawis will decide to join Morocco immediately. However Spain did not want to release Western Sahara which is rich in raw materials. They offered extensive autonomy and founded the Party of Sahrawi National Unity, where delegates got a seat in the national assembly, the Jemma. The Party drew a political programme, which contained 14 points for a peaceful solution, considered the only way towards liberation. The programme rejected the territorial claims of the neighboring countries and declared the right to self-determination. [10] This point of view was rejected by the Moroccan government to, there is no third way for Sahrawis, they emphasized, either they join the mother-country or they will stay under Spanish rule.

How serious and well grounded was the Moroccan point of view about the right for the Sahrawi territories can be measured from the fact, that King Hassan II applied directly to the International Court of Justice, which gave an answer in the form of a several questions in its advisory opinion. In the first place, in the time of imperialism, Rio de Oro was not “no man’s

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6 Harakat Tahrir Saguia El Hamra wa Wadi Ed Dahab

land”, namely *terra nullius*, so Spain was not able to gain possession by occupation. [11] The Final Act of the Berlin Conference in 1884–1885 declared that the state which obtained a seashore region is allowed to extend its domination into the continental areas. [7] The international practise of the 19<sup>th</sup> century and later on the decision of the International Court of Justice amended this archaic and quite immature legal position, when it declared the fact, that the territory of Western Sahara was not considered *terra nullius*, because the chieftains and the trunk-alliances ruled the population of the desert as sovereign rulers, representing their own nation in foreign affairs. Afterwards the Spanish invaders entered into relations with these tribes and made them acknowledge Spanish supremacy and “protection”.

In the second place, Rabat wanted to confirm and claim the continuity of “Greater-Morocco”. The government alleged that the predecessors of the kingdom exercised sovereignty over the nomadic tribes they wandered along the frontier of Morocco, Mauritania and Algeria, so they conveyed the Moroccan rule to their descendants.

According to the opinion of the Court, the “alleged immemorial possession of the territory and uninterrupted exercise of authority” was not substantiated. [11] Morocco actually practised some – rather nominal – authority in the past centuries over the tribes wandering permanently, but did not collect taxes, nor organised the administration, nor resisted the adventurous attacks directed at the conquest the Sahara region. [11]

This decision was completely against Moroccan interest, King Hassan II chose a quite special form of intervention. He organised a march to Western Sahara with more than 350 thousand participants. [10] The mass of volunteers – including around 12% state employees – marching to the south was logistically supported by the ambulance services, police, and secured by the army. [10] The UN called for moderation and tried to persuade the king to cancel or suspend the march, but the international community did not interfere substantively. The march crossed the borders and entered the territory of Spanish Sahara on the 6<sup>th</sup> of November in 1975, meanwhile the Jemma and the Polisario call upon the Spanish authorities to protect the province from the Moroccan aggression. The garrison was alerted but instead of clashing Spain withdrew during Operation Swallow and evacuated Spanish Sahara. [4]

The Moroccan conquest was facilitated by two important coefficients. One of them was the change in Spanish internal affairs, namely the fall of the Franco-regime and the restoration of the monarchy, the other was the absolute disinterest of the international community. Besides the unapproving statements of the Security Council, the UN did nothing. Besides the unapproving statements of the Security Council, the UN did nothing. Spain admitted, because of the temporary dishevelment of the army, they can not afford a war with Morocco, so they abandoned the colony and accepted the situation and agreed to a compromise with Rabat to protect the Spanish enclaves (Ceuta and Melilla) on the southern shore of the Mediterranean Sea.<sup>7</sup> In the treaty of Madrid, Spain yielded the province of Sahara, which was divided and occupied by Morocco and Mauritania. That was the beginning of the almost three decades war among the Polisario and the invaders.

In 1975 Spain simply ceded the former colony, and handed it over to another occupying power. The question is, did Spain have the right to do this, and if not, is Spain responsible for its act in terms of international law? According to the main rule, states are allowed to make an agreement among each other. In these agreements they can even concede territories. Since

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<sup>7</sup> The Franco-regime was a military dictatorship. After its fall, the army was weakened temporarily.

Western Sahara did not have the right and possibility of self-government Chapter XI. of the United Nations Charter was applicable to its legal situation. [12] According to Chapter XI. the governing state has the responsibility to ensure the social, economic and political advancement of the ruled colony, and to develop self-government. The Franco-regime scarcely fulfilled these expectations and the treaty of Madrid raises the possibility of invalidity on the ground of *jus cogens*. According to the Vienna Convention on the law of treaties a norm is considered to be *jus cogens* if it is unconditionally applicable, derogation is not permitted, and which can be modified only by a subsequent norm of general international law having the same character. [13] These rules are not listed completely, but the international community agrees that – except of a few exceptions – the *jus cogens* norm is the prohibition of violence, prohibition of genocide, prohibition of slavery and forced labour and the prohibition of piracy. [7] In our case the prohibition of violence emerges. The Spanish government was aware of the Moroccan intention, so Madrid was not allowed to sign the treaty of Madrid validly because the object of the contract was the division of Spanish Sahara, not to mention the fact, that the purpose of the treating parties was the occupation of Western Sahara. Neither Morocco, nor Mauritania wanted to continue the development of self-government in accordance with the Charter of the United Nations.

## **Basic Terms of Humanitarian Law and the Infringements Committed by the Parties of the Conflict**

Hereinbefore I described the “Green March” as a particular intervention, but can it be conceived of as aggression? Can we consider, on the ground of international law, the war after the “Green March” as *armed conflict*? To satisfactorily analyze the conflict in Western Sahara, which is still unsolved, we have to clarify some of important terms used for war and warfare, then try to apply them to the case of Polisario and its conflict with the Moroccan and Mauritanian armies.

Foremost we have to explain the terms of violence and aggression invoked in the UN Charter and Resolution 3314. of the General Assembly. Article 2/4 of the Charter says, that states are refrained from the threat or use of force against the territorial integrity or political independence of any state. [7] The terminology of aggression is narrower. Resolution 3314. Article 1 says that aggression is the use of armed forces against the sovereignty, territorial integrity or political independence of another state, or in any other manner inconsistent with the Charter of the UN. [14]

Although the term aggression does not fit directly the case of the “Green March”, it definitely can be classified as aggression. Moreover, the covenants on human rights and the Declaration on Principles of International law bear in mind that all nations have the right to develop their own economic, social and political system. In the meantime, all the other states have to abstain from using force against the political independence and territorial integrity of other states. The Moroccan mass movement can fully qualify as an attack against the integrity of Spanish Sahara giving the right of self-defence to the Spanish garrison. Another question is why Spain did not use force in the defence of Spanish Sahara. It is doubtless, that the “Green March” directly led to the Spanish withdrawal.

The termination of aggression is clearly linked to the invasion of Moroccan and Mauritanian armies after the departure of Spanish troops. After clarifying the aggression of neigh-

boring countries, only one question is left. In the treaty of Madrid, Spain gave up the rule over the province of Spanish Sahara, and seemingly resigned it to the other two parties of the treaty. But the two aggressors entered into an ongoing process. Sahrawis had started to put into practise the principle of self-government, the referendum had already been promised. The illusion of an independent state was wiped out by the invading armies. But who were the targets of the Moroccan and Mauritanian aggression? Hardly Spain, because they had already given up and evacuated the province. In my opinion, Morocco and Mauritana were quasi-successors of Spain in the dominion over Western Sahara. Their acts were not only aggressive, but deprived the Saharavi nation of the right to self-government, freedom and independence as well. [7] Therefore the population of Western Sahara still have the right to fight against intruders, because they are still under foreign rule, practically as a colony of Morocco. [7]

In 1973 the Sahrawis established a political-military organisation, the so called *Polisario Front*<sup>8</sup> which started to fight against the neighboring forces. Originally the Polisario were founded against Spain. They organised and committed some minor crimes, but the real war started after the Spanish withdrawal, when the Sahrawi Arab Democratic Republic was proclaimed on the 27<sup>th</sup> of February in 1976. [5]

The classic term of war was used for those conflicts which were fought by sovereign states. For these conflicts the international community worked out different rules during history. The two most important of these are The Hague and Geneva law, which are increasingly merging. [15] The so-called law of war and the international humanitarian law consist of a comprehensive regulation regulating what the parties of war are allowed to do on the battlefield, how to treat the hostile soldiers and the civilians. Most of the armed conflicts after World War Two were not clashes among states, they were more like civil wars and other inner conflicts. In these conflict many of other external powers – just like in the case of Western Sahara – got involved usually as a supporting factor on behalf of one of the fighting parties. In our case Morocco is supported and supplied with weapons by France and the United States, the Polisario is supported by Algeria. [4]

The Western Sahara and other similar conflicts have special features. Every confrontation takes place among a regular *combatant* army and a weaker group of armed people using guerrilla warfare. A combatant (fighter) is someone who is carrying arms openly, commanded by a person responsible for his subordinates, has a fixed distinctive sign recognizable at a distance and conducting their operations in accordance with the laws and customs of war. [16] For the combatant we have to apply additional rights, different from those called civilians by the humanitarian law. Naturally they are also under legal protection, but if they take part in combat, they are going to be *militants*, consequently they are going to be in necessity of elementary rights, such as the title of prisoner of war. [7] In addition, they will carry individual criminal responsibility for the loss of other life, while a combatant – because this is his duty – shall not be penalized. [17]

If the Moroccan soldiers are combatants, what are the Sahrawi insurgents? The freedom fight is led by the Sahrawi People's liberation army established by the Polisario. Can we presume, that the members of SPLA are combatants, or do we have to apply another terminus for them? When the convention was adopted, the contracting parties agreed that the term could

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be used for those warriors belonging to resistance movements, if they fill all requirements of the legal category of combatant. The first protocol of the Geneva Convention (III.) amended and extended the term of combatant. After the amendment we have to consider the guerrillas combatants, if they fulfil the requirements named above, even if they are not recognizable. [7]

Although we can apply the term of combatant to the Polisario rebels, the difference is significant between the regular Moroccan army and the armed group of Sahrawi militants. Therefore we have to use the *non-state armed group* expression. According to the definition of the International Council on Human Rights Policy a non-state armed group is an armed troop, which uses force to achieve their objectives and are not under state control. [18] In my point of view, we can use the definition of non-state armed group for the forces fighting for freedom in Western Sahara, even if the Polisario is functioning as de facto government. On the 27<sup>th</sup> of February in 1976 Uld Ziou proclaimed the republic in a refugee camp in Algeria. [18] The government of the new state was born in immigration. In these days 78 states have recognized it, including the United Nations in 1978. [2] [3] The UN authorised the Polisario to practise the right to self-determination, even if it has to use force. [4]

If we consider both the Moroccan troops and the Sahrawi People's Liberation Army as belligerents, we have to apply to them all the rights and obligations of the law of war. They are responsible for incidental inhuman treatment, atrocities against the civilians, for the harm to private property and use of illicit arms.

The occupying power also has some responsibilities on hostile territory. According to the advisory opinion of the UN – as I have already referred – Spain did not have the right to transfer its sovereignty over Spanish Sahara to Morocco, but since Rabat did move in, Morocco is practising administrative authority over two-thirds of Western Sahara, even if it is practising it with military support. [19] While administrating Western Sahara, Morocco has to respect all human rights. It is important to notice, the occupying power is not allowed to demand sovereignty over the territory where it is only allowed to practise administrative rights. [19] In the case of Western Sahara, this requirement barely prevails, because Morocco considers Western Sahara as an integral part of the Kingdom.

Regrettably, during the decades of the conflict, many humanitarian crimes were committed and human rights suffered serious harm. Right at the beginning of the conflict, the Moroccan air force struck three refugee camps, later on Rabat deployed napalm. [2] [3] These actions were not only against the Geneva Convention No. IV which declares that the belligerents have to protect the civilians, but also raised further concerns of humanitarian law. The use of napalm is strictly forbidden since 1980. [17] Notwithstanding, it was not prohibited in 1976, but it still put the burden of responsibility on the Moroccan government because of the Geneva law. In war, the written text of law can be easily forgotten. This is the reason, why crimes can occur such as poisoning wells, machinegunning herds, and looting, bullying or public executions. [2] [3] These acts are not only against humanitarian law, but offend human rights as well, and include cases of torture, cruel, inhuman or degrading treatment.

Because the Moroccan army was too big and strong for the Polisario rebels, they turned their force against the weaker foe, Mauritania, which was not able to solve the logistic problems of supplying its troops across the desert. The Sahrawis attacked continuously the Mauritanian units and the mines under Mauritanian rule. The warfare was too expensive for Mauritania which faced a serious economic crisis. Until 1978, when Mauritania got exhausted and the government was upset by a coup, the new leader came to an arrangement with the Polisario

and drew off the units from Western Sahara. The ceded territory was occupied by Morocco instead of the Polisario Front. [4] The struggle continued, the guerrillas attacked mines efficiently, causing significant losses to the Moroccan army, but they were not able to overcome the much stronger enemy. Morocco placed under its control the biggest municipalities and the mines, but Rabat was not able to defeat the Polisario rebels moving quickly in the desert regions, so in 1980 they decided to build a “wall”. The 2400 km long fortification was built in order to protect the Moroccan controlled Western Sahara territories from the attack of the Polisario. The standoff held up until 1988, while Morocco committed many violations against the humanitarian law, when settlements were built for thousands of Moroccan citizens in the occupied zone. This fact breaches the obligation of the occupying power, which is not allowed to do any type of colonization in the occupied territory. [7] The parties started negotiations in 1988 trying to find a legal settlement which is acceptable for each party. In 1991 the UN adopted a resolution of arrangement, they created the so-called *MINURSO (United Nation Mission for the Referendum in Western Sahara)* to organise, transact and control the referendum in Western Sahara. [4] Morocco was unwilling to accept the referendum as a solution, because Rabat was afraid of to lose Western Sahara, if the Sahrawi people vote in favour of the independence. To avoid an undesirable result, the Moroccan government successfully obstructed the referendum. The status of Western Sahara is still unsolved, the referendum is delayed, the international community would prefer a type of settlement where the Sahrawis have a wide scale of autonomy as an integral part of Morocco. This is implicitly unacceptable for the Polisario.

