Global stability through the EU’s neighbourhood and enlargement policies

Johannes Hahn, Commissioner for EU Neighbourhood Policy & Enlargement

The European Union’s response to CBRN risks and threats

Helga Schmid, Secretary-General, European External Action Service (EEAS)

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France is back again

The young President’s landslide victory in the presidential elections and the absolute majority he won during the ensuing parliamentary elections bring home the need for Emmanuel Macron to make the most of this grace period in order to launch a comprehensive reform programme. With his newly-founded party “La République en marche” he has swept aside the traditional parliamentary parties either side of the centre and begun to dismantle the fossilised political system.

It will be no mean task to drag French society out of the doldrums.

Macron’s ascent could be compared to that of Cicero who, from very humble beginnings, was elected consul in Rome in 64 B.C. at the age of forty. He took power in a bid to get Rome’s long-feuding parties to work together and thus take the destiny of the Empire in hand in harmony with the people (‘concordia ordinum’) and secure peace at home and abroad. Cicero success was due to his natural charisma and his ability to speak to the people. Furthermore, his image was untarnished by electoral battles. Surely this applies equally to Macron?

President Macron’s inauguration ceremony was royally staged, and his first foray on the international scene with the Russian President and the US President was masterful. On 3 July 2017, his speech to Congress – both Houses of Parliament sitting in Versailles - on the very spot where Emperor Louis-Napoleon Bonaparte convened Parliament for the first time in 1848 to deliver his report on the state of the nation as required by the Constitution, was both imperial and Gaullist in tone. Macron bowing to Parliament? More striking was his allegiance to the founder of the Vth Republic, General de Gaulle, who set the direction that Macron also wants to follow: establishing firm political guidelines while letting the Prime Minister govern, in accordance with the Constitution.

Emmanuel Macron found himself the new hope of the nation although making no bones about the fact that it was not going to be easy to pull French society out of its stagnant stage. His leitmotiv is dignity. President Macron has set out to reconcile the French and instil in them a new sense of France’s historical significance and greatness which can only come from stability at home and a strong united Europe. He has outlined his vision of a better Europe while stating his determination to fulfil France’s commitments to the EU in the interests of credibility. But now time has come to explain to the French society his master plan.

Internally, sound judgement will be called for from a government seeking both to be close to the people and to involve the political elites, of which some lost their influence in the last election, if the process designed to transform society is to succeed.

To meet new external challenges, Europe needs a strong, open, cooperative and self-confident France. Macron has the charisma to create a new image for France and to move France and Europe forward, with reliable partners on the continent.
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EUROPEAN COMMISSION

Juncker’s 2017 State of the Union speech

On 13 September 2017, Jean-Claude Juncker delivered his 2017 State of the Union address, to the Members of the European Parliament in Strasbourg. The President of the European Commission explained priorities for the year ahead and outlined his vision for how the European Union could evolve by 2025. After a year that shook the EU’s very foundations, President Juncker showed optimism for the future. He said: “The wind is back in Europe’s sails. We now have a window of opportunity but it will not stay open forever. Let us make the most of the momentum, catch the wind in our sails.” The President outlined his 5 priorities for Europe: strengthen the European trade agenda; make the European industry stronger and more competitive; make Europe the leader in the fight against climate change; protect citizens better in the digital age; and make migration stay on the EU’s radar. Juncker’s speech in the European Parliament was accompanied by the adoption of several initiatives by the European Commission on trade, investment screening, cybersecurity, industry, data, and democracy.

→ Web: https://tinyurl.com/yarsgwjb
→ Video: https://tinyurl.com/ycwodz48

INTERNATIONAL RELATIONS

All eyes on Macron

The speeches that US President Donald Trump and President of France, Emmanuel Macron, delivered during the UN Plenary Session on 19 September 2017 in New York, couldn’t be more opposed. On the one hand, Donald Trump, cutting his “enemies in pieces”, ready to risk war in the case of nuclear questions on non-proliferation and promoting his doctrine of “America first”, and reiterating his doubts on the purposes of the United Nations. On the other hand Emmanuel Macron, delivering with verve a plea in favor of the United Nations as vital instrument for human beings and central point of what the nations had underscored: striving for peace and better live in the world. Macron made clear that he refuses a policy of escalation, which could end in a nuclear war, but wants to bring the players on a table to find livable political solutions. Against Trump’s doctrine of sovereignty Macron set a strong and reliable multilateralism to bring nations together for a better future on strong and reliable relations.

→ See our chapter EU-US Relations (pp.43-52) which discusses, if Trump’s America is still a reliable partner for the European Union
Tribute to a committed European

On 1 July 2017, the world took leave of Helmut Kohl, who died on 16 June 2017, at the age of 87. The obsequies took place in the hemicycle of the European Parliament (EP) where more than 40 heads of state and government honoured the former German Chancellor as a great European statesman. Speakers at the ceremony included EP President Antonio Tajani, European Council President Donald Tusk, EC President Jean-Claude Juncker, as well as German Chancellor Angela Merkel, French President Emmanuel Macron, and former US President Bill Clinton who said: “Helmut Kohl made us part of something bigger.”

CBRN
A major challenge to Security

CBRN risks and threats are a major challenge to security and peace. Grave incidents with chemical material (Seveso, 1976 and Bhopal, 1984), major nuclear incidents (Chernobyl, 1986, and Fukushima, 2011), the use of CBRN material by military forces (gas attacks during Iran-Iraq war, 1988, and Syrian Civil war, 2013), or epidemics like the breakout of Ebola fever in West Africa (2014-2016), have raised worldwide awareness for Chemical, Biological, Radiological and Nuclear treats and risks. IEDs (Improvised Explosive Devices) which are bombs generally seen in terrorist attacks or asymmetric unconventional warfare, have to be added to this list of threats.

We decided to dedicate our Main Topic chapter to the question: Is the European Union prepared and equipped to respond quickly and effectively to a CBRN emergency situation?

→ For the Main Topic chapter see pp.23-42

→ See also the article on the EU’s response to CBRN threats and risks by Helga Schmid, Secretary-General of the EEAS in our Spotlight chapter (pp.10–11)
Exporting stability or importing instability – this is the question

Global stability through the EU’s neighbourhood and enlargement policies

by Johannes Hahn, Commissioner for European Neighbourhood Policy and Enlargement Negotiations, Brussels

We live in uncertain times. Our continent has experienced multiple crises in the last few years, the effects of which are still ongoing: the financial crisis, the migration crisis, the conflicts in Syria, Libya and Ukraine to name but a few. Add to this the threat posed by terrorist and criminal networks, and it becomes clear that Europe’s prosperity and security cannot be entirely separated from that of its neighbours. It is fairer, easier – and far more cost-effective – to actively help our neighbours become more resilient. The European Union’s Neighbourhood and Enlargement policies lie at the core of these efforts.