## Human Rights and their Status in Western Sahara

As I have already referred before, violations against humanitarian law and human rights are very common in armed conflicts. As we did in the previous chapter, we have to review the rules of human rights and the regulations that refer to asylum seekers.

Jurisprudence is dividing human rights into three generations. In case of Western Sahara, for the time being, we can mention only the first generations, which consist of rights that are still in the scope of the Polisario’s struggle. The next two generations (economic, social and cultural rights) can only be applied after the cessation of the conflict.

After World War II the United Nations adopted numerous conventions concerning human rights. These conventions specifying the basic rules and principles of the UN Charter. First in 1948 *The Universal Declaration of Human Rights* extricated the norms of the UN Charter. [7] From these rules the most important in accordance with our topic is the right to life, the prohibition of torture or cruel, inhuman or degrading treatment, right to independent and impartial judiciary and the right to seek asylum from persecution. [20]

It was a defect of the Declaration in the year 1948 that it did not contain the declaration of the right to self-determination. In 1966 the international community compensated for this in the *International Covenant on Civil and Political Rights*. [21] Among plenty of other treaties and conventions on human rights we have to emphasize two more. There is the *Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment* adopted in 1984, the other is the *Geneva Convention Relating to the Status of Refugees* adopted in 1951. [7]

From this short and far from detailed enumeration it is marked out clearly, that Morocco, which considers Western Sahara as its own, harms one of the most essential human right, the right to self-determination. Even if the international community regards the procedure of decolonization as already finished, in my point of view the Sahrawis are still in that state when they are legally allowed to fight against their “colonizers”, because they have not succeeded in reaching independence, or its threshold, the referendum. I have also referred to the bombing of refugee camps, which is not only harm against humanitarian law, but also against the right to life, and we could also mention several other mutual abuses against each other’s captives.

In the occupied zone, the Moroccan authorities committed dozens of abuses since 1975. It is not a surprise that Morocco did not accomplish the requirements of the “duties of an occupying power”. Fundamental social and economic rights are not granted, according to the estimates, at least 1,500 people have disappeared and have gone missing since the beginning of the conflict, these are those who probably criticized the regime. This fact immediately raises the question of the situation of right to personal security or the freedom of speech or expression. [22] The Moroccan authorities did not respect the rights related to foreign citizens, when they expelled and deported Spanish missionaries and teachers. [23]

## Refugees and their Camps

If we are talking about the law of refugees – leaving the historical background – first we have to mention the *1951 Geneva Convention on the Status of Refugees*. This was the first international document relating to the rights of refugees and defining the term of migrants forced to leave their homeland. According to this, refugees are those who “owing to well-founded fear of being persecuted for reason of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable, or owing to such fear is unwilling to avail himself of the protection of that country.” [24] Examining the definition, we easily can draw the inference that all the migrants fleeing Western Sahara have to be acknowledged as refugees.

The first migrants left their homes after the “Green March” in 1975 and fled into Algeria, where four refugee camps have been built near the town of Tindouf. In these camps, according to the estimates, more than 160 thousands Sahrawi live. [2] [3] The camps, growing almost into town size, were named after Western Sahara cities, for example El-Aaiun, Smara, Dakhla and Awsard. [25] The inhabitants of the camps treat their temporary homes as a province, calling them with an Arab word wilaya, which might sound familiar to Hungarian ears.<sup>9</sup> The camps are constructed near watercourses and the constructors tried to build them sufficient distances from each other, to avoid the consequences of airstrikes. The communities of refugees who fled in hope of shelter are led by chosen leaders nominated by Polisraio. [25] In the beginning the refugees lived in tents, but nowadays more and more houses are built of sand-brick. The inmates try to produce food on their own, but they still need the donations of international aid agencies. [25]

The regrettable insufficiency of the Algerian refugee regulations is that it tolerates the presence of Sahrawi refugees on its own territory, but it does not allow them to settle down in

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9 During the Turkish wars, the occupied zones of Hungary were organised into the so-called *eyalet* (in Hungarian *vilájet*.)

Algeria. Although this is probably not in the interest of Sahrawis, who are enticed to join the Polisario with the possibility of homecoming. Return has many of difficulties. The migrant government of Sahrawis is operating in immigration itself in a small town, Rabouni, where beside the government, the legislation body, the Red Crescent and the MINURSO can also be found. The Sahrawis try to maintain their own social and health status with medical centers and schools. [25] In spite of the relatively satisfying achievement of the education system, living conditions are quite harsh. Water from the nearby sources is almost undrinkable, so they try to ensure supply by water trucks. In spite of the medical centers, cholera, asthma and other infectious diseases are a frequent “guest”, due to the low level of equipment. [26]

For the habitants living in deplorable circumstances, it would be advisable, if they would be allowed to return back to Western Sahara, but it is prevented by their own organisation, the Polisario. The Moroccan government built houses, but the Front does not allow the refugees to move back, trying to put pressure on the Rabat government. [26]

## Summary

This hidden conflict of Africa is quite a significant topic, but also a difficult one. Important because it reveals a part of the world which is unknown to many of us, and because it consists of a lot of interesting issues to analyze from the field of international law. It is difficult at the same time, because its bibliography is not comparable with other conflicts, such as Palestine. Beyond the raised questions, the examination of the conflict is not mainly concerned with the crimes committed against humanitarian law and human rights, but rather the fact, that the UN, in spite of all the well-meaningness and pursuit, was not able to find an adequate solution in any serious conflicts, because those aspirations have been encumbered by the momentary interest of the world-powers. Although the UN and other international aid agencies have proved, that they have imprescriptible merits in the alleviation of humanitarian disasters.

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# Explaining the Evolutionary Dynamics of an Insurgency: T. E. Lawrence and the Art of Tribal Warfare

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*Despite the advances made in social and industrial life hundreds of millions of people world-wide live in social groups that can be described as tribes. These groups translate into segments of societies that have little to do with political entities. Enemies with tribal identity are difficult to defeat, which is due to the inherent dynamics of primitive or tribal warfare that feature a strong similarity with biological evolution. In the case favourable conditions exist, these dynamics can accumulate into victory of the weaker and defeat of the stronger. In order to support this statement the authors use the Arab Revolt (1916–18) as an example, which is excellently explained in the “Seven Pillars of Wisdom” written by T. E. Lawrence.*

**Keywords:** *evolution; tribal warfare; insurgency; Arab Revolt; T. E. Lawrence*

In the article the authors first introduce the observed tendency that in asymmetric wars the weaker side has a greater chance to prevail. Then they detail certain, mostly wrong perceptions and assumptions regarding the nature of primitive or tribal warfare. This is followed by a short treatise on the obvious similarities between biological evolution and war in general.

After that the internal dynamics of the Arab Revolt as recorded by T. E. Lawrence in his epic volume “Seven Pillars of Wisdom” is introduced. Then one particular theory on biological evolution, the shifting balance theory, is introduced to display the similarities in terms of internal dynamics between biological evolution and primitive or tribal warfare. The article ends with a conclusion.

## Changing Prospects

The expected peace period after the demise of the bipolar world order did not last very long. Regular soldiers soon found themselves involved in many little regional wars that very much differed from their ingrained perception of what a proper war should look like. These wars were not symmetric, not regular, and not of high intensity. They did not involve armed forces with standardized weapons, uniforms and procedures to defeat, but various ragtag bands, armed and equipped with what they could get in a globalized world. More than two decades after the end of the Cold War, aberration to war proper appears to be the new norm for waging war. [1] After years of constant involvement in missions world-wide it has also become clear that this breed of enemy is very difficult to defeat. They are very resilient and

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able to turn initial weakness into eventual strengths. The war they wage appears primitive to regular soldiers and has very much in common with the tribal wars of sub-state societies of the past. Clausewitz, the great Prussian military theorist made clear that in war nothing is eternal and there could be little doubt that previous ways of fighting would always reappear. [2] [3]

A good century ago when regular soldiers met enemies waging primitive or tribal warfare the result was one-sided and often there was almost no need for elaborate tactics, as superiority in armament was mostly decisive in itself. Scholarly research states that imperialist expansion in the late nineteenth and early twentieth century was made possible because tribal resistance was crushed with speed and efficiency. The overwhelming success was attributed to asymmetry in the form of military capability. As a consequence, common thinking has long assumed that the difference in military technology, manifest in weapons systems employed is an important arbiter of war. [4] [5] [6: 86]

## **Tough Enemies, Biased Perception**

The logical conclusion of the common thinking as mentioned above would be that should military capability imply victory in war, the weaker side almost never wins against a stronger power, especially when the gap is very large. Yet examples in history suggest otherwise as the weaker side also wins from time to time. The second half of the 20<sup>th</sup> century showed that military and technological superiority are a highly unreliable guide to the outcome of asymmetric wars. In fact, the many wars that were waged after World War II brought home important lessons on the falsity of the conception of military power. It became clear that superiority in military capability does not guarantee victory and under certain circumstances it may be even counter-productive as a factor. [7: 216–218] [8] [9] Possible explanations among scholars for this tendency are varied. One assumes that because of the possible negative consequences the weaker side fights harder and displays a willingness to accept losses that would be intolerable for the stronger power. This disparity in interest is one plausible explanation for the weaker side's tenacity and staying power. Another scholar highlights the weaker side's stronger political will, the third regards the weaker side's superior strategy as decisive, whereas another approach underlines the importance of access to external assistance. [8: 102–123] [9: 175–200] [10]

The general and biased perception toward primitive or tribal warfare was laid down in the 1940s. Since then a general consensus among scholars arose that tribal wars do not involve many casualties as the total number of people killed in battle is usually small. Participation is not very risky; therefore these wars can be described as substandard and cowardly, waged half-heartedly at best. Tribal wars also suffer from a number of deficiencies such as poor mobilisation of manpower, complete reliance on voluntary participation, poor logistics and supply that make the protraction of campaigns impossible. There are no formalised units, there is no organised training, command and control is generally poor. There is a lack of discipline and as a result morale is flighty. In such wars no specialised weapons are used and there is a clear absence of fortifications. No professional warriors are involved and no signs of military specialisation can be found. Tactics are ineffective and there are no principles to be distilled. [11: 8–14] [12] Hence the enduring and very resilient picture of these wars as a relatively harmless sport and not war proper was created. It should not come as a surprise that in the

many explanations for the reasons why tribes wage war anthropologists have listed sport and entertainment as important reasons. [13: 164–165] [14: 135–144]

A thorough understanding of primitive or tribal warfare is important not only from the academic, hence theoretical point-of-view. Despite the advances made in social and industrial life much of the world's population is located in nation-states without being really part of them. Hundreds of millions of people live in many ways as tribes of old and translate into segments of societies that have little do with political entities. [15] The consequence is that their wars resemble similarities with wars waged in the past. It is also important to note that throughout human history wars were mostly waged by social entities other than states, fought by social organizations other than armies with the involvement of combatants other than soldiers. These wars were mostly non-decisive, protracted engagements fought for limited objectives and by limited means. They were a permanent way of life and viewed as natural phenomenon. [3: 608] [16: 3] [17: 64] [18: 73] [19] [20] Unlike political wars regular soldiers are familiar with, these wars were necessary and brute mechanisms for the survival of the people involved in them and featured patterns and reasons thought to be extinct for long. [7: 15]

## Biological Evolution and War

War, even primitive or tribal war, displays structural unpredictability that suggests definite limits to what can be known at any given point in time. War has a non-quantitative and non-predictive character, which makes it impossible for the empirical or hard sciences to offer suitable descriptions, explanations or models. Given war's structural unpredictability, its dynamic and constantly changing nature, it is assumed that biological evolution may offer better foundations for a theory of war than most quantitative sciences. [14: 135–144] [21: 49–55]

Detecting obvious similarities between biological evolution and war is not difficult. In his book titled *Adaptive Coloration in Animals* biologist Hugh Cott observed a striking similarity between the primeval struggle of the jungle and the refinements of civilized warfare. He regarded biological evolution as struggle for existence and described it as interspecific warfare. Cott also stated that both evolution and warfare have much the same story to tell. In evolution and warfare there are results of an armament race and an invention race, which have led to a complex state of preparedness. The methods employed in both are, according to him, mainly similar as shown by the evolution of speed, on land, in the air, and under water, by pursuer and pursued. Both can be characterized by the employment of stealth and surprise, of deception and ambush. There is a display of warning signals and of alluring baits, the elaboration of smoke-screens, traps, nets, parachutes, of electrocution and booby-traps. In both there is evidence for fossorial and nocturnal habits, the development of poison, and of deadly apparatus in the form of fangs, stings or arrows. Protection in both is afforded by armour-plating, spines and barbed wire. Chemicals are used both in evolution and warfare as practiced by certain insects and by creatures such as the skunk. [22: xi–xii]

The American military thinker John Boyd too, advocated that evolution by natural selection and the conduct of war are intimately related. Soldiers and biologists share similar problems as both try to find a function that matches the crude reality of life. Both evolution and war reflect conflict, survival, and conquest in a very similar and fundamental way. They feature processes that include trial-and-error mechanisms and oscillate on a continuum

that cannot be broken into discrete points or steps in time. [13] [23: 59–80] [24: 229–235] [25: 32–33] [26: 217] [27: 11] T. E. Lawrence, the author of “Seven Pillars of Wisdom” and leader of the Arab Revolt in 1916–18 also found a biological element in warfare that was inexpressible with hard or quantitative sciences. This element was for him not subject to the laws of mathematics as it dealt with unknown variables, unfixed conditions, and organic things. Its focus was the individual without artificial aids, an intangible that drifts about like gas. This element, he stated, does not live on any material and does not offer any material to the killing. The biological element appeared for him messy and slow like eating soup with a knife. Lawrence regarded this element the breaking-point, which decided on life and death. The biological element was humanity in battle, the personal experience, and the very war with a line of variability running through all its aspects. Its components were sensitive and illogical, with always the possibility of accidents and flaws. The biological element was not expressible in troops or figures, but existed as intuitions. He reasoned that even if nine-tenths of warfare was certain and could be taught in books the irrational rest could be ensured only by instinct. Due to this biological element he stated that amateur control, experimental councils, ad-hoc divisions, and all sorts of whimsicality are inherent features of war. [28: 101]