Exporting stability or importing instability?

These two policies are intrinsically linked. Their overall objective is achieving stability at Europe’s borders, by helping neighbouring countries develop stable democratic institutions and, at the same time, to become more prosperous. We believe that placing emphasis on the establishment and proper functioning of democratic institutions, a strong and active civil society and economic reforms which boost investment, jobs and growth is a game changer for any society. This concept underlines also the relevance of both the European neighbourhood and enlargement policies for the European Union. You could sum it up in one sentence: we have the choice of exporting stability or importing instability. The decision is clear and we are implementing it through cooperation with our neighbours, be it candidate countries or partner countries in our neighbourhood.

When it comes to enlargement policy, the accession perspective is a major incentive driving reform processes. It is very much in our own interest to help transform these countries. By working on reforms with our partners, we create security, stability and prosperity for both, them and ourselves. Our commitment and the countries’ own efforts are already paying off. For example, Serbia and Montenegro are moving ahead with their accession negotiations and the former Yugoslav Republic of Macedonia has finally overcome its political crisis with overall fair elections and the formation of a new government.

Stronger joint ownership and more flexibility

Let us now focus on the EU’s neighbourhood policy: in 2015, we carried out a major review, which resulted in a new approach that ensured stronger joint ownership and more flexibility by recognising the different aspirations and diversity of our 16 partner countries. The reviewed neighbourhood policy provides all the necessary tools to reach out to partner countries on key issues such as good governance, rule of law, democracy and human rights; economic development (including trade, employment, transport and connectivity, energy security and climate action); security; migration and mobility. As with the enlargement countries, the EU’s interest is in the stabilisation of these efforts.

“Europe’s prosperity and security cannot be entirely separated from that of its neighbours.” — Johannes Hahn
of its wider neighbourhood in political, socio-economic and security-related terms. This includes addressing the root causes of the migration crisis and conflicts. This will also work towards the goals of the EU Global Strategy which emphasises the importance of furthering state and societal resilience in the EU’s broader neighbourhood.

Economic development is key for stability
Lack of economic opportunities is often at the heart of instability. That is why the EU has flagged economic development as a key priority. This includes work on economic governance, improving the business environment (including property rights, dispute resolution mechanisms and commercial courts which aid stability and promote growth) and job creation, especially for youth. Measures such as these encourage trade and investment, both domestic and foreign, as well as stronger economic integration with the EU. The EU also facilitates energy connectivity and transport between the EU and ENP partners, a further source of economic gain as well as stability for all parties concerned.

Security and defence set priorities
Security is one of the central issues that emerged as a priority from the ENP review. Conflicts in our wider neighbourhood have a strong impact on the EU, and threaten our own stability. It is for this reason that we have redoubled our efforts to counter terrorist threats, prevent radicalisation, disrupt organised crime, fight cybercrime and ensure effective border management. Given the specific security challenges the region is facing, we are placing emphasis on security sector reform and on working with Member States to develop effective and transparent institutions in partner countries. In the same vein, we’re looking at more efficient forms of defence integration within the EU. The threats that the EU faces have no borders. Their scale is increasing and they are best tackled by working together. We have therefore launched the European Defence Fund, which will create incentives for Member States to cooperate on joint research, development and acquisition of defence equipment and technology. And looking to the future, we have produced a detailed reflection paper with different options for how the European Union at 27 might develop by 2025 in the area of defence.

Tackling the root causes of migration
Finally, in response to the European migration crisis, we have increased cooperation and partnership with our neighbours. We created two trust funds to enable quick mobilisation of funding: the EU Trust Fund in response to the Syrian Crisis and the EU Trust Fund (EUTF) for Africa. €767 million have already been committed under the EUTF Syria to increase resilience and self-reliance of refugees and host communities displaced as a result of the Syrian crisis. A Facility for Refugees in Turkey was established in 2016 through which three €3 billion have been committed for 2016 and 2017 to support refugees and host communities in Turkey by enhancing access to livelihoods, education and improved infrastructure, amongst other means of assistance. Access to education and job opportunities have also been the focus of our activities in Jordan and Lebanon, countries with whom we have signed compacts to provide concrete help to refugees and their host communities. And our efforts don't stop there. In line with our overarching aim to prevent the tragic loss of lives in the Mediterranean, we’re stepping up actions and cooperation to combat smuggling and break its business model at sea, on the coast, inside Libya and throughout the region. Lastly, the European External Investment Plan for Africa and EU Neighbourhood Countries is a new initiative that brings a new focus on boosting investments in the region. One of its functions will be addressing the root causes of irregular migration and forced displacement.

It is through helping our partners on all these fronts, creating the right conditions for their citizens to pursue a dignified, stable and secure life that we can ensure our own stability and resilience. The stakes have never been so high, both for us, and the region.
The principle of local ownership and regional cooperation

The EU’s response to CBRN risks and threats

by Helga Schmid, Secretary-General, European External Action Service (EEAS), Brussels

As a global actor, the EU has always considered CBRN threats and risks to be a major challenge to security and peace. For decades, EU assistance programmes to third countries have been developed in close cooperation with EU Member States and strategic partners in particular with the United States. Building on the lessons learned from Ebola, Fukushima and Syria, the EU has launched a unique initiative – the CBRN Centres of Excellence (CoEs) – an approach based on regional cooperation and inclusiveness involving 57 countries worldwide and embracing the principles enshrined in the 2016 EU Global Strategy.

The EU as an active player

Disasters such as Bhopal, Chernobyl, Fukushima or Aleppo have raised CBRN awareness worldwide. The EU was one of the first global players to bring its financial and technical support to the communities affected by such catastrophic events. As the main contributor to the Chernobyl Shelter Fund, the first international organization to offer civil protection and humanitarian aid in Fukushima and the first to deploy mobile labs in West Africa to collect on-site Ebola pathogens, the EU has spared no effort to share its know-how. However, there is no cause for complacency. In combination with other threats – terrorism, organized crime or cyber threats in order to decrease the likelihood of non-state actors using CBRN materials on European soil or beyond. In this respect, coordination and cooperation with EU neighbours and new regional partnerships, including with NATO, is a prerequisite for an effective strategy.