## Dynamics of the Arab Revolt

At the beginning of the Arab Revolt the tribal setup of the Arabs was not promising. Arab tribes were bellicose, but they normally went to war in order to gain honour and wealth. There were no principles for their hasty practice of warfare and tactics were empirical snatchings of the first means. The three noble spoils for which they usually waged war were arms, good riding-animals, and nice clothes. National union was always episodic and never deeper than a combined resistance to an intruder. The tribes were not familiar with the meaning of mass nor could they display corporate spirit or mutual confidence. They did not know military discipline in the sense of restricting and submerging individuality. Without formality of discipline there was no formal subordination and there was no distinction in terms of military ranks. Virtue of accomplishment was regarded more important as only the only person who could be a leader was the one who appeared better than the rest. The Arabs were volunteers, individuals, local men, relatives, but never soldiers. They fought in parties and not in stiff formations, their warfare was intentional and attack was always imminent. [28: 86, 124, 144, 150–151, 281, 504]

During the revolt the Arab contingents were continually shifting. Young men often served only for a few days, married men alternated between camp and wife, and sometimes whole clans became bored and just took a rest. Any of the Arabs could go home without risking a penalty as the only contract to serve was honour. Blood feuds were nominally healed, but members of one tribe were suspicious of each other and within a tribe no man trusted his neighbour. The distribution of the raiding parties was ad-hoc as due to their distrusts, and it was impossible to mix or combine tribes, and no tribe could be used in the territory of the other. This dissipation added fluidity to speed, reinforced the tribes’ natural mobility, and always refilled their ranks with fresh men. Each new tribe involved maintained their pristine energy. Fresh forces were composed of local men who knew the qualities of their ground and fought best there. The result was utmost disorder in which the raiding parties achieved maximum irregularity and extreme articulation. Their circumstances were not similar twice and no sys-

tem could fit them twice as the tribes never tried to maintain or improve any advantage. They always moved off and struck again somewhere else with the smallest force, in the quickest time, at the farthest place. Arab tribal warfare was like naval warfare featuring mobility, ubiquity, and independence of bases, independence of communications, lack of ground features, lack of fixed directions, and lack of fixed points. [28: 89, 329–330]

It turned out during the revolt that the assets of the tribesmen were movement, endurance, individual intelligence, knowledge of the country, and courage. Tactically the tribes represented a highly mobile, highly equipped army of the smallest size. Having five times the mobility of the Turks they needed only one-fifth of their number. Arab tribal warfare was simple and individual as every participating man was self-contained. Their efficiency came from the personal efficiency of the single man and the sum yielded by them at least equalled that of a compound system of the same strength. As T. E. Lawrence remarked, this sort of warfare was more intellectual than a bayonet charge and more exhausting than the obedient service in a regular army. The moral strain of isolated fighting made war very hard upon the individual, exacting special initiative, endurance, and enthusiasm. [28: 330] [29: 12–14, 19, 20]

During the revolt the Turks had to cope with unforeseen difficulties as the activity of the tribes behind their back continuously hampered them. Tribal raids caused daily losses of camels and men killed or wounded. Even those clans who fell away from the revolt did not become trustworthy. The Arabs' diversity threw the Turkish intelligence off the track as their strength depended upon whim. No spy was able to count them, as the Arabs themselves had no idea of their strength at any given place or moment. The Arabs also had the habit of never engaging the enemy. They never disclosed themselves until the moment of attack, which was directed not against the enemy's men, but against his materials. Over time the tribes made themselves superior in one branch that turned out to be decisive. They modified one maxim of warfare, being superior at the critical point and the moment of attack, and applied it to the railways. Their aim was to reduce the railway to working with the maximum loss and discomfort. They did only a little damage to the line to annoy the Turks without making them fear its final destruction. The tribes thus sought the weakest link and hit only that, till time made it fall. [28: 122, 183–184, 215–216, 329, 467–469]

T. E. Lawrence regarded the tribal war of the Arabs a sort of national strike, a nature of peace in which they lived by their raggedness and, in the end, won by uncertainty. The revolt was not war of contact and there were no pitched battles either, since the enemy was contained by the threat of a vast and unknown desert. The strategic strength of the tribes came from time as the war was going neither well nor very ill, and it always seemed as though there might be time for another try next year. Their victory was not so much based on their ability to do things perfectly, as the Arabs had a preference for botching things somehow, rather than letting things go altogether by default. The value of the tribes came from their quality for this special sort of warfare in which quantity, in terms of numbers, was not decisive. The few active rebels who were probably never more than two percent of the total population had qualities such as speed, endurance, ubiquity and independence of supply. They had the technical equipment to destroy or at least paralyse the enemy's communications. [28: 132, 184–186, 215, 379, 538]

## Dynamics of Biological Evolution

British military theorist Liddell Hart once wrote that “instead of fusing individuals into a mass through the suppression of their individuality and the contraction of their thought, the lead (...) only has effect, lightning effect, in proportion to the elevation of individuality and the expansion of thought. For collective action it suffices if the mass can be managed; collective growth is only possible through the freedom and enlargement of individual minds. It is not the man, still less the mass, that count; but the many.” [30: 356] He also stated that in war “bad means deform the end, or deflect the course thither”; therefore the only thing left possible is to acknowledge that “if we take care of the means the end will take care of itself.” [30: 357]

His observation on war is in full accordance with T. E. Lawrence’s description of the nature of Arab tribal warfare, which he regarded as simple and individual. Every participating man was self-contained. The personal efficiency of the single man did matter, which at least equalled that of a compound system of the same strength. In a similar fashion biologist *Sewell Wright* regarded evolution to be driven by efficiency, hence the interaction of single genes. He wanted to understand the properties of gene mutation and to better understand the underlying dynamics of the process he introduced the *shifting balance theory*, also known as the *theory of the fitness landscape*. Fitness described for him the relative success of a species in relation to others in the environment. He stated that biological evolution happens in a constantly changing environment in which a species’ suitability to the circumstances can alter in subtle and dramatic ways. [31] [32] Wright’s theory appears to be a powerful aid to conceptualise any complex phenomenon, including war. As a graphic representation, a short and non-mathematical approach it resembles a certain similarity with a topographical map. Although he emphasised that references to geography are of secondary importance, the result was a map containing multiple peaks surrounded by circular contours defined by two axes representing the dimensions along which possible combinations could be arranged. Every combination had a certain value and by connecting the points of equal value contours of peaks and valleys arose. [32: 67–68] [33] [34]

Wright assumed that evolutionary selection could carry the species to the top of the nearest peak, but could not cross valleys that separate the current peak from other, probably higher ones. However, should the species be able to cross valleys then it is not under the exclusive control of natural selection, but of certain trial-and-error mechanisms. An indefinitely large species, that lives under constant environmental conditions and is exposed only to natural selection, can reach equilibrium by occupying a certain peak. The population either grows through an increase in mutation rate or a decrease in mass selection, or it decreases through the opposite process. In both cases evolutionary selection alone does not seem to be sufficiently strong to push the species towards another and possibly higher peak. [33: 360–362] [34: 117] Wright assumed that the environment is never static, but changes continuously. The landscape constantly deforms by depressing high places and elevating low ones. According to him, if a species is not extremely specialised and occupies a wide field on the landscape, by moving constantly it could find higher general regions. Such a trial-and-error mechanism can shuffle the species about by means of change without advance in adaptation. As a solution he proposed a large species to be subdivided into many local races that shift continually in a non-adaptive

fashion on the landscape. Although this exploratory process could result in a decrease of fitness as an immediate effect, this way it would become possible that at least one local race finds a higher peak and pulls the entire species towards this better position. Wright emphasised that a subdivision of a species into local races provides the most effective adaptation mechanism for trial and error in the field of gene combinations. [31: 363] Thus evolutionary adaptation involves differentiation in which the principal mechanism is essentially non-adaptive. Wright regarded evolution as a dynamic process in which adaptation comes as a result of a careful balance between natural selection and random genetic drift. In this process each has a varying contribution to the survival and extinction of species over time and space. He proved that adaptation and chance events play an important role in biological evolution. [32: 73–75]

## Conclusion

Wright's theory of the shifting balance allows for conceptualising the Arab Revolt as a complex phenomenon that involves adaptation and trial-and-error. According to his theory the Arabs and the Turks can be regarded as two species each trying to increase its own fitness at the expense of the other. The war between them can thus be visualised as a landscape with a constantly changing surface that contains multiple peaks. The height of the peaks corresponds to the value of the effects the Arabs and the Turks achieved during the war.

As indicated by the shifting balance theory, due to their tribal structure, the Arabs were more fit to survive in this constantly changing environment. Over time they won the war against the Turks, with the result that the political map of the Arab Peninsula changed in a subtle and dramatic way. The dynamics of their tribal warfare made it possible for them both to occupy high peaks in the landscape and to cross valleys that separated those peaks. Arab tribal warfare was able to exploit the trial-and-error mechanisms to a higher degree, which better corresponded to inherent dynamics of the constantly changing environment. Their loose tribal setup, their lack of indoctrination in terms of processes and procedures resulted in lesser specialisation. In other words, they were able to occupy a wider field in the landscape and could move about constantly thus finding higher general regions and occupy higher peaks. They were able to shift continually in a non-adaptive fashion on the landscape and this way they found by accident that damaging railways was unbearable for the Turks in the long term. This chance discovery of some local Arabs and T. E. Lawrence spread through their ranks and became a general practice until the end of the war.

Tribal warfare is a form of war and as such it is a dynamic process, which is scarcely in equilibrium. In the end the subdivision of the Arabs into local entities, the shifting balance of the various tribes proved to be more effective than the Turks centralised structure and strict military hierarchy. Thus victory in such wars comes from a careful balance between selection and random events, which continuously shift back and forth. In the end it turned out those horizontal structures, decentralised command and bottom-up processes of the tribes proved to be the more effective. Adaptation in war is certainly important, but as the Arab Revolt shows adaptation alone does not help anybody to win any sort of war. Trial-and-error is just as much an important factor in waging war and must be considered with equal weight. The success of the Arab Revolt stands for a clear limitation on the assumption that any careful process of optimising, which is often described by the word *adaptation*, alone will yield an advantage and later victory in war as it has been observable in recent wars.

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# The Problems Related to the Stocktaking of Forces and Resources in Internal Emergency Plans

SZENDI Rebeka<sup>1</sup>

*The laws, related to disaster management order the operators of dangerous establishments to prepare an internal emergency plan as the part of their safety documents. In this plan they describe the measures and resources for the protection against a possible industrial accident. Although the internal emergency plans of dangerous establishments are prepared mostly by the rules in effect, experiences show that lesser or greater problems may occur by preparing internal emergency plans, the inventory of the forces and resources is often not adequately detailed.*

*The aim of this article is to present the problems related to force and resources calculations, respectively to give recommendations on the making of these calculations in a form which is easier to judge by the authority.*

**Keywords:** *dangerous establishment, internal emergency plan, industrial accident, protection measures, averting industrial accidents*

## Introduction

In line with Government Decree 219/2011 (XI. 10.) on the protection against major accidents involving dangerous substances (hereinafter: Decree), the operator of the establishment dealing with dangerous substances has to draw up an Internal Emergency Plan for the purpose of preventing risks set out in the safety report and safety analysis (hereinafter: SR and SA). [1] This document regulates the prevention, recovery and mitigation of major accidents involving dangerous substances as well as the order and conditions of information, alert and preparation. In addition, it also contains – as a compulsory item – the inventory of forces and resources available, which are necessary for protection against disasters. [2]

The purpose of this article is to present the problems related to the inventory of forces and resources in the Internal Emergency Plans based on personal experiences gained in this field, professional consultations as well as studying the internal emergency plans of dangerous establishments. Moreover, to give recommendations on a more transparent inventory of forces and resources, thereby facilitating the work of the authorities – by reviewing the relevant regulations and literature.

## Describing Forces and Resources

### *General Requirements*

The content requirements of internal emergency plans are specified by Annex VIII of the Decree. It is a general requirement that the tasks of preventing and averting accidents described

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in the plan are proportionate to the vulnerability assessed in the SR and the SA – as the Internal Emergency Plan is based on the SR and the SA. Furthermore, the organisations, forces and resources specified in the plan must be able to prevent major accidents and mitigate their consequences. [1]

The internal emergency plan has to address the situations following major accidents involving dangerous substances; tasks of controlling their effects; organisations, forces and equipment involved in the control; the infrastructure that can be involved in the control; facilities and materials that can be used and the measures and rules of conduct intended to protect the employees – within the framework of the tasks intended to prevent major accidents involving dangerous substances and to mitigate their effects. [1] Only those forces and equipment can be taken into account in the enumeration which are available. We cannot rely on tools which are not in use, the circumstances are not proper for their use (e.g. the lack of adequate power source), their technical compliance cannot be guaranteed or the employees are not prepared to use them. [3] It is important that the forces and equipment ensured by other regulations capable to execute the tasks defined in the plan are applicable to executing these tasks provided their duties are not affected and they meet the general requirements in the internal emergency plan (e.g. industrial fire brigades, chemical assessment teams). [4] In addition, the plan also has to include the forces and resources available under cooperation or mutual assistance. [5]

### ***Problems Related to the Description of Forces and Resources (Based on the Review of Internal Emergency Plans of Dangerous Establishments)***

When writing this article, internal emergency plans of several dangerous establishments have been reviewed which I became acquainted with during my work. Furthermore, the experiences used have been gathered during internal emergency plan exercises.

The internal emergency plans of dangerous establishments reveal that the establishments possess the protective equipment and gears in accordance with the (workplace safety, fire safety, environmental, etc.) legislation, such as personal protective equipment, fire extinguishers, fire hydrants, safety showers, eye washes, etc. It is a standard practice of the operators that the internal emergency plans simply list the forces and resources which are to be used in response and decontamination without a specific stocktaking of forces and resources mentioned above. It is very difficult for the authorities to judge whether the listed forces and resources are sufficient for the response. Furthermore, in certain cases the internal emergency drills point out that further resources are needed to carry out the operations properly and efficiently.

### ***Recommendations on the Stocktaking of Forces and Resources***

The wide variety of materials stored, produced or used in dangerous establishments and the applied technologies does not allow a general formula – applicable to all plants – to define the necessary forces and resources to be used in the response to various potential accidents.

There used to be guidelines based on the standards in certain regulations of the National Directorate General for Disaster Management (NDGDM) to calculate the forces and resources needed in firefighting, technical rescue as well as in chemical reconnaissance and decon-

tamination. In the case of firefighting, the number of necessary and available extinguishers is specified based on the capacity of the extinguishers and the intended intensity:

$$\Sigma N_{\text{needed}} < \Sigma N_{\text{available}}$$

where  $\Sigma N$ : the number of fire extinguishers or equipment of a certain type;

and  $N=Q/q$

where  $Q$ : the needed intensity,  $q$ : the intensity of fire extinguishers or equipment of a certain type.

Through the determination of the capacity needs of technical rescue, the urgency of the operation is contrasted to the time ( $T$ ) necessary to carry it out, which is the quotient of the volume of the rescue operation and the time available:

$$T_{\text{necessary}} > T_{\text{possible}}$$

where  $T_{\text{necessary}}$ : the urgency of the operation;  $T_{\text{possible}}=N/I$ , where  $N$ : the volume of the rescue operation (an item of the operation),  $I$ : the capacity of the staff unit (an item of the operation/h). To specify the forces and resources needed for chemical reconnaissance the following factors are essential: the number of released materials, their identification and the circumstances of the release. As regards chemical decontamination, the characteristics of released materials and the size of the damaged area are decisive factors. [6: 62–69] [7]

This article does not aim at covering the above mentioned standards in detail. The goal of the recommendations on the stocktaking of forces and resources is a uniform, properly-detailed stocktaking, thereby facilitating the work of the authorities. In this process, the relevant legislation and authoritative tasks of examining the documents are taken into account.

The following method is proposed for the operators to make calculations of forces and resources:

Analysing the main scenarios defined in the safety documents assess the minimum demand on sources and resources – if it is possible one by one<sup>2</sup> – which are needed for the elimination of the situations described in the scenarios. Besides, we have to recon with the possibility of more events occurring simultaneously, resulting in increased needs. Next, the personnel and the technical infrastructure must be considered (event by event) which are available for the response or the mitigation of the consequences. When comparing the two, the number of resources available at least has to achieve – but, preferably outnumber – the necessary quantity. [8] Table 1 might provide help with stocktaking forces and resources.

The operator should also submit the event-specific inventory of forces and resources to the authorities as part of the review of internal emergency plans, so that the forces and resources that can be deployed in the response are more transparent for the authorities and they can set the minimum quantity.

The quantification of forces and resources necessary for various reconnaissance and response operations may pose difficulty due to the lack of specific legal requirements or guidelines. It would be reasonable to lay down the content requirements of the inventory of forces and resources.

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2 When setting the requirements of forces and resources, the authority also has to examine the possibility or the necessity of treating each scenario separately (e.g. in establishments where dozens of scenarios are identified in the safety documents, it might be cumbersome). It might be more reasonable to compile a joint inventory for similar scenarios (e.g. release of dangerous chemicals, fire) or it may be enough to compile a general inventory for each scenario.

Table 1. Manual to prepare the inventory of forces and resources [Edited by the author]

Scenario (based on SA/SR)	Operations to be carried out	Detailed specification of the forces – the necessary personnel (number of persons) in each operation	Detailed specification of the re-sources needed in each operation
Scenario 1	Reconnaissance	<ul style="list-style-type: none"> <li>• number of staff involved in the operation</li> <li>• their location</li> <li>• alert protocol</li> <li>• their qualification, preparation</li> </ul>	<ul style="list-style-type: none"> <li>• personal protective equipment (e.g. gas mask, oxygen tank, protective clothing, etc.)</li> <li>• the location of protective equipment, access to them, distribution</li> <li>• reconnaissance equipment (e.g. detector tubes, detectors)</li> </ul>
	Alarm <ul style="list-style-type: none"> <li>• executives</li> <li>• staff</li> <li>• disaster management</li> <li>• authority</li> </ul>	<ul style="list-style-type: none"> <li>• appointment of persons responsible (who issues commands to whom?)</li> </ul>	<ul style="list-style-type: none"> <li>• alarm devices (e.g. siren)</li> <li>• communication devices</li> </ul>
	Command/Control	<ul style="list-style-type: none"> <li>• responsibilities, duties, authority to issue instructions, decision-making authority</li> </ul>	<ul style="list-style-type: none"> <li>• command centre (location, facilities)</li> <li>• computing devices</li> <li>• communication devices</li> <li>• etc.</li> </ul>
	Fire fighting (initial fire attack, localisation before the arrival of professional responders)	<ul style="list-style-type: none"> <li>• number of staff involved in the operation</li> <li>• their location</li> <li>• alert protocol</li> <li>• their qualification, preparation</li> </ul>	<ul style="list-style-type: none"> <li>• necessary firefighting equipment and facilities (quantity, capacity, location)</li> <li>• pumps e.g. at fire water storage tanks (automatic, if not, who starts it, where and how)</li> </ul>
	Technical rescue (operations that can be carried out by the staff before the arrival of professional responders)	<ul style="list-style-type: none"> <li>• number of staff involved in the operation</li> <li>• their location</li> <li>• alert protocol</li> <li>• their qualification, preparation</li> </ul>	<ul style="list-style-type: none"> <li>• necessary technical devices</li> <li>• their location</li> </ul>
	Decontamination of the area (operations that can be carried out by the staff before the arrival of professional responders)	<ul style="list-style-type: none"> <li>• number of staff involved in the operation</li> <li>• their location</li> <li>• alert protocol</li> <li>• their qualification, preparation</li> </ul>	<ul style="list-style-type: none"> <li>• necessary devices and materials for decontamination</li> <li>• their location</li> <li>• necessary protective equipment</li> <li>• the location of equipment, access to them, distribution</li> </ul>
	Decontamination of the people (operations that can be carried out by the staff before the arrival of professional responders)	<ul style="list-style-type: none"> <li>• number of (qualified) staff involved in the operation (if available)</li> <li>• their location</li> <li>• alert protocol</li> <li>• their qualification, preparation</li> </ul>	<ul style="list-style-type: none"> <li>• necessary devices and materials for personal decontamination</li> <li>• their location</li> </ul>
	Rescuing people (operations that can be carried out by the staff before the arrival of professional responders)	<ul style="list-style-type: none"> <li>• number of (qualified) staff involved in the operation (if available)</li> <li>• their location</li> <li>• alert protocol</li> <li>• their qualification, preparation</li> </ul>	<ul style="list-style-type: none"> <li>• rescue equipment (e.g. stretcher)</li> <li>• their location</li> </ul>
	Medical care	<ul style="list-style-type: none"> <li>• number of (qualified) staff involved in the operation (if available) e.g. medical staff</li> <li>• their location (the location of the doctor's surgery, if available)</li> </ul>	
	Communication Alerting adjacent establishments	<ul style="list-style-type: none"> <li>• appointment of persons responsible (who issues commands to whom?)</li> </ul>	<ul style="list-style-type: none"> <li>• alarm devices (e.g. siren)</li> <li>• communication devices</li> </ul>
	Evacuation of the area/ Evacuation support • administration	<ul style="list-style-type: none"> <li>• incident commander</li> <li>• supervisors of the evacuation</li> <li>• personnel responsible for the administration of evacuation assembly points</li> </ul>	<ul style="list-style-type: none"> <li>• communication devices</li> <li>• IT equipment needed for administration</li> </ul>
Note: The plan has to include the procedure of detecting the event as well as the procedure of the individual operations (e.g. alarming the intervention teams) outside working hours when no or just a limited number of employees are present			

## Summary

According to the regulations, the operators of dangerous establishments have to draw up an internal emergency plan as part of their safety documentation. The law sets the requirements in the plan. It is a general expectation that the preventive and recovery tasks specified in the plan are proportionate to the threats listed in the SR and SA and that the bodies, forces and resources available are able to prevent major accidents and to mitigate their impact.

Experience shows that internal emergency plans of establishments generally comply with the regulations and contain the required items (tasks, forces, resources, description of the infrastructure, management, the identification of the individuals involved, etc.). However, these compulsory items are often just enumerated as a list and are not assigned to a certain event. The detailed, event-specific stocktaking of forces and resources is often absent, as the quantification of forces and resources necessary for various reconnaissance and response operations may pose difficulty without specific legal requirements or guidelines. Reasonably, the authority activities related to the examination, assessment and review of internal emergency plans (including the stocktaking of forces and resources) should extend to the specification of related requirements, guidelines and the possibility of introducing relevant legislation. The event-specific report on forces and resources and the description of the procedure would assist the authority with their activities of assessment, review and control.

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# The Role of Nuclear Weapons in NATO's Early Cold War Strategies (1949–1957)

KISS Petra<sup>1</sup>

*Since August 1945 atomic weapons have become significant factors in international relations, every state with great ambitions has aspired to get atomic secrets. The primary goal of the North Atlantic Treaty Organization (NATO) created in 1949 was – possessing the United States', a nuclear power's, security guarantee – to deter the Soviet aggression. The first strategic documents of the Alliance were written with this very purpose. However, in the 1950s there was a shift in the allied nations' policies, which influenced NATO's strategic thinking as well, so in 1957 a real different strategic concept was adopted. Gaining technological superiority became the most important goal, which led to development and intense production of nuclear weapons. This article examines the emerging role of nuclear weapons and the changing strategy of the Alliance between 1949 and 1957.*

**Keywords:** NATO, strategic concept, nuclear weapons, deterrence, massive retaliation, Cold War

## Introduction

In a classic sense a strategic document takes into consideration – be it a state's or an alliance's strategy – a nation's total resources, its capabilities and constraints, and its traditions, culture and values. If there are significant changes in these factors, similar re-orientation is usually due to happen in the strategic thinking as well.

With the appearance of nuclear weapons (1945) the nature of warfare has been altered, its characteristics have been shifted. These weapons have such an enormous destructive power, which mankind has never seen before. The definition of victory and defeat were challenged, for neither politics nor the armed forces were prepared. [1] This urged NATO members and the whole Alliance to set out new directions. However, these changes raised many questions for the member states' leaders and for the military.

According to Lawrence Freedman, a British security policy expert, nuclear strategy is the strategy of the non-use of nuclear weapons. Atomic weapons and their (non)use has always belonged to the scope of highest political decision makers and – in contrast to any other weapon systems – not in the least has depended on the decision of soldiers or armed forces. [2]

The issue of using nuclear weapons was much more cardinal during the cold war than in the last two decades, nonetheless it has been a sensitive question of international relations

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in our days, too.<sup>2</sup> The best evidence for that is the “Special Advisory and Consultative Arms Control, Disarmament and Non-Proliferation Committee” which was established in 2013. The committee’s primary task is to enhance the dialogue between NATO and Russia on confidence building and transparency regarding tactical nuclear weapons.

In 2014 NATO celebrated its 65<sup>th</sup> anniversary which gave researchers an exquisite opportunity to interpret the North-Atlantic Organization’s past again, study its presence and to envision its future. This paper is examining the Alliance’s strategic documents from 1949 to 1957, with special regard to use of nuclear weapons. It also surveys the United States’ changing guidelines, inasmuch as they had crucial influence on the Alliance’s strategic thinking.

## The Atomic Secrets – the Foundation Stone of Western Defence

The United States, after the invention and initial use of nuclear weapons in 1945, had a monopoly in this field for years. However, the role of these weapons – from a political and also from a military point of view – was to clarify even more years later. Atomic weapons got into focus of defence planning and strategy development in 1948 as an effect of the Berlin Crisis, but this time – more than 3 years after the first use of nuclear weapons – there was a huge uncertainty in the official documents:<sup>3</sup>

*“...It appears imprudent either to prescribe or to prohibit beforehand the use of any particular weapons when the character of future conflict is subject only to imperfect prediction. [...] In the light of the foregoing, no action should be taken at the present time:*

- a) *To obtain a decision either to use or not to use atomic weapons in any possible future conflict;*
- b) *To obtain a decision as to the time and circumstances under which atomic weapons might or might not be employed.”* [4]

It was not for a moment called in question that the USA will ever give up the advantage nuclear weapons meant.<sup>4</sup> In the same document it was also declared that Western-Europe’s security is ensured by atomic weapons under American trusteeship, as only such devastating instruments can counterbalance the permanent Soviet military threat.

The United States’ leaders realized that its monopoly can not be maintained for a long time. In August 1949 the Soviet Union carried out its nuclear tests. At that time optimistic British and American experts predicted the birth of the first Soviet atomic bomb at the end of the 1950s, the pessimistic opinions said it will take only 3–4 years for the Soviets to eliminate

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2 Three NATO member states possess nuclear weapons: the United States since 1945, United Kingdom since 1952 and France since 1960 (however France has never offered these for Alliance use).

3 Similar “chaos” prevailed in war planning. American air force and navy commanders both counted on using nuclear weapons in support of their own battles, so the same targets were selected more times in war plans. In the Far East and Europe there were over 100 targets selected two times but in many cases this “overplanning” happened even by three commanders. See more: [3].