Lessons learned from Ebola, Fukushima and Syria

Defining future priorities requires to look back at what happened and why. In November 2016, during the EU annual conference on non-proliferation, the EEAS chaired a symposium on the lessons learned from Fukushima, Ebola and Syria. It was a moving experience, confronting expertise about what went right and wrong during these tragic events. In the case of Fukushima, one of the challenging issues was the lack of real-time communication between off and on-site (communication was by fax, on paper), to which can be added mistrust between local and central governments. In the case of Ebola, the absence

A health worker in a suit going through a decontamination treatment at the Ebola treatment centre in Conakry (Guinea), run by Médecins sans frontières

Source: European Union, 2014; EC-Audiovisual Service/Kenzo Tribouillard
The concept of CBRN Centres of Excellence follows the same principle as the one underlined in the Global Strategy: without greater resilience within the EU’s neighbourhood, the security of the Union cannot be guaranteed.”

EEAS Secretary-General Helga Schmid, Brussels, 28.8.2017
© European Union, 2017/Source: EC-Audiovisual Service/Photo: Mauro Bottaro

of early warning was key. However, even in situations where there were clear early warnings (i.e. Chernobyl, Fukushima, Syria), the question remained the same: when to trigger action? Another issue discussed was how to secure evidence. Indeed, evidence comes in a variety of forms but if a catastrophe is subject to a UN investigation, for instance, it is essential to ensure a chain of custody and science that can withstand scrutiny by the UN Security Council. Finally, there is no international repository of knowledge with lessons learned from national crises. Countries and organizations are often reluctant to share sensitive information that may reveal embarrassing internal malfunctioning. This is a real issue as keeping track of what happened at local level is a prerequisite to the creation of a sustainable culture of CBRN safety and security.

The EU Centres of Excellence: a global initiative
In this spirit of local ownership, the EU decided in 2012 to establish 8 regional Centers of Excellence located in Morocco for the Atlantic Facade, Algeria for the Maghreb/Sahel, Jordan for the Middle East, the United Arab Emirates for the Gulf region, Kenya for the Horn of Africa, Georgia for the Caucasus, Uzbekistan for Central Asia and the Philippines for South East Asia. A total of 57 countries are involved.

The concept of CBRN Centres of Excellence follows the same principle as the one underlined in the Global Strategy: without greater resilience within the EU’s neighbourhood, the security of the Union cannot be guaranteed. Together, the EU and third countries assess the threat and prepare national and regional action plans to facilitate regional cooperation. Such a concept of regional platforms is entirely new in the security area and has been praised for its success by the UN Security Council and supported by NATO and the G7, the latter adopting a similar model. Around 60 projects have been developed in 5 years in various domains, from nuclear waste management, disease surveillance or illicit trafficking to border control and emergency procedures. In 85% of these projects, the expertise (on regulation, training and equipment) comes from EU Member States, with a very high level of return on investment.

Expanding the EU CoE concept to other domains
As the EU Centre of Excellence initiative enters its sixth year, the question arises of expanding this successful initiative to other domains such as cybercrime, the protection of critical infrastructures or the illicit trafficking of conventional weapons. Many of the experts involved in the Centres of Excellence – law enforcement officials, first responders, military officers – are the same as the ones involved in fighting terrorism. It makes sense to use these existing regional platforms to facilitate exchanges of information, best practices and early warning networks in order to strengthen international coordination and cooperation in the fight against terrorism.

Helga Schmid
has been Secretary-General of the European External Action Service (EEAS) since 2016. Born in 1960 in Germany, she studied in Munich and at the Sorbonne in Paris. Ms Schmid attended the German Diplomatic Academy and became political adviser to German foreign ministers Klaus Kinkel and Joschka Fischer between 1994 and 2000. Before going to Brussels in 2006, she was Head of the political staff of the federal foreign office in Berlin and Head of the minister’s office. In Brussels, Ms Schmid became director of the policy planning and early warning unit of the High Representative for the CFSP in the General Secretariat of the Council of the European Union and joined the EEAS as deputy Secretary-General for political affairs in 2011.
THE EUROPEAN – SECURITY AND DEFENCE UNION

In the Spotlight +++ Brexit +++

Brexit: Application of Article 50
(ed/ak, Berlin) Negotiations about Brexit, or more precisely the Article 50 negotiations with the United Kingdom, have been conducted since June 2017. Where do these stand now?

The actors involved

> MICHEL BARNIER, Chief Negotiator in the Taskforce on Article 50 Negotiations with the United Kingdom, European Commission

> EUROPEAN COUNCIL AD HOC WORKING PARTY ON ARTICLE 50

The working party, established on 22 May 2017, assists the Council and Coreper (Committee of Permanent Representatives) in all matters related to the UK’s withdrawal from the EU. It has a permanent chair and meets in a EU27 format.

> EUROPEAN PARLIAMENT BREXIT STEERING GROUP (CHAIR BY GUY VERHOFSTADT MEP)

Working under the aegis of the Conference of Presidents, the Brexit Steering Group’s purpose is to coordinate and prepare Parliament’s deliberations, considerations and resolutions on the UK’s withdrawal from the EU.

> DAVID DAVIS, Her Majesty’s Principal Secretary of State for Exiting the European Union, United Kingdom

“At the current speed, we are far from being able to recommend to the European Council that there has been sufficient progress in order to start discussions on the future relationship, while we are finalising the withdrawal agreement throughout 2018.”

Michel Barnier, 31.08.2017*

What has happened so far?

2017
29.03.

Triggering of Article 50 by the British government

“Red lines on Brexit negotiations” as decided by the European Parliament

• Citizens first: importance of securing equal and fair treatment for EU citizens living in the UK and British citizens living in the EU
• No trade-offs: indivisibility of the four freedoms of the single market: free movement of goods, capital, services, and people
• Negotiation principles: need for both sides to act in good faith and full transparency

05.04.

European Council (Art. 50) guidelines for Brexit negotiations

• EU will lead negotiations in unity
• Negotiations will be conducted in transparency and as a single package
• Citizens’ rights are first priority for the negotiations
• Preserving the integrity of the Single Market
• Special recognition of the situation of Ireland

29.04.

Opening of the Article 50 negotiations

• nomination of the European Commission as negotiator for the EU
• establishment of the European Council ad hoc working party
• adoption of negotiation directives

22.05.
“As discussions in June, July and again this week have shown – our separation from the European Union and our future relationship is inextricably linked. We can only resolve some of these issues with an eye on how the new partnership between us will work in the future. This is not about skipping ahead or trying to reopen previous discussions, it is about pragmatically driving the progress we all want to see.”