4 In 1946 the United States presented its proposal for the United Nations Atomic Energy Commission. (The concept was named Baruch Plan after Bernard M. Baruch, who had an essential part in the development of this document and who served as a presidential advisor to three US Presidents.) According to the plan the USA would prefer the creation of a new international authority which would control the technology, supplies of raw materials and use of atomic energy. This authority’s decisions would have been mandatory for every state, however the USA would have had a leading role in the organization. The initiative would have sorely harmed the countries’ sovereignty and even more the Soviet Union’s interests which would have never accepted American control of production so it rejected the proposal directly. See more: [5]. The Baruch Plan (Presented to the United Nations Atomic Energy Commission, June 14, 1946) and [6].

technical problems. The United States envisaged the appearance of a technology endangering the American homeland in only two decades. [2]

At that point presumably neither the USA nor the Soviet Union planned a war against the other party, but the Truman administration was seriously afraid that Soviet provocations, miscalculation and misconstruction of Western intentions may lead to a military conflict which could drive the world towards the Third World War. [7] This concern is reflected in the Alliance's strategies til the end of the Cold War.

*“To win one hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the acme of skill.”* (Sun Tzu)

## Nuclear Weapons in Security Theories

Thinking about nuclear weapons and their role in science appeared first of course in the USA. Many theories and approaches came out which reflected the same discrepancies as there were in the reality. Although the author refers to Soviet sources as well in order to substantiate the topic scientifically, these sources are primarily of political and military nature, we can not find any writings in Political Science or Security Theory such as in the USA or UK.

The precedent of the two Japanese cities which suffered nuclear attacks in 1945 proved unambiguously that the nature of warfare had been altered, its characteristics had shifted.<sup>5</sup> The schools of thought were forced to re-think their view of war. The Clausewitzian thinking which goes back to the 19<sup>th</sup> century describes war as the continuation of politics by other means. But this idea seemed to dissolve since in case of nuclear power politics controls these weapons – politics defines not only the goals for the armed forces but also how they have to fight in a war.

In the accelerating pace of development and production of atomic weapons the elementary question was: why do countries aim to get atomic secrets? How do the spread of nuclear weapons influence international security and what are the consequences?

Kenneth N. Waltz (1924–2013), an American neorealist political scientist argued that there are positive impacts for the international community if more states possess atomic weapons. In his opinion possessing nuclear weapons can not change the relations among states since these are the consequences of complex historical, economic, political and military factors. Examining the countries' motivation to get nuclear weapons Waltz listed seven reasons: [9]

- Great powers always aimed to defeat other significant powers and to develop more effective weapons. It is not surprising that the state which develops its own atomic bombs can expect such success.
- Certain states may worry because of the lack of nuclear weapons even if their allies have atomic secrets. They can never be sure that the nuclear ally is ready to help them in case of aggression. So they are going to start their own nuclear program.

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5 In Hiroshima ca. 60–80,000 people were killed instantly but many more died because of the long term effects of radiation sickness. More than 10 km<sup>2</sup> of the city were destroyed through the explosion and because of the heat; there were fires throughout the city for months. The bomb that was dropped on Hiroshima was named “Little Boy” and had a mass of 4,000 kg and was about a 16 kilotons of TNT equivalent in explosive force. A few days later a bigger atomic bomb was dropped on Nagasaki by the American Air Force, it was named “Fat Man” and weighed more than 4,600 kg with 22 kilotons explosive force. One third of the city was destroyed and 40,000 people were killed instantly. See more: [8].

- If neither the state nor its allies possess nuclear weapons but their adversaries do, the state might begin nuclear developments.
- If a state is afraid of present or future large scale conventional conflicts, that can provoke similar aims to get atomic weapons.
- The reason may be that the state is not able or willing to get into a conventional arms race. In order to increase its security nuclear weapons are a much more effective and secure alternative.
- States also can aspire to have atomic weapons because of aggressive intentions.
- At last there is an element which can be a reason or a result as well: possessing nuclear weapons increases the state's prestige and position in the international community.

In Waltz's concept the Clausewitzian cost-benefit theory is at work, simply modified and inversely. According to Clausewitz, if the political benefits of a war are bigger than the acceptable costs and losses, the war can be justified: the winner gets more advantage than without a war against the adversary.<sup>6</sup> Waltz however explained that it does not matter how many members the atomic club has, initiating and fighting a war is pointless since in such a conflict there is no winner and the fighting parties may lose everything. [9] So the retaliation capability – lacking a world government – keeps the system of anarchic states under control. [11] As evidence Waltz mentions the fact that atomic powers have not waged war against each other since World War II. [9]

Kenneth Waltz took Robert Oppenheimer's (nuclear physicist who participated in the American atomic program) simile, according to which nuclear powers behave in the international system like two scorpions in a bottle. Both of them are able to kill the other but only at the risk of their own life. This mutual vulnerability and destructive power hinders the breakout of a general war and ensures the maintenance of peace. [12]

In contrast to Waltz, Scott D. Sagan, a liberal American theorist stands totally against the spread of nuclear weapons. It is worth observing the debate between Sagan and Waltz which has been published several times. Sagan argues that possessing a huge number of nuclear weapons can lead to the security dilemma described by Robert Jervis, an American political scientist. [13] This does not strengthen the security of the international system but may also cause serious problems. [14]

According to the analysis of the American authors, Ned Lebow and Janice Gross Stein, possessing nuclear weapons can inspire states to two kinds of behavior: it can make them self-confident and emboldened to act, however it can also encourage them to maintain peace (see: Oppenheimer's simile) The authors demonstrated their arguments with the case of the Cuban Missile Crisis in which both mechanisms affected the parties. [15]

Albert Wohlstetter (1913–1997), who worked as a mathematician at the American research institute RAND Corporation, was against the spread of nuclear weapons, too. In his view this was the problem of "N+1". "N" stands for the number of states already possessing nuclear weapons which has changed from time to time. In Wohlstetter's formula the "+1" means the state which wants to get into the atomic club. Examining Europe, more precisely the European countries of the Western Bloc, he explained that these states have four ways to go:

- States can utterly reject nuclear weapons, be they in the possession of the United States or any other country;
- They can make efforts to develop their own nuclear capability;

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<sup>6</sup> George Lakoff is cited by Szilágyi Ákos [10].

- Countries can create a nuclear force under common control;
- They also have the possibility to rely on the security guarantee of the USA.

Wohlstetter proved in his analysis – confirming Sagan's idea – that the only one rational choice for Europe can be the last alternative, any other would only weaken the Alliance. [16] Eventually NATO chose this way at the end of the 1950s.

The Alliance would have had no other option, because the Soviet political and military leaders counted on the use of tactical and strategic nuclear weapons in their military scenarios and operational planning – even if they had only a few number of nuclear weapons in the 1950s. (Graph 1.) Although the Soviet high politics utterly condemned (American) nuclear weapons, their use was considered simply illegal, contrary to international law. Nonetheless the Soviets did not explain their own developments, they justified it as an enforced move.<sup>7</sup> Khrushchev affirmed in his statements many times that the Soviet Union will give a nuclear answer to a nuclear attack. The First Secretary of the Communist Party of the Soviet Union stated, he has no doubt that one of the two superpowers will use its atomic weapons in case it is losing in a conventional war – initiated by imperialists. [17]

The Soviet opinion always correlated with the possibilities of nuclear capability developments and with the political phraseology that denied general nuclear war. However the Soviets had just begun building their atomic arsenal, they counted on their use in operational planning. According to the conceptions at that time, the Soviet Union wanted to use conventional and nuclear forces jointly in fast offensive operations in depth, however atomic weapons would not have been deployed on the whole theater of war but only in some operational areas. The Soviet military doctrine also took into account using nuclear weapons to destroy the hinterland of the enemy, the so called “Military-Industrial-Complexes”. From this time on the “doublethink” was typical for the Soviet politics, inasmuch as they denied the concept of total nuclear war on the level of high politics, they opposed the idea of the first use of atomic weapons and condemned the concept of preemptive strike and they hid their nuclear developments.

The differences between theory and practice generated famous debates in the 1950s when Herbert Dinerstein criticised the Soviet Union in his article in *Foreign Affairs* in January 1958. The article was disclaimed by General Vladimir Kurasov in an issue of *Krasnaya Zvezda* in April.<sup>8</sup>

From the 1960s the Soviets started a huge nuclear development program, established strategic-level troops and in possession of nuclear capabilities they began to talk about using nuclear weapons more and more openly. In 1962 Marshal Vasily Sokolovsky (1897–1968) wrote in his book “*Military Strategy*” honestly about using nuclear weapons. According to Sokolovsky, who determined Soviet strategic thinking for a long time, eliminating the enemy, destroying targets in depth and disorganizing the function of the adverse country are parts of a unified war process which can not disregard nuclear weapons.

Lieutenant General Zav'yalov stated this later, noting that the appearance of nuclear weapons completely changed the principles of warfare that were known before. While the

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7 According to O. V. Bogdanov, Senior Research Associate of the Institute of State and Law of the Academy of Sciences of the Soviet Union, the use of nuclear weapons is against The Hague and Geneva Conventions and violates the Martens-Clause. This concerned weapons of a tactical nature too, because they are just as illegal as strategic nuclear weapons. See more: [17].

8 The American Edward L. Warner III. also refers to the debate. See more: [18].

destructive power of weapons had increased significantly and they could be deployed over hundreds of kilometers at any time, the actions of troops and their protection on the battlefield remained unchanged. So the distinction of strategy, operational art and tactics became pointless, and the concept of offense and defence is not compatible with the old perceptions referring to past wars. [19] [20]

The introduction of nuclear weapons made the Soviet military leadership reconsider the key subject of the initial phase of a future war, the deployed forces and their concentration as well. Maneuvering got a primary role because it could decrease the chance of using nuclear weapons since this way the troops were less likely targeted. Force protection against NBC weapons came quickly into focus. [21]

At one point however both superpowers agreed: none of them was interested in the spread of nuclear weapons and a breakout of a general nuclear war. Aleksandr Zinoviev, a Russian geopolitical scientist wrote in his book "Homo Sovieticus" the following "about the next war":

*"After the First World War it looked as though the next one would be chemical and that all humanity would perish from poison gases. But it wasn't a chemical war. And humanity didn't perish: it almost doubled itself. Now it seems that the Third World War will be nuclear and that all humanity will perish from nuclear bombs and radiation. But it won't be a nuclear war. And humanity will remain intact. And most likely it will multiply even more. Why won't the war be nuclear? Because it isn't to our advantage that it should be nuclear. And so we won't allow it to be nuclear."* [22]

## NATO's First Strategic Concepts

In 1949, when the North-Atlantic Treaty Organization was established, the primary goal was to create an overall strategic concept which might be a basis for defence planning of the new Alliance. [23]

The Soviet Union used to be an outstanding danger in European general opinion and also for politicians before the end of World War II. The superpower, as a victorious nation, possessed large armed forces and technology, whereas the relations between the East and the West seemed to be more and tenser.

*"...Meanwhile what is to happen about Russia? [...] I feel deep anxiety because of [...] their power to maintain very large armies in the field for a long time. What will be the position in a year or two, when the British and American Armies have melted and the French has not yet been formed on any major scale, when we may have a handful of divisions mostly French and when Russia may choose to keep two or three hundred on active service?"* [24: 47–48]

Therefore, all the efforts of Western Europe were made to obtain the USA's security guarantee which was embodied at this time by its nuclear monopoly. Washington – learning from the consequences of its isolation policy after World War I – did not leave Europe alone and became an important element in realizing the so called containment-policy.<sup>9</sup>

*"Deterrence is the art of producing in the mind of the enemy the fear to attack."* [26]

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9 The expression was first used by George F. Kennan in his famous "Long Telegram" in 1946. The former American diplomat accredited to the Soviet Union explained his point of view under the pseudonym "Mr X" in his article "The sources of Soviet Conduct" published in Foreign Affairs. The United States was realizing this theory through establishing a system of alliances (Organization of American States – OAS; Australia, New Zealand, United States Security Treaty – ANZUS; Southeast Asia Treaty Organization – SEATO; Central Treaty Organization – CENTO). See more: [25].

In the first NATO strategic document [27] the parties emphasized that the Alliance's purpose is to create an effective deterrent capability. Furthermore, should the deterrence fail and war occurs, the member states are going to defend the North-Atlantic area and restore NATO's security. In this document, in 1949, it was written that the Alliance needs to be able to "insure the ability to carry out strategic bombing including the prompt delivery of the atomic bomb". In 1952 this document was modified. In the new strategic concept [28] – because of Danish concerns – it was stated that NATO should "insure the ability to carry out strategic bombing promptly by all means possible with all types of weapons, without exception". However, the parties emphasized that this change was made only in phrasing not in the position. [23]

Thus, it can be easily noticed that nuclear weapons were already very important factors in the early period of NATO – and also of the Cold Wars. To achieve the goals mentioned above a very loose and primitive structure was established. Certain bodies met irregularly, the main part of planning fell on the five regional planning groups.<sup>10</sup>

The Korean War induced significant changes in NATO, the defence of the allies came to the front again. Lord Ismay, NATO's first secretary general raised the question: How could the Alliance defend itself against similar aggression? [7] Although in Korea there were not any atomic weapons used thanks to the wise decision of the fighting parties,<sup>11</sup> the West was forced to re-think its future prospects. So Henry Kissinger was entitled to refer to this period as a dilemma of containment. [29]

## The New Look of the 1950s

In the 1950s a new approach was unfolding in the Alliance. The defence budget of the member states obviously could not increase any more. [30] European allies could not achieve American expectations, [31] but not even the USA could maintain its military burdens at the same level as before. On the other hand, the Alliance had to take into account that the Soviet Union was superior to NATO in numbers of conventional forces – just like at the end of World War II, but since then the difference has become bigger and bigger because of the armed forces' different concepts of disarmament. [32] [33]

Combining maximum efficiency of the armed forces and maximum economy of manpower, money and materials was one of the most important elements in NATO's strategy in the 1950s, too. However, this evoked a totally different answer, another sort of pressure of co-operation like there it is nowadays among NATO members under the "Smart Defence" concept.

The solution in the 1950s was – instead of increasing conventional forces – to urge the development of military technology and gain technological (nuclear) superiority. In 1952 the British Government suggested that the confrontation with the Eastern Bloc needs to be built on nuclear deterrence.<sup>12</sup> Then in 1954 US Secretary of State, John Foster Dulles said that the USA has to define its political orientation and efforts for the long term. The most important

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10 The five regional planning groups were the following: Northern Europe, Western Europe, Southern Europe/Western Mediterranean, United States/Canada, and the North Atlantic Ocean.

11 Some of the military leaders supported the proposal for a nuclear war – in the Korean War General MacArthur made such a proposal to the American President.

12 In 1951 Churchill as a returning Prime Minister decreed an immediate defence review and in October 1952 the UK tested its first nuclear bombs. See more: [2].

decision is to base the country's defence on a great deterrent capacity which can be deployed at any place and anytime. [34] This speech is often referred to as the base of "massive retaliation" theory, even if Dulles' original idea is not the same as the later introduced massive retaliation policy. The basic principle of the strategic re-orientation should have been – according to Dulles – the free choice of response to aggression without any restriction.

In 1952 Matthew B. Ridgeway (GEN) replaced Dwight D. Eisenhower (GOA) as the Supreme Allied Commander Europe (SACEUR). He conducted a study about the impact of a possible use of NATO's nuclear weapons on the Alliance's forces. Ridgeway explicated that NATO could prevail in the case of nuclear war insofar as it is able to compensate its losses by ground forces (so their development is mandatory) and hereby NATO can exploit the advantages given by the unfolding campaign. In his opinion to achieve these goals SACEUR needs to have predelegated authority to decide about using nuclear weapons.<sup>13</sup>

Meanwhile the United States was dynamically developing its tactical nuclear weapons. There were many political-military debates, which raised important questions like does it make sense to use such weapons when they can only gain temporary advantages but they can easily lead to general nuclear war. Does their deployment in Europe mean benefits as great as damages it can cause in the European states and societies, and when the military task – demand of early response – stands in contradiction to politics which tends to wait for developments. In the meantime the first tactical nuclear weapons arrived on the continent. [7]

In 1954 the NATO Military Committee submitted its report to the North-Atlantic Council (NAC) in which the creators concretely count on the use of nuclear weapons in a future conflict. However, the chiefs of staff expressed their concern about the devastating effects of atomic weapons and the difficulty of defence against them, which creates problems not only of military but political, economic, social and a psychological nature as well. Nevertheless they stated that initiating a general nuclear war would be contradictory with the Alliance's guiding principles so it can come to that only if the Soviets attack the Alliance intentionally or because of miscalculation. The Military Committee also saw it as possible that the Soviet Union does not plan using nuclear weapons against Western Europe hoping that neither does the Alliance. Still, in response to such an attack NATO can give one and only one answer, to deploy nuclear weapons on a strategic or tactical level. [35] It was only a step away from introduction of the principle of massive retaliation into NATO's strategy.

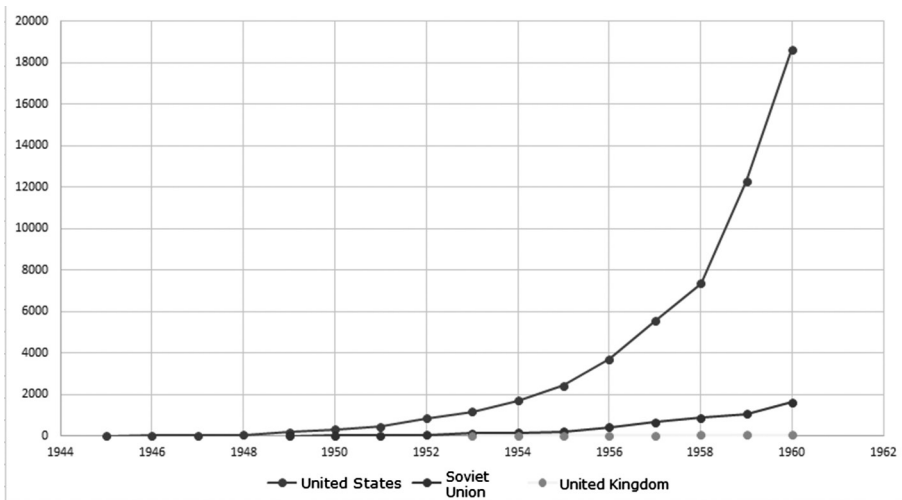
In the midst of political and military debates the development, production and accumulation of nuclear weapons at an increased rate had begun. (Table 1. and Graph 1.) At the end of the 1940s the United States had less than 200 atomic weapons but in the next five years this number had a tenfold increase. Furthermore, at the end of the 1950s this number achieved the order of magnitude of 10,000. At that time the Soviet Union had slightly more than 1,000 atomic weapons. All these made the strategy of massive retaliation well-founded in the Alliance.

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13 These aspects were contradictory to NATO's goals at the moment, so General Ridgeway was removed from his office. His successor, General Alfred Gruenther began a new examination of these questions. As a result he submitted a "new approach" to the political decision makers which based the Alliance's defence decisively on nuclear weapons.

*Table 1. Global nuclear weapons inventories 1945–1960.  
Source: Bulletin of the Atomic Scientists [36]*

Year	USA	Soviet Union	United Kingdom	Total
1945	2	0	0	2
1946	9	0	0	9
1947	13	0	0	13
1948	50	0	0	50
1949	170	1	0	171
1950	299	5	0	304
1951	438	25	0	463
1952	841	50	0	891
1953	1169	120	1	1290
1954	1703	150	7	1860
1955	2422	200	14	2636
1956	3692	426	21	4139
1957	5543	660	28	6231
1958	7345	869	31	8245
1959	12298	1060	35	13393
1960	18638	1605	42	20285



*Graph 1. Global nuclear weapons inventories 1945–1960. (Edited by Kiss Petra) [36]*

## The Strategy of Massive Retaliation

The NAC approved the document MC 14/2 [37] in May 1957 which contained the new Overall Strategic Concept of the Alliance. The paragraph which targets the efficiency and economic effectiveness as a guiding principle for defence is to be highlighted. In terms of future war the strategy reflects internationally accepted elements. The document declares that nuclear weapons drastically change the conditions of modern warfare so the experiences

and lessons learned from previous armed conflicts can not be applied. As NATO's primary goal the document states NATO has to avert general (nuclear) war. If a war is forced upon the Alliance it has to possess the means and capabilities to defend its population, and the territory covered by the North Atlantic Treaty. In case of a general war the strategy differentiates two main phases:

- The first phase includes only the first days of war (a 30-day-period maximum), which can be characterized by intensive nuclear exchanges.
- The second phase takes up more time, during which the armed forces have to be re-organized, they need rehabilitation and their supply is also to be ensured.<sup>14</sup>

It is almost a euphemism that in such a strategic document the consequences of nuclear strikes are only described as a situation when forces can not be mobilized, military tasks can not be fulfilled and the lines of communication and logistical support need to be reconstructed. In the second phase however planners took into account conventional warfare when allied forces can exploit the advantages gained in the first phase and win. NATO did not take into account the further (long term) impacts of nuclear attacks.<sup>15</sup>

Nevertheless, a kind of flexibility can already be noticed in this strategic concept, insofar as the strategy prescribes that the member states have to be prepared in case of infiltration, incursions or hostile local actions "to deal immediately with such situations without necessarily having recourse to nuclear weapons". [37]

Through this decision NATO member states became – basing their strategy on nuclear weapons<sup>16</sup> – totally dependent upon the United States.<sup>17</sup> Therefore Allies saw it as necessary to take part in decision making in connection with their defence even if they do not have nuclear weapons. According to President Eisenhower there were two options for that. One solution could have been the USA's offer for NATO to provide nuclear weapons. These weapons would have been in peacetime under American control and command, but in case of war they would have been under NATO's control – in accordance with plans of the SACEUR. In a second scenario the USA would have deployed intermediate-range ballistic missiles (IRBMs) in Europe.<sup>18</sup>

Meanwhile the Soviet Union had completed serious technical developments as well. The most important one was probably launching into space the first artificial satellite, Sputnik I in 1957, which undermined the basic idea of massive retaliation, namely the belief in the victory of Western technology over the superiority in manpower of the Soviet Union. Moreover, at the end of the 1950s the Soviets had had already intermediate-range missiles targeting Europe.

A tremendous arms race had just started between the two superpowers in which Europe wanted to participate anyway. Especially the mutual fear from surprise attacks made this rivalry uncontrollable and which could have increased the chance of an attack: mutual trust

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14 There are similar ideas in Albert Wohlstetter's concepts about first strike and second strike. See more: [38].

15 It is worthy of note, because NATO's member states, defence ministries just like research institutes and other nongovernmental bodies were permanently examining the consequences of a nuclear war. See more: [3].

16 This did not mean that conventional forces have to be disarmed, particularly because certain elements of "flexible response" (as mentioned before) made it necessary to maintain them to some extent.

17 Both the United Kingdom and France lost their positions as great powers, therefore status politics and getting the atomic secret were of great importance. However their nuclear weapons could not be significant enough to replace the American nuclear security guarantee for Europe. See more: [39].

18 In practice this would have been the extension of a previous British-American agreement with the same subject to the other European allies.

was lacking, the parties did not know the intentions of the other and they fell into the trap which was described by T. C. Shelling.<sup>19</sup>

As a short term solution the United States offered the Alliance five newly developed Washington class nuclear-powered ballistic missile submarines with Polaris A-1 missiles to counteract the threat of Soviet missiles. In the long run maintaining a nuclear-powered ballistic missile submarine could have been the answer according to the American conception – in common ownership, with joint personnel and common funding.<sup>20</sup> The so called “Multilateral (Nuclear) Force” (MLF) concept could have given a chance for European allies to participate actively in NATO’s nuclear mission. In the promising early years of the European integration the USA was ready to hand over the control of MLF to a new European authority in case of successful integration. [7]

However, the strategic thinking of the USA was altered at the end of the 1950s, NATO closed this decade focusing on the strategy of massive retaliation.

## Conclusions

Nowadays the importance of factors and processes which were essential in the first ten years of NATO seem to be decreased. Nonetheless, if we examine the relevant, influencing factors and the answers in this period more carefully we can observe some really interesting parallelisms.

The unbalanced burden sharing within the Alliance is not a new question, it has been a problem since the first years. The difference is that in the 1950s the United States was able and willing to help its allies financially. Economic and financial problems, however, made the current political and military leaders think over their policy as much as they did it during the past few years as the result of the global financial crisis. The solution – may it be utterly distinct at that time compared with our days – evolved along similar lines as we saw in the decisions of the Wales Summit.

Member states could not maintain as large armed forces as they did during the war. Reduction in manpower and transformations happened which caused damages in the capabilities of forces. But the credibility of the Alliance could have been at risk if it could not ensure its own security and the necessary capabilities. Thus, the answer laid in nuclear technology developments, since earlier conventional forces in great strength could not be maintained. To achieve and retain technical superiority huge resources were needed. As a consequence the necessity of multinational funding and the idea of development and maintenance of joint capabilities were conceived already at the beginning of the 1960s.

Anyhow, the above examined time period reflects today’s main questions – even if there are smaller differences. At that time the shadows of a nuclear war, nowadays the emerging

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19 T. C. Shelling (USA) was motivated in his game theory research by the arms race evolving in the 1950s. He pointed out that under the given conditions of a nuclear age, a surprise attack can give such a big advantage to one party preparing for a nuclear war that it became worth attacking first. According to this, the one party – believing that the other one is preparing for a surprise attack – could have felt encouraged to increase its armament and initiate an attack against the other with justification. Considering that at the end a successful nuclear surprise attack gives far fewer advantages than avoiding war there is no way to justify such an attack. See more: [40].

20 In this concept is easy to recognize today’s idea of ballistic missile defence, AGS and other great NATO projects.

security risks and threats has determined the processes. We are confident that NATO will be able to adapt to the changing security environment and new conditions (the Ukrainian crisis, emerging of ISIS) as it did in the 1950s as well as in the recent past. As a last remark let us cite Professor Megginson's words, who served in the American air force during World War II:

*“It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change.”* [41]

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# Operation “Artemis”: The First Autonomous EU-led Operation

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*In June 2003, the EU launched Operation “Artemis”, its first military mission outside Europe and independent of NATO, to the Democratic Republic of Congo. While it ultimately received an EU badge, its origin, command and control were French. The objective of Operation “Artemis” was to contribute to the stabilisation of the security conditions in Bunia, capital of Ituri, to improve the humanitarian situation, and to ensure the protection of displaced persons in the refugee camps in Bunia. Its mandate was to provide a short-term interim force for three months until the transition to the reinforced United Nations Mission in the Democratic Republic of Congo (MONUC – Mission de l’Organisation des Nations Unies en République Démocratique du Congo; English: United Nations Organization Stabilization Mission in the Democratic Republic of the Congo). Although the EU can be said to have passed the first “test” of the European Security and Defence Policy (ESDP) mechanisms for the conduct of an autonomous operation, this test was a limited one. Operational constraints were caused by inadequate strategic lift capabilities and the lack of a strategic reserve.*

**Keywords:** Democratic Republic of Congo, Ituri, Bunia, MONUC, poor governance, inefficient state, civil war, rebels, anti-rebels, humanitarian crisis

## Introduction

The Ituri region is often described as the bloodiest corner of the Democratic Republic of Congo (DRC). Despite three peace agreements purportedly ending the five-year old Congolese war, fighting in northeastern DRC intensified in late 2002 and early 2003. In early May 2003, hundreds of civilians were slaughtered in the town of Bunia and tens of thousands of others were forced to flee. [1] Some, desperately looking for protection from the violence, sought shelter near the United Nations compound. While the international community focused on the town of Bunia, massacres continued in other parts of Ituri away from media attention. As one witness described it, “Ituri was covered in blood” because of the lack of state efficiency and due to an absence of effective government control. [2]

Based on information gathered by its researchers and on other reports, Human Rights Watch estimates that at least 5,000 civilians died from direct violence in Ituri between July 2002 and March 2003. These victims are in addition to the 50,000 civilians that the United Nations estimates have died there since 1999. These losses are just part of an estimated total of 3.3 million civilian dead throughout the Congo, a toll that makes this war more deadly to civilians than any other since World War II. [3]

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Armed groups have committed war crimes, crimes against humanity, and other violations of international humanitarian and human rights law on a massive scale in Ituri. Assaultants have massacred unarmed civilians, often solely on the basis of their ethnicity, killing scores and sometimes hundreds of civilians in each such attack. In one of several such massacres documented by Human Rights Watch researchers, Ngiti combatants together with soldiers of the Congolese Popular Army (*Armée Populaire Congolaise*, APC) of Mbusa Nyamwisi killed at least 1,200 Hema and Bira children, women and other civilians in Nyakunde. Over a ten-day period assaultants carried out a well-planned operation, systematically slaughtering and often torturing civilians in house-to-house searches and executing hospital patients still in their beds. Many other massacres, especially those that occurred in more remote areas, were never even reported.