David Davis, 31.08.2017

“It’s time for UK politicians to be more honest about the complexities Brexit creates and for them to recognise that other governments also have obligations to their own taxpayers. The EU can be bureaucratic but, from day one, the EU-27, the European Commission and the Parliament have been fully transparent about their negotiating positions and mandates. It is as if we are now told we are too efficient.”

Guy Verhofstadt, 01.09.2017

What are the latest developments?

19.06.
First negotiation round
- Agreement on Terms of References for the Article 50 Treaty on European Union negotiations
- First exchange of positions on vital issues of negotiation such as citizen’s rights, the financial settlement and the Northern Irish border

20.07.
End of second negotiation round
- Presentation of respective positions on several issues, e.g. citizens’ rights
- Acquire overall understanding on the framework for the future relationship

31.08.
End of third negotiation round
- Continued discussion on citizen’s rights
- “Fruitful discussions” on the issue of Ireland
- Continued discussion on the financial settlement

22.09.
Speech of Prime Minister May in Florence
- Proposition of an “implementation period” after the 29th of March 2019
- Reaffirmation to honour existing commitments of the UK

25.09.
Start of forth negotiation round
- Clouded by discussions about whether to link agreements on terms of exit and the transitional period
Russia will not return Crimea to Ukraine in the foreseeable future

The Minsk II Agreement is the only base for détente

Interview with Dr Ioan Mircea Paşcu MEP, Vice-President, European Parliament, Strasbourg/Brussels

The European: Vice-President Paşcu, in early 2016 you have contributed an article to this magazine in your position as Vice-President of the European Parliament on “Re-establishing the Euro-Atlantic Region”, declaring that Russia and the West are in the same boat, but that reconciliation with Russia is only possible under certain conditions. This was two years after the annexation of the Crimea by Russia (18 March 2014) and one year after the so called “Minsk II Agreement” (12 February 2015) which offered a glimmer of hope, as German Chancellor Angela Merkel put it. Do you still have any hope for a revision of the Crimea Status or are in these days other political issues prevailing?

Ioan M. Paşcu: My initial skepticism has not diminished; on the contrary, it became stronger with respect to a return of Crimea to Ukraine, because, after all, this is the essence of any “Crimea Status”. Russia – especially under its current leadership – will not return Crimea to Ukraine in the foreseeable future. Besides, international attention is now focused on other issues, (North Korea, for instance), as you correctly pointed out.

The European: You don’t see a “return” scenario?

Ioan M. Paşcu: Indeed there is a small detail which, if optimistically interpreted, might suggest that Russia contemplates a “return” scenario sometime in the future: it is the separate status for Sevastopol (with its naval base), from the rest of Crimea, even in the current federal arrangement for the Peninsula. This “separation” might indicate that keeping Sevastopol will be part of a return agreement, but …

The European: Indeed a very optimistic interpretation. Reconciliation is far away, if I understand you right, but could the West continue to accept the Crimea “fait accompli” and let fade away a solution to the next century?

Ioan M. Paşcu: I think that, at least for the time being, the West cannot do more than it does, namely denying recognition of the illegal annexation and maintaining the sanctions imposed for it. Any departure from this position, either in relaxing it or in hardening it is detrimental because – given the expected resistance of Russia – will indicate either capitulation or impotence, which is pretty much the same and any weakening of the sanctions regime with regard to Crimea – I am not speaking about Eastern Ukraine – will most probably be interpreted as a de facto recognition of the annexation.

The European: Do you think that the West has the stamina?

Ioan M. Paşcu: I am afraid that we, the West, have to brace ourselves for a long voyage. This does not mean that, in the light of Russia’s history, abrupt changes are completely excluded (see Brest-Litovsk’), only that logical expectation is for a long wait. In the meantime, the West has made very clear that the implementation of the Minsk II Agreements by Russia – and the separatists it supports in Eastern Ukraine – is, currently, the key to starting the normalisation process.

The European: I agree that a revival of Minsk II might be a solution; but in which sense? It can’t repair the annexing of the Crimea?

Ioan M. Paşcu: Indeed, you touched the most sensitive aspect of the matter: the Minsk Agreements and the accompanying sanctions regime are not related to Crimea, they are related to Eastern Ukraine!

The European: Indeed, the illegally annexed Crimea is not mentioned at all in the text of Minsk II.

Ioan M. Paşcu: Minsk II is primarily a cease-fire accord; it does contain politically loaded provisions, with impact on the future

“I think that, for the strict implementation of the Minsk II Agreements, the Normandy Format continues to be necessary.”

Ioan M. Paşcu MEP
configuration for Ukraine. I always wondered why the toughest sanctions and conditions for a return to business as usual between the West and Russia were related to the destabilisation of Eastern Ukraine and not to the return of Crimea to Ukraine. The only explanation I could find was that, first, Crimea has been sanctioned previously and separately, second, that the West is aware of the length of wait in respect to coming back to “status quo ante” with respect to Crimea and, third, that, emotionally, the Malaysia Airlines Flight 17 (MH 17) has been downed by the separatists over Eastern Ukraine and not over Crimea.

The European: So, extrapolating, one could foresee a situation in which the sanction system loses its weight?
Ioan M. Pașcu: Let us say, Russia, the separatists and Ukraine start implementing the Minsk II Agreements, the sanction regime is eased, may be even lifted under certain circumstances, normalisation gets momentum, but Crimea will continue to be sanctioned and thus placed on hold for the foreseeable future.

The European: And if that will not be equated?
Ioan M. Pașcu: Will that not be equated, in public perception, this will be a tacit, “de facto” recognition by the West of the illegal annexation of Crimea by Russia.

The European: Minsk II means only stabilisation efforts.
Ioan M. Pașcu: Yes and no. Yes, for instance, along provisions of immediate ceasefire, withdrawal of heavy weaponry, halt the flow of arms, materiel and military personnel from the Russian Federation into Ukraine, exchange of prisoners. No, because it also stipulates elections in the separatist regions of Donetsk and Lugansk (only after which, Kiev would re-establish control over its border), both regions being permitted to legally keep their own militias, it asks for an encompassing constitutional reform in Ukraine to be implemented in a rather short period of time decentralising the Ukrainian political system and offer privileges to Donetsk and Lugansk.