Armed groups also committed summary executions, forcefully abducted persons whose whereabouts remain unknown, and arbitrarily arrested and unlawfully detained others, some of whom they subjected to systematic torture. Survivors told Human Rights Watch researchers that the Hema Union of Congolese Patriots (UPC) conducted a “man hunt” for Lendu and other political opponents shortly after taking power in August 2002. Many Lendus were arrested. Others fled or went into hiding, afraid to walk openly in the streets of Bunia. According to witnesses, senior UPC military officers were in charge of two prison areas that became notorious places of summary execution and torture. Combatants of armed groups also committed rapes and engaged in such inhumane acts as mutilation and cannibalism, a practice meant to bring ritual strength to perpetrators and to inspire terror in opponents.

This essay attempts to critically assess the efficacy of Operation “Artemis”, a peacekeeping mission of the European Union in the Democratic Republic of Congo (DRC). This mission, initiated just a few months after the beginning of the Iraq war in 2003, was the response of the European Union to the Civil war in the DRC, which could not be controlled by international peacekeepers. Operation “Artemis” was the very first EU-led peacekeeping force in combat and attempted to restore order and peace in the Ituri province for a mandate of three months.

In the first part, I will focus on the mission itself. Firstly, the background of the concerned area and the mission will be explained, including the challenges that led the United Nations Security Council to delegate this mandate to Operation “Artemis”. Secondly, this essay will also investigate why the European Union accepted the responsibility of this mandate. The tasks of this mandate will be described thereafter. This is followed by the diplomatic and military preparations of the mission. Finally, the actual development of the mission will be described and what results it gathered. In the second part, the mission will be evaluated according to its individual strengths and weaknesses, including the overall assessment. Achievements of the mission will be complemented with recommendations for future missions.

In evaluating this mission, especially in the context of the Iraq War, it will also assess in a broader context if the European Union is able to be an effective international player. This essay concludes that Operation “Artemis” illustrates that the EU has the capabilities to successfully execute mandates, if the EU member states are willing and agree upon foreign policy actions.

## Background of the Ituri Conflict

The region of Ituri is a district of the vast Orientale Province. It has a population of about 4.5 million, according to aid agencies working there. Figures of the make-up of the population differ widely. The town of Bunia, swelled by displaced families, is thought to hold at least 300,000 people. The main ethnic groups are the Alur, Hema, Lendu, Ngiti, Bira and Ndo-Okebo. On the key question of the relative size of these communities, there are conflicting figures. The Alur are often regarded as the largest community in the region, but some figures indicate the Lendu are the largest group. The comparative size of the Hema and Lendu is unclear.

There are other, smaller ethnic groups indigenous to the region, including the Twa and a wide diversity of groups from other regions, particularly in the towns. Generally speaking, the Hema are associated with animal husbandry and business, and the Lendu with agriculture. A key Lendu grievance is a perception of unjust accumulation of land in Hema hands, inasmuch as Belgian colonial administrators favoured the Hema at independence with large land concessions. As the conflict escalated, Hema leaders, on their side, have expressed fears of being targeted for “ethnic cleansing” or even genocide. In the ethnic ideology which has poisoned the Great Lakes region, the two are sometimes seen (however inaccurately) as representing two sides of a Bantu-Nilotic clash. Clashes between Hema and Lendu over land ownership and rights over land for grazing have broken out on several occasions in the last three decades. However, the deadliest phase of the tensions between the two communities started in May 1999. Each group attempted to expel the other from contested areas in a policy of local “ethnic cleansing”.

The 1994 Genocide of Tutsis in Rwanda led to a civil war, which resulted in Hutu refugees, fearing revenge of Tutsis, crossing into Zaire. The counterattack of Hutu forces into Rwanda from Zaire in turn resulted in the Rwandan invasion of Zaire. This led to the First Congo War, during which Zairean opposition leader Kabila, with Ugandan and Rwandan military support, replaced Mobutu as head of Zaire in 1997. Zaire was renamed the “Democratic Republic of Congo” (DRC). Shortly thereafter, the Second Congo War broke out, when Kabila refused his former allies Uganda and Rwanda the spoils of the First Congo War. Their invasion into the Eastern DRC prompted invasions by Angola, Namibia and Zimbabwe in 1998 on behalf of Kabila’s government.

In the absence of national authority, good and efficient governance (whose criteria have been described by Maria Bordas) mass killings, rape, torture, displacement, mutilation and cannibalism took place in Ituri. These were brought to the attention of the international community by the United Nations and non-governmental organizations. [4]

In 1999, the UN Security Council authorized 90 peacekeepers to assist in promoting the Lusaka peace agreement that had been reached by the six involved countries, and provided for an interim authority to be established in Ituri. [5] Yet violence continued and the peace agreement was widely disregarded, while fighting and massacres continued. Following the six-day war between Rwanda and Uganda, in 2000 the United Nations Security Council (UNSC) Resolution 1291 approved deployment, under Chapter VII of the UN Charter, sending 5,537 peacekeepers from the United Nations into Congo, called MONUC to monitor the implementation of the ceasefire. [6]

When MONUC deployed its first contingent in a very limited manner with one senior political advisor, one political officer, one civil affairs officer and one humanitarian officer to the rebel-held East in 2001, finally an accord was signed between Presidents Kabila and Kagame of Rwanda in 2002 to withdraw Rwandan troops from the DRC, once Rwanda’s security concerns were addressed. This was followed in October 2002 by the withdrawal of Angolan, Namibian and Zimbabwean troops that had supported the DRC government.

The European Union had previously called for a resolution to end the violence in Ituri in December 2002. The Security Council demanded firmly the withdrawal of Ugandan forces from Ituri. Uganda agreed in 2003, and withdrew its forces in a chaotic fashion in May 2003. This security vacuum was not filled and the Lendu and Hema tribal militias started fighting each other in Ituri’s regional capital, Bunia, over control of land and resources, which resulted in a humanitarian disaster. United Nations investigators reported massacres from February 2003; at the same time some 500,000 to 600,000 people were displaced throughout the region. [7]

The humanitarian conditions deteriorated rapidly, and the violence resulted in the creation of approximately 7,000 refugees. [8] The streets beyond the UN compounds fell under the control of rival militias, whose violent attacks on each other’s civilians made any kind of humanitarian and other assistance to the population in need impossible. Bunia was plagued by rival militiamen openly carrying small arms. The situation was exacerbated by the fact that a number of military, political and logistical difficulties were amplified by the inadequate resources such as low troop ceilings. For instance, at the time of the 2003 Ituri crisis, MONUC’s troop strength was under half of its authorized level. The 700 UN peacekeepers, mostly from Uruguay, who were deployed on April 23<sup>rd</sup> near Bunia, did not have the mandate necessary to prevent the violence. They could only protect UN personnel and lacked the capacity to do much more. Bunia was overrun by violence, while MONUC headquarters and personnel were directly attacked. In an attempt to escape the ensuing violence, thousands of civilians either abandoned the town or collected around MONUC sector 2 Headquarters and the airport where the Uruguayan battalion had established its base.

## Way to Operation “Artemis”

Since the deployment of a better equipped and mandated MONUC force was not possible before the end of July 2003, it left a dangerous interim gap in this highly volatile area. The Secretary-General addressed a letter to the President of the Security Council on the 15<sup>th</sup> May, 2003. In his letter the Secretary-General called for the rapid deployment to Bunia of a highly trained and well-equipped multinational force, under the lead of a Member State, to provide security at the airport as well as to other vital installations in the town and to protect the civilian population.

UN General Secretary Kofi Annan specifically appealed to Javier Solana to build support among EU defence ministers. Solana, as former NATO General Secretary, then Spanish Foreign minister and president of the European Council of Ministers, was in a good position to promote collective values and shared norms regarding the EU’s strategic interests in Africa. At a meeting of the EU defence ministers in May 2003, Solana presented Annan’s request on May 19<sup>th</sup> to the meeting of EU defence ministers and drafted a response to Annan from the EU, while he sent his assistant, Aldo Ajello, to initiate diplomatic overtures with Uganda, Rwanda, and the DRC to withdraw, while briefing the UN Security Council. Following a

call to President Jacques Chirac by the Secretary-General, France indicated its readiness to deploy a force to Bunia. On 30 May, 2003, the Security Council authorized the deployment.

The assassination of two UN military observers on 30<sup>th</sup> May, 2003 made the situation in Bunia spiral out of control and the plight of the civilians who sought refuge around the MONUC compound and the airport eventually led to the deployment of the IEMF (Interim Emergency Multinational Force) under the leadership of France. On the 30<sup>th</sup> May, 2003, UN SC Resolution 1484 authorized a mandate for the deployment of an emergency international force (Interim Emergency Multinational Force in Bunia), until 1 September, 2003. The international force was to contribute to the stabilisation of the security conditions and the improvement of the humanitarian situation in Bunia, by ensuring the protection of the airport and internally displaced refugees in the camps in Bunia, and if required, of the civilian population, United Nations personnel and of humanitarian agencies in the town.

France declared its willingness and readiness to deploy a French-led Interim Emergency Multinational Force, known as Operation “Artemis”, until MONUC reinforcements could take over in September 2003. France set up operation “Black Mamba” and on 5 June the EU adopted a “joint-action on the European Union military operation in the Democratic Republic of Congo”. The European Union was already heavily involved in the region through its ECHO (European Commission’s Humanitarian Aid Office) humanitarian aid programme and was therefore well placed to carry out such a peacekeeping operation.

France and the UK had already issued a joint declaration to African leaders at La Tourquet in February for more human rights, democracy, conflict prevention and peace in Africa. France, historically the most aggressive advocate for separate EU military capability, [8] wanted to show only two months after Operation Iraqi Freedom that the EU could independently act without NATO using its military capabilities and cooperation, and thus act as a counterweight to the US. France attempted to gain additional military and diplomatic support from other states. Artemis, as the first autonomous EU-led operation, outside Europe, would also emphasize the EU’s ambitions for a stronger voice in security affairs. [10]

The current situation in many African states provides a breeding ground for terrorism and extremism. Without good governance and adequate security forces or intelligence, extremist groups and factions are free to create and expand their networks and develop into terrorist cells. [9] One such example is the al-Qa’ida attack in Mombasa, Kenya, in November 2002, which claimed 13 lives, whilst there is concern that numerous al-Qa’ida cells may be developing or operating in “troubled African states”, and therefore provide threats to the future of European security. [11]

According to Duke [12] France’s willingness to assume the bulk of the burdens in an operation involving a modest number of personnel and resources and with a limited time frame helped other EU states to join. The operation (codename “Artemis”) was then organized under French command and composed of 1,850 troops from 9 countries, mainly France.

France, which provided 1,500 of these troops with main air strike capabilities, and Sweden (approx. 80) were the only participants who provided combat troops in Bunia. For the operational structure of forces see next figure. A French officer, General Jean-Paul Thonier was named “Artemis” force commander, with headquarters in Entebbe (Uganda), while the operational commander was another Frenchman, General Bruno Neveux, who led from his headquarters in Paris. As an initial measure, a nine-man team was deployed on 20<sup>th</sup> May, 2003, to Bunia to assess the ground conditions and to initiate preparations to secure the airport there

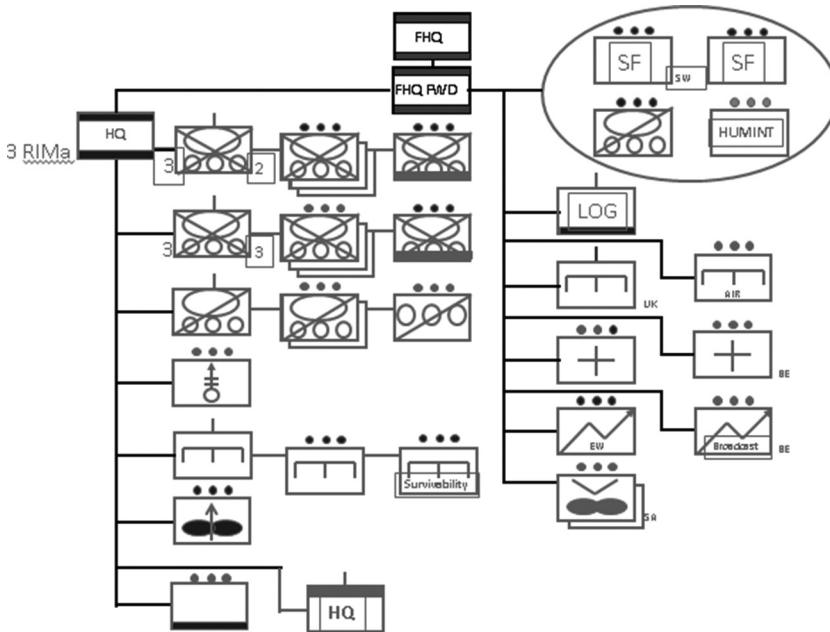


Figure 1. Operational structure of forces. [13]

The UK provided 90 personnel (mainly engineers), and Belgium provided a radio communications center and a field hospital, all in Bunia. Several other European states (Austria, Germany, Greece, Hungary, Ireland, Italy, Luxemburg, The Netherlands, Portugal, and Spain) provided a few personnel for service at the Headquarters in Paris. At its peak, Operation “Artemis” involved the deployment of a total of 2,200 personnel from 17 countries, 12 of them EU member states, and three of them – South Africa, Canada and Brazil – non-European nations.