The European: Leaving Crimea completely out of the picture, why is Russia so reluctant to live with the accords?
Ioan M. Pașcu: Particularly since, for all practical reasons, Russia, which could not and therefore did not want to conquer Ukraine entirely, seems to have already achieved its goals: Crimea, the “geostategic prize” of all conflict, as shown, has remained in its hands, a “veto power over” on any major decision of Ukraine, has been achieved through control over Donetsk and Lugansk and the writing off from the table – at least for some time – of Ukraine’s membership to NATO and, probably, to the EU, has also been achieved.

The European: Probably, Russia considers the conflict in Eastern Ukraine – and its solution – in the larger context of its general relations with the West?
Ioan M. Pașcu: I agree with you. In the context of Russia’s
In the Spotlight

+++ EU and Russia+++ 

The European: Is the Normandy Format (heads of state and government of Germany, France, Russia, and Ukraine) the right configuration to push at least Minsk II solution forward?

Ioan M. Pașcu: I think that, for the strict implementation of the Minsk II Agreements, the Normandy Format continues to be necessary, but, in case the above-mentioned supposition is valid, then this format might be perceived as insufficient – the US is missing! However, let us not lose sight of the right order: implementing the Minsk II Agreements and the Normandy Format are indispensable.

The European: US is missing you said, but you didn’t mention the European Union, invisible but striving for a stable situation.

Ioan M. Pașcu: After all, the EU is part of the 5+2 format dealing with the conflict in Transnistria – not that it makes much difference I would sadly say, but still. So, logically, all the more so the EU should – theoretically – be part of the negotiating format. That would require squaring the individual role of Germany and France in the Normandy format with their general role within the EU.

The European: Back to the United States. Is the Black Sea region out of interest of the USA?

Ioan M. Pașcu: You seem to hold the view that the US are not already present in the area, and that the EU are totally silent. Let us look to 2014 and the illegal annexation of Crimea and let us remember that NATO – with the US in leading role – was the organisation to respond first to the military challenge posed by that act. The EU responded after by condemning it and imposing sanctions. No harm in this “division of labor”, given the different nature of the two organisations.

The European: To sum up, what is the problem of security in the Black Sea region?

Ioan M. Pașcu: The problem with the Black Sea is that, due to the illegal annexation of Crimea and its subsequent transformation into a “southern Kaliningrad”, the initial energy dimension – which brought Black Sea on the radar again, after decades of neglect – important as it is, is now doubled by an important military dimension. As such, the response to your question would depend on the desire of the EU to approach both dimensions – one cooperative, the other confrontational – simultaneously, and to do it in the name of all stakeholders, the US included, if the latter would accept a secondary position. Recently, a new dimension has been added of particular interest to the EU: the opening of a new route for refugees crossing the Black Sea from Turkey to Romania.

The European: The prerequisite for all political progress are calculable and reliable relations between the powers as you said. We are far away from this stage at the moment.

Ioan M. Pașcu: The ship called the “international system” has been anchored by the United States for many decades now. Currently, the ship is facing a very big storm, a tempest and we see that the anchor has lost apparently touch with the bottom.

The European: The result is that the ship – the international system – is now drifting, and everybody on board is wondering how will it be steered out of trouble?

Ioan M. Pașcu: I am afraid that, due to its unpredictable course, the US is confronted with an accelerated hemorrhage of moral authority, with the possible outcome of remaining feared but less and less respected. However, sometimes we tend to make the mistake of seeing only one decision-maker in the US, namely the President, only to repeatedly find out that there are other actors playing important roles in the decisions the US are taking. The Pentagon, for one, is such an important player, and here one can see a certain continuity of behaviour. Probably, the Black Sea might be a case in point.

The European: Vice-President, I thank you for this discussion.

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1. The Treaty of Brest-Litovsk was a peace treaty signed on 3 March 1918 between the new Bolshevik government of Soviet Russia and the Central Powers (Germany, Austria-Hungary, Bulgaria, and the Ottoman Empire), that ended Russia’s participation in World War I.

2. Malaysia Airlines Flight 17 (MH17/MAS17) was a scheduled passenger flight from Amsterdam to Kuala Lumpur that was shot down on 17 July 2014 while flying over eastern Ukraine, killing all 283 passengers and 15 crew on board.
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In the Spotlight +++ CSDP +++

Given the EU’s current political structure a European Army is a utopia

How to go from a national to a European defence?
by Jean Paul Perruche, Lieutenant General (ret), Expert to the European Parliament, Paris

Last June’s European Summit has given hope to all those who believe in a European Defence. It seems that the decisions were taken not only under the influence of the Trump effect, but also in consideration of the role being asked of the European Union’s defence forces all over the world. Economic and military power must go hand in hand on the world stage. A first step has been taken, but there is no guarantee that the objectives will be attained. There is no end to the individualism of Member States and some nations lack any real convictions about the need for a Common European Defence (CED).

A European defence: three scenarios
The European Council conclusions on security and defence reflect progress in the fields of the fight against terrorism and defence capabilities, with the launch of a European Defence Fund and the Council giving the green light for the start of an ambitious Permanent Structured Cooperation (PESCO) project. (ed: see documentation pp.20–21)

There are three possible scenarios for a future European defence:

The first is the one advocated by the nationalist parties whose harping on the theme of national sovereignty is reminiscent of the 1930’s, with a juxtaposition of competing nations in Europe and a resurgence of the risk of war.

The second involves prolonging Europe’s broad-based dependence on the US within the current NATO framework, in disregard of the risk posed by the United States’ re-evaluation of its strategic priorities and generating uncertainty among European countries about their security.

The third entails bolstering Europe’s strategic autonomy as called for by the European Council, and developing its structures and capacity for joint action accordingly.

We all know that a European Army will remain a utopia as long as there is no European government. However, there are a number of key questions that need to be properly addressed if a European Army indeed remains a long-term objective as suggested by Mr Juncker with the implicit approval of the German Defence Minister last year. Which questions must we ask in order to go from the current situation to attaining that objective?

• Should we envisage variable formats within the EU between those Member States that want to go for it and those that are not ready or able to do so? There is some hope following the Summit that this could work thanks to PESCO.

• What must be done to deliver the results citizens expect during the transition period?

• Will citizens accept a hefty increase of their nations’ defence budgets?

The issue of sovereignty-sharing
The EU Member States must find a solution to the political conundrum of sovereignty-sharing: do they wish to stick to intergovernmental cooperation and limited power at the EU level or go for more power at the EU level, which implies more integration and sovereignty-sharing? Linked to that question is the issue of a credible European leadership.

More European integration as I see it requires a strengthening of the political reality of the EU through a global approach to its defence requirements (in conformity with the EU Global Strategy) and setting out the threats and risks at the EU level in an EU White Paper on defence and security that treats the EU as a united entity.

This would enable steps forward in three directions:
1. Closer convergence and coherence among nations’ security interests. By highlighting the main threats to the common interests of our continent and also of individual EU Member States (MS), the White Paper should pave the way for more
complementarity and cooperation between the MS on a regional or transverse basis. Such an EU White Paper would not supersede national analyses but offer them a framework for consistency and complementarity. In parallel, it is necessary to engage in further serious reflection upon the practical implementation of solidarity between MS in order to show our citizens what the EU can and must do for their security (rather than the MS simply stating what they expect of the EU without giving it the requisite assets and tools).

2. Creation and development of a common European operational culture inspired by the EU’s goal of strategic autonomy. This means adopting a common and comprehensive approach to the requirements set out in the EU White Paper and gradually inculcating in operational personnel (both civil and military) a European mindset and a shared perception of the threats and responses that go beyond and are complementary to the national ones. All this boils down to the creation of a European Defence awareness.

3. Better leadership at the EU level, making it more visible, effective and credible. This requires better anticipation on the part of the MS of their possible contributions to EU missions and operations. The European White Paper should highlight the main possible scenarios to be addressed by the EU in order to defend and protect, so as to enable the MS to anticipate their contributions. This in turn should make for better EU responsiveness thanks to quicker political decision-making supported by a full-fledged civ-mil command structure (permanent and qualified). So far the EU’s lack of responsiveness in crisis situations has been due not to operational shortfalls but to political shortcomings.

Conclusions
The creation of a European Army remains a utopia at least in the current state of the EU. But a pooling of capabilities remains urgently necessary if our countries are to protect their interests and continue to wield influence in the world of the 21st century. This is only possible if the defence of our continent is viewed as a whole in which national requirements have their place like the pieces of a jigsaw puzzle. This is the only approach that has any chance of transforming a juxtaposition of national security interests into an addition of the EU Member States’ strengths. This is the way towards an effective CSDP supported by citizens. In the meantime, Member States can have recourse to multinational operational HQs and units and create new ones bringing together forces from several countries in the spirit of a European defence.

25 years of Eurocorps – a symbol for Europe
On the occasion of the 25th anniversary of Eurocorps, a change of command ceremony was organised on 7 September 2017 in the courtyard of the European Parliament building in Strasbourg. German Lieutenant General Jürgen Weigt took over as Commander of Eurocorps (COME) from Spanish Lieutenant General Alfredo Ramirez.

The new Commander (for a period of two years) said: “It is crucial to be effective, ready and flexible to fulfill all kind of missions.” He added: “It’s a deep honor and I’m deeply impressed to take over the command of such a military formation.” Before handing over the pennant to his successor, General Ramirez recalled that during his mandate, more than 500 staff members have been serving the Eurocorps nations and the European Union in the framework of EU training missions (Mali and Central African Republic) and EU Battlegroup stand-by periods. “We leave to our successors a fully mature tool which is the result of an expert balance between actions for the EU and NATO”, he said.

Lieutenant General Weigt taking over the Eurocorps pennant in the courtyard of the European Parliament, Strasbourg, 7 September 2017

It was the 12th change of command since Eurocorps’ creation in 1992 in Strasbourg. Starting as a common French-German initiative of then French President François Mitterrand and German Chancellor Helmut Kohl, Eurocorps’ doors were open for other nations with the same rights as the founding nations. Between 1993 and 1996, Belgium, Spain and Luxembourg joined the Headquarters. Greece, Italy, Poland, Romania and Turkey are Associated Nations of Eurocorps.
In the Spotlight

+++ CSDP +++

European Council meeting in June 2017 focuses on security and defence
(ed/ak, Berlin) On June 22 and 23, heads of state and government of the EU Member States met in Brussels for a European Council meeting inter alia covering various security and defence topics. Excerpts from the Council conclusions:

“[The] European Council focused on strengthening Europe and protecting its citizens through effective measures to fight terrorism and develop its common security and defence, to ensure its economic development in a globalised world, to tackle migration and to protect its external borders. [...]"

Internal security and the fight against terrorism

1. The European Council strongly condemns the recent terrorist attacks and stands united and firm in the fight against terrorism, hatred and violent extremism. These acts have strengthened our resolve to cooperate at EU level so as to enhance our internal security: we will fight the spread of radicalisation online, coordinate our work on preventing and countering violent extremism and addressing the ideology, thwart the financing of terrorism, facilitate swift and targeted exchanges of information between law enforcement authorities, including with trusted partners, and improve the interoperability between databases.

2. Industry has its own responsibility to help combat terrorism and crime online. [...] The European Council expects industry to establish an Industry Forum and to develop new technology and tools to improve the automatic detection and removal of content that incites to terrorist acts. This should be complemented by the relevant legislative measures at EU level, if necessary. [...]"

3. The agreement on the Entry/Exit System, which is expected shortly, and the finalisation before the end of the year of a European Travel Information and Authorisation System (ETIAS) will pave the way for their rapid implementation, thus enhancing external border control and internal security [...].

4. We need to accelerate our collective efforts to share knowledge on foreign terrorist fighters as well as home-grown radicalised individuals and take forward policy and legal measures to manage the threat.

5. The European Council underlines the importance of providing support to the victims of terror acts.

“Enormous steps [have been] done with the establishment here in Brussels of the Military Planning and Conduct Capability, and a lot of work done especially on the European Defence Fund. This is one of the fields where the European Union project can be relaunched and I expect strong leadership from our heads of state and government to give further impulse so that Foreign and Defence Ministers together with me can follow up in the coming months and come back in December with even more decisions taken.”

HR/VP Federica Mogherini, 22 June 2017
External security and defence

6. The European Council reiterates its commitment to strengthening EU cooperation on external security and defence so as to protect the Union and its citizens and contribute to peace and stability in its neighbourhood and beyond. Together with all its diplomatic and civil capabilities, the EU brings a unique mix of possibilities to this enterprise. Significant progress has been achieved in implementing the EU Global Strategy in the area of Security and Defence and the Joint Declaration signed in Warsaw by EU and NATO leaders. The transatlantic relationship and EU-NATO cooperation remain key to our overall security, allowing us to respond to evolving security threats, including cyber, hybrid and terrorism. The European Council welcomes the establishment in Helsinki of a European Centre of Excellence for Countering Hybrid Threats. [...]