On 12<sup>th</sup> June 2003, the Council Decision 2003/432/CFSP launched the military operation of the European Union in the Democratic Republic of Congo.

## Mandate

The mandate was to stabilise Bunia, protect civilians under imminent threat of physical violence, restore the security to the town and the airport, establish a weapons-free zone inside the town and improve humanitarian conditions until September 2003, when the reinforcement of the UN peacekeeping Mission, known as MONUC, was supposed to arrive.

Just under half of the forces were at the force headquarters (FHQ) in Entebbe, Uganda around 300 km away. The French air force supported the mission with reconnaissance, air support and surveillance from airfields at Ndjamena and Entebbe. The aircraft included some Mirage fighters. MONUC was operating two or three regular flights a day out of the Bunia airport when the first IEMF plane landed. On 6<sup>th</sup> June, 2003, the first troops of the IEMF were deployed to Bunia. These elements were followed shortly by engineers to help maintain the very poor airfield for the numerous strategic and tactical airlifts of personnel and

equipment. Each IEMF company had a doctor and a field level unit hospital with surgical capacity in Bunia. In fact, the only real access to Ituri’s main town was a small, rough and ready airstrip, accessible only by C-130 Hercules or C-160 Transall tactical transport aircraft.

The following air assets were available:

*Air reconnaissance:*

- 1 pc. ATLAS-2 (FR).

*Tactical Air-transport:*

- 2 pcs. C-130, 1 pc. C 160 FR,
- 2 pcs. C-130 BE,
- 2 pcs. C-130 CA,
- 2 pcs. C-130 UK,
- 2 pcs. C-130 BR.

*Fighters:*

- 4 pcs. Mirage F1 CR (4 in Entebbe, 8 in N’Djamena as reserve).

*Helicopters:*

- 2 pcs. Puma, 2 pcs. Gazelle (FR),
- 2 pcs. Oryx (SA).

With regard to reserves, Operation “Artemis” had operational reserves:

- 2 infantry companies in Gabon;
- 1 infantry company in Chad;
- 1 infantry company in Djibouti.

Until to the end of the operation strategic reserves were not offered, however it was clear that in case of an emergency France would provide strategic reserves from the “hexagon” (i.e. from France itself).

Meanwhile, the European Commission’s Humanitarian Aid and Civil Protection department (ECHO) initiated a clear and informal communication mechanism between Operation “Artemis” and the humanitarian community. These partnerships in the district periphery, emergency stocks and regular ECHO Flight services were part of this operation.

On 6 June 2003, IEMF forces took up position and secured Bunia airfield without any problems. From the start, the operation commander took a firm stance against the militia that were terrorising the local civilian population. General Thonier advised his men to “hit back hard, the first chance you get”. The IEMF used the threat of or the use of force in a convincing manner. It quickly established its presence and stabilized the area of deployment, by limiting itself initially to declaring the town and a 10km area around it a “weapons-invisible” zone. This meant that the weapons were carried openly were confiscated, but there was no attempt to disarm militia groups. In fact, weapons disappeared from the streets but were not taken out of circulation. List of collected arms:

- 22 pcs. AK-47 assault rifle,
- 1 pc. PKM machine gun,
- 6 pcs. RPG-7 anti-tank rocket-propelled grenade launcher,
- 1 pc. 107 M/M antitank gun,
- 2 pcs. 60 M/M mortar,
- 1 pc. 14.5 M/M heavy machine gun,
- 120 pcs. handgrenades.

Beyond the town, the rival groups continued to fight and the IEMF was often caught in the middle.

By the time “Artemis” was properly launched on 12 June, 2003, in the north-eastern Ituri province of the Democratic Republic of Congo (DRC), there had been approximately 430 deaths. The mission’s European “strategic” HQ in Paris was fully operational from 16 June. The Europeans retaliated after every provocation or attack by the militias, and on 16<sup>th</sup> June several militiamen were killed when IEMF forces returned fire.

Some skirmishes started against Lendu forces and the UPC on June 14<sup>th</sup>, in which another twenty militiamen were killed. Having made it clear to the militias that IEMF forces would use force and by weakening the military capabilities of the militias through monitoring of airfields and cutting off military supplies from abroad, the militias retreated. The European troops gradually secured Bunia and brought an end to the violence and. On 21 June, they forced the 2,500-strong UPC rebels to cede control of the area to Artemis, thereby extending their control to the immediate surroundings of their town. On 8th July, 2003, Bunia was declared “a weapon-free town”, and the city was controlled by several checkpoints and patrols. On 11 July, following provocations, 300 European troops moved into the Hema militia camp near Bunia. Heavy weaponry was seized, which made the UPC withdraw from the region.

Meanwhile, on 28 July 2003, the Security Council resolution 1493 [7] approved a significant expansion of MONUC to 10,800 personnel, including the deployment of a brigade to Ituri, composed of four battalions and support elements (4,800 military personnel) to take over from the IEMF and to expand its mandate from Bunia and its environment, as the situation permitted, to other parts of Ituri. In the first half of August, preparations for the withdrawal from Bunia were started, because the IEMF leadership was concerned that the expiration of the authorized mandate by the Security Council would leave the forces without legal cover in the case of any incident occurring. This led the force to accelerate its withdrawal and seek an extension of the authorization by the Security Council until 15 September, 2003.

Due to the success of the IEMF in securing the area, political offices reopened, economic and social activities in Ituri resumed, and delivery of international aid (food, water, medical care, restoration of the electric power plant etc.) also resumed. The town’s population increased from only 40,000 inhabitants in Bunia before “Artemis” to 100,000. The IEMF, which was initially sceptical that the period of deployment was not sufficient to secure the area, did not face significant difficulties. Nevertheless, the IEMF asked the UN SC for an extension until September 7<sup>th</sup> 2003. From September 1<sup>st</sup> 2003, the IEMF gradually handed over all remaining tasks in Bunia in a well-planned and well-executed manner to the 5,000-strong MONUC-force from India, Pakistan, Bangladesh, Nepal and Indonesia and withdrew completely by 7 September, 2003. On 25 September, 2003, the support base in Entebe, Uganda ceased to function.

Following the rapid deployment of about 1,800 troops to the region in June 2003, Bunia was secured but massacres continued in the countryside. By December 2003 one of the major warring parties in the region, the Union of Congolese Patriots (UPC) had split and fighting in the region decreased significantly. Finally, the regional dynamic of the conflict in Ituri remains unresolved. It is unclear how Uganda and Rwanda will react to the dismantling of their proxy forces in Ituri district. Although Uganda’s direct involvement in the region has been heavily scaled down since the withdrawal of its troops in April 2003, the UN panel on the arms embargo in the eastern DRC has documented its continued involvement in the plundering of the district’s resources. Although Rwanda’s involvement in the province was never as intense as that of Uganda, it had and may still have close links to UPC factions.

## Evaluation

Operation “Artemis” was the first independent EU mission outside NATO, where its troops engaged in combat and through successful military-civilian cooperation. [4] EU diplomacy effectively obtained cooperation of neighbouring states prior to the deployment of the IEMF. The fact that Operation “Artemis” was also present in Uganda sent a positive message to Uganda as key player in improving cooperation. In fact, the EU is thus acquiring greater credibility on the international stage and affirming its role as a political and military player in the settlement of international crises and conflicts, because the EU showed its ability to act toward a common foreign security policy to promote regional stability by helping to develop a safer world and carry out all the tasks set out in UN Security Council Resolution 1484. Dr Javier Solana himself referred to “EU military progress”, due to its ability to secure Bunia’s airport, and to assist and protect the displaced persons located in the surrounding refugee camps. It also allowed humanitarian assistance like the World Food Programme to get aid through to the local population and the refugees by restoring the security conditions necessary for NGOs and – through putting an end to the immediate crisis – ensured a return to normal working life, so that many people that had left moved back.

Furthermore, it helped MONUC to build onto the safe foundations laid by Operation “Artemis”. On one hand Operation “Artemis” was a big humanitarian, military and political success by restoring security, helping people to return home and restarting economic activity.

However, the success was partly due to the fact that the mission was narrowly defined (limited time frame and space) and due to the highly-skilled, flexible and well trained troops, which illustrates that missions require adequately trained, equipped and supported reserve forces, who are highly mobile and ready to be deployed rapidly in unpredictable environments. It is also clear that there were also shortcomings of the Union’s real capabilities and areas in which these were lacking. The highly multi-nationalised tactical and strategic airlift operated flawlessly, but the overreliance on the Franco-German built C-160-Transall carrier aircraft for long distances illustrated the shortcomings of the European armed forces in terms of strategic lift capability. The limitations of this aircraft in terms of mass and lift capacity make the required number of sorties high. This explains why a more rapid build-up of “Artemis” forces on the ground was not possible, and this was also a reason why the EU rented Antonov 124 transport airplanes.

Indeed, the strict limitation in terms of time and area of operations merely pushed the problem of violent aggression against civilians beyond the environs of the town, where atrocities continued. In this regard, the IEMF acted intelligently, because it understood that its own security depended on securing the surrounding area.

However, it has to be acknowledged that Operations “Artemis” was just the beginning of ESDP involvement in the DRC and limited in time (three months), resources (1,850 troops) and a distant destination (6,000 km from Europe) but in limited Area of Operation (Bunia). We have to confirm that the reason why France, in particular, was eager to lead this mission was to illustrate the independence and capability of the EU as an international actor and counterweight to the US shortly after the Iraq War.

Operation “Artemis” also underlines the fact that international actors can cooperate effectively in the framework of international law. Although the realists may have a point in arguing

that security (breeding ground for terrorism) was here a main issue for the involvement of mainly European countries, the participating nations understood that they needed to support each other in a framework of a “division of labour” concerning costs- and task-sharing. This may have also been the reason other UN Security Council members supported the task-sharing, especially the US, which was rather desperately seeking allies already in the Iraq War in 2003, in order to share burdens.

The French command of “Artemis” placed a civilian-military liaison officer on the ground immediately, along with the first French troops that arrived in Bunia. His role was to liaison with those providing humanitarian assistance in Bunia and the region, which went very successfully. CIMIC projects launched in BUNIA: [13]

Electric power station repair at BUDANA:	80,000 EUR
Save the Children project:	25,000 EUR
Local football stadium repair:	5,000 EUR
Water system repair:	15,000 EUR
2 bridges built:	15,000 EUR

## Conclusion

The Genocide of Tutsis in Rwanda resulted in an involvement of Rwandan and Ugandan troops in Congo in two Congo wars. Despite peace agreement between the involved actors, violence continued until diplomatic intervention by the United Nations led to an agreement for withdrawal of Ugandan and Rwandan troops from Congo. This, however, caused a political vacuum in the Ituri region and its capital Bunia. The United Nations peacekeepers of MONUC were under-resourced and their mandate was too limited in Ituri to deal with the ensuing violence and the inability of humanitarian organizations to provide their services after the withdrawal of Ugandan troops. In order to stop the violence between ethnic militias, the United Nations Security Council authorized in Resolution 1484 the mandate for the multinational Operation “Artemis” under the leadership of France, which included primarily EU countries, to protect civilians and UN staff and re-enable humanitarian assistance in Bunia through securing both the city and the airport of Bunia.

This paper had the intention to argue that Operation “Artemis” was a solution for the Congo Conflict from the EU’s perspective, and it was a real test of the EU’s crisis management capacity. Moreover, the operation significantly helped the EU to accomplish the Headline Goals 2003 and 2010.

On June 12<sup>th</sup>, the first EU troops landed in Bunia to take control and gradually extended their zone of influence. By implementing “weapon-free” zones in and around Bunia and hitting-back hard against any attacks, IEMF forces successfully re-established normal activities and a return of civilians to Bunia and the surrounding areas, while forcing the ethnic militias to withdraw.

At the end of the Mandate, the IEMF had successfully completed its task and between September 1<sup>st</sup> and September 7<sup>th</sup> handed over effective control of Bunia partially to the expanded MONUC forces. This success was the result of the uncompromising attitude and coordination and adequate equipment of the IEMF forces. The EU and France in particular were very keen on illustrating the independence and ability of the EU as an international actor in international security matters, especially in the wake of the illegitimate Iraq war by a

US-led coalition. However, pre-deployment liaison with other agencies, including the United Nations, a more generous time and space framework (limited to Bunia and surroundings) and more continuity of EU policy in Africa (no EU intervention since 2003 despite continuing conflicts and genocides) would be more advantageous. Nevertheless, Operation “Artemis” illustrates that the EU has the capabilities to successfully execute mandates, if the EU member states are willing and agree upon foreign policy actions.

Subsequently Operation “Artemis” with its operational dimension (limited space, maximum 3 months of duration, maximum 2,000 troops) has become a model for the EU’s battle group concept. This mission has shown the increasing importance of international cooperation in the field of crisis management.

Finally yet importantly, the EU is doubtlessly improving its capabilities in order to become a more coherent global actor. For years, the EU has been criticized for not having military means, and now under the framework ESDP the EU is trying to develop its military capabilities as well as its civilian means. Operation “Artemis” was a test to see whether the EU was capable of launching such an operation, directing and concluding it on its own, or not. Although there is a great deal of room for improvement, Operation “Artemis” was an encouraging first step towards a better institutional order inside the Union for developing the crisis management capabilities and a more coherent discourse for becoming a global actor.

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