7. The joint development of capability projects commonly agreed by Member States to fill the existing major shortfalls and develop the technologies of the future is crucial to fulfil the level of ambition of the EU approved by the European Council in December 2016. The European Council welcomes the Commission’s communication on a European Defence Fund, composed of a research window and a capability window, and is looking forward to its swift operationalisation. It calls for rapid agreement on the proposal for a European Defence Industrial Development Programme with a view to supporting investments in defence research and development activities. [...]

8. To strengthen Europe’s security and defence in today’s challenging geopolitical environment and to help reach the level of ambition of the EU expressed in the EU Global Strategy, the European Council agrees on the need to launch an inclusive and ambitious Permanent Structured Cooperation (PESCO). [...]

9. To strengthen the EU’s rapid response toolbox, the European Council agrees that the deployment of battlegroups should be borne as a common cost by the EU-managed Athena mechanism on a permanent basis. It also urges the Council to speed up its work on greater responsiveness of the civilian crisis management.

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“The European Council agreed on the need to set up permanent European cooperation in defence (also called PESCO). I consider this a historic step, because such cooperation will allow the EU to move towards deeper integration in this crucial area.”

Donald Tusk, 12 July 2017

Web: http://bit.ly/2tBI0sb
Additionally, clarification would be needed on issues like the effects for the political acquis of the EU, for national constitutions and political systems, for national defences and forces, for NATO, OSCE and UN, for existing treaties or agreements and other specific areas. Self-explanatory, these and many more detailed parameters would have to be agreed by the individual Member States, the responsible EU institutions and possibly further partners. Such a process might take an undefinable number of decades and it would be highly questionable whether the result would match the expectations. Nevertheless, extreme visionaries may still consider a Europe-an army an attractive option, but in the real world it seems to be a dream at best.

Therefore, the suggestion is to stick to realistic, achievable approaches. Since the beginning of the European and Common Security and Defence Policy, a considerable package of action plans, goals, intentions and projects has been developed and agreed. There has been progress but there is also disappointment as quite a lot has remained on paper and not been implemented. Just recently, several fresh steps have again been announced to improve the posture of the EU. Let us hope that all member states develop the crucial will and contribute the necessary means. In our unstable and dangerous world dreams may be nice but we need efficient and effective instruments. The sooner we get them the better for us and for the next generations.

* Deutsche Gesellschaft für Wehrtechnik e.V. – German Defence Technology Association
MAIN TOPIC

CBRN Threats

Threats and risks emanating from Chemical, Biological, Radiological and Nuclear (CBRN) material should not be underestimated! * The European approach to CBRN security stems from the transnational character and the massive number of potential casualties in case of natural, industrial or terrorist disasters when CBRN materials are involved. It is vital for the European Union to make the most out of civil-military cooperation to effectively counter CBRN related risks and thus get prepared, equipped and trained to respond to a CBRN multi-hazard emergency situation.

* More recently the acronym CBRNe arose – the e in this term referring to explosives.
A new EU legislation is needed for CBRN food and health risks

Protecting EU’s citizens and environment

by Adina-Ioana Vălean MEP, Chair of ENVI Committee, European Parliament, Strasbourg/Brussels

In the past years, the EU’s security environment has changed significantly. Instability in the EU’s eastern and southern neighbourhood is, in many instances, at the origin of current challenges to peace, security and prosperity within the EU. New types of threats, such as hybrid threats, are emerging and include the possibility of a terrorist attack using chemical, biological, radiological or nuclear (CBRN) materials as weapons of terror, possibly jeopardising public health, environmental protection and food safety and security within the EU.

CBRN warfare knowledge and techniques
Following 11th September 2001, the international community came to believe there was a high probability that terrorists would make use of such weapons. The 2001 ‘anthrax letters’ attacks as well as the 2004 Madrid and 2005 London attacks were the bedrock of this line of thought. Fortunately up to now CBRN attacks have not fully reached their intended destructive power. However experts warn that the growing number of people familiar with CBRN warfare techniques and the spread of scientific knowledge, combined with poor security of relevant facilities, are making it relatively easy for terrorists to get hold of CBRN materials.

Consequently, the international community has reacted to CBRN threats through a series of instruments, most of them under the aegis of the UN. Similarly, the EU, its Member States and other key partners (e.g. NATO), have undertaken numerous activities to improve the ability to prevent CBRN incidents and protect citizens, institutions and infrastructure against such incidents.

Strong efforts on prevention and protection
Although counter-terrorism is in general a national competence, crisis management procedures and tools to support the Member States in case of a CBRN disaster with cross-border implications have been developed at EU level, such as the EU Civil Protection Mechanism (facilitating cooperation in civil pro-
In the past, the European Parliament has been attaching particular importance to strengthening chemical, biological, radiological and nuclear security in the EU, with a special focus on the protection of public health, the environment and food safety.”

Adina-Ioana Valean MEP

The EU Parliament’s position

In the past, the European Parliament has been attaching particular importance to strengthening chemical, biological, radiological and nuclear security in the EU, with a special focus on the protection of public health, the environment and food safety. In its Resolution of 14 December 2010 on the CBRN Action Plan, Parliament stressed, in particular, that the intentional spreading of communicable diseases or the contamination of food, soil, air and drinking water by CBRN agents could seriously impact animal and human health, food safety and security, and the environment, also in the longer term. In addition to a call for recovery and decontamination strategies to be included in the CBRN policy, Parliament pointed to the need to enhance the security of radioactive and nuclear materials and facilities and to better protect public transport networks.

Implementation of the EU CBRN Action Plan

As regards nuclear security, most actions foreseen in the CBRN Action Plan have in the meantime been fully implemented (see Commission staff working document on nuclear security of March 2016). The actions spelt out in the Joint Framework on a European Union response to countering hybrid threats, adopted in April 2016, which focus, inter alia, on enhancing protection and resilience of critical infrastructures (including transport infrastructure, but also, e.g., a water purification plant) and on protecting public health and food security against a CBRN attack can be considered as a further step in the right direction. More might, however, need to be done in the future. The food supply and public health will need new legislation.

Food defence

Food defence means the protection of food from intentional contamination or adulteration by biological, chemical, physical, or radiological agents. It includes measures regarding prevention, protection, mitigation, response and recovery from intentional acts of food contamination. The WHO, in 2007, identified intentional food contamination as one of the main global health threats of the 21st century and stated that food has become an instrument for terrorist attacks. To date there is no comprehensive regulation of food defence at EU level.
The EU-guided CBRN Centres of Excellence

The European: Mr Luyckx, you are the Head of Unit, Security, Nuclear Safety in the Directorate General for International Cooperation and Development (DG DEVCO) after having been the Head of Unit, Counterterrorism, in DG HOME. In this capacity, you coordinated the EU internal CBRN Action Plan. May I ask you to elaborate on the rationale of the CBRN CoE?

Olivier Luyckx: I would like to underline the fact that security and development go hand in hand, and the EU considers the security-development nexus as crucial. History tells us that there is no lasting development without security, as seen, for example, in diverse environments such as Libya, Somalia, Central Africa, the Democratic Republic of the Congo, Haiti, and Afghanistan. Insecurity, fragility and conflicts hamper normal social and economic activities; they make institutions weak and dysfunctional; they jeopardize political stability; they impede development activities. The opposite is true though: lack of development, poverty, inequalities, competition for natural resources, absence of basic public services fuel grievances, tensions, violence and insecurity. This nexus has been widely recognized, for example in SDG 16, the EU Global Strategy, the EU Comprehensive Approach, or the EU Agenda for Security.

The European: And all of this has to be viewed in light of the relationship between Europe’s internal and external security?

Olivier Luyckx: Indeed, the second key nexus is the internal-external nexus. Whatever happens in Algeria, in Vietnam, in Iraq, in Afghanistan, even in very remote areas, has an effect on our own security. This relationship works in both directions, for example, we know that remittances from diasporas are sometimes higher than ODA (Official Development Assistance).

The European: So the security-development nexus and the internal-external nexus are really at the heart of your mandate here?

Olivier Luyckx: Absolutely. Let us now consider CBRN specifically, as an illustration of this. The remit of the Centres of Excellence involves capacity-building and multi-hazard preparedness and response.

The European: What does capacity-building mean in this context?

Olivier Luyckx: Capacity-building means equipping partner countries to manage situations themselves. We do this by supporting changes in legislation and regulatory frameworks, assessing partner countries’ needs and producing action plans according to the needs identified. Currently we are working with a group of almost 60 countries in eight regions worldwide. We work using a multi-hazard approach: CBRN incidents could be either natural, such as the Ebola outbreak or the Fukushima disaster; man-made but incidental, such as the tragedies of Bhopal and Chernobyl; or man-made and malicious, for example the use of chemical weapons by the terrorist group Aum Shinrikyo in Tokyo in 1995.

The European: Do you reflect on specific scenarios like a terrorist dirty bomb?

Olivier Luyckx: According to the latest available information, the most likely modus operandi would be the use of chemical agents. However, we also look at the threat of biological materials, coming from poorly guarded hospital waste. Likewise, a device containing radiological material could be made using discarded material from medical and research centres.

The European: So the whole process is about saving lives and avoiding such incidents?

Olivier Luyckx: Indeed. To avoid incidents, we support capacity building in partner coun-

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A common cooperative security culture in CBRNe mitigation

The EU Centres of Excellence on Chemical, Biological, Radiological and Nuclear Risk Mitigation (CBRN CoE) initiative was launched by the European Union in 2011 and has increasingly developed its worldwide network and range of activities. It aligns with the activities of the latest EU CBRN Action Plan, which commenced implementation in 2014. The objective is to facilitate regional cooperation in order to enhance CBRN governance and capabilities, in mitigation of risks related to CBRN materials worldwide.

The EU-guided CBRN Centres of Excellence

Interview with Olivier Luyckx, Head of Unit B5, DG DEVCO, European Commission, Brussels

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Olivier Luyckx (left) and Hartmut Bühl in front of the EU CBRN CoE flagg in Mr Luyckx office at the European Commission in Brussels

Source: DG DEVCO/European Commission
Olivier Luyckx

is Head of the Security and Nuclear Safety Unit in Directorate General for International Cooperation and Development. Born in 1964, he holds an LL.M. in International Legal Studies and graduated from the European Security and Defence College in 2005. In 1994, Mr Luyckx joined the European Commission in the Directorate General for Economic and Monetary Affairs. He then joined the private office of the Vice President of the EC in charge of External Relations. From 1999 to 2004, Mr Luyckx worked within the Secretary General of the European Commission, followed by four years as the Assistant to the Director General responsible for Development Policy and Relations with Africa, the Caribbean and the Pacific. In 2008, he was appointed Head of the Unit in charge of Aid Effectiveness and prior to his current position, Mr Luyckx has served as the Head of the Unit in charge of Fight against Terrorism and Crisis Management (DG Home Affairs).

The European: Did you establish prototypes for implementation, or is implementation at the discretion of each country?

Olivier Luyckx: We have some prototype projects, for example Project 41, which enhances chemical security in high-risk facilities in West Africa, or Project 53, dealing with biosafety and biosecurity legal frameworks and conducting trainings in Central Asia. We are now reaching "cruising speed", with a portfolio of sixty ongoing projects. They have been defined mostly bottom up through national and regional discussions, which are known as Regional Round Tables.

The European: Maybe we could consider a specific project.

Olivier Luyckx: Our projects are all referenced by number. One example is Project 55, which we started in April this year in Africa. After providing training and equipment, the participants will now leave the training facilities with boots on the ground. They have started undertaking challenging work on the main route crossing the Sahel and the Sahara. The purpose is to detect illegal smuggling of CBRN materials at border crossings in this region.

The European: How are they proceeding?

Olivier Luyckx: They screen trucks and individuals. Detection is extremely complex, because environmental conditions like dust and heat make the process less reliable. So we are considering all of this in real life conditions, not just in theory.

The European: Part of ‘real life’ also involves financing. How are these projects financed?

Olivier Luyckx: The total amount that we have disbursed since 2010 is about €250 millions. We (the EU) financed the expertise, the needs assessments, the development of action plans based on those needs, the methodology and coordination activities with national authorities. In addition, the EU finances the regional secretariats, round tables, training, delivery of equipment and now the projects themselves. The budget comes from the Instrument contributing to Stability and Peace (IcSP).

The European: How is this initiative implemented?

Olivier Luyckx: At three levels simultaneously: starting from the bottom up, addressing multi-hazard risks and combining the national with a regional approach.

The European: Is the EU the key player in this area? What is the role of the European External Action Service (EEAS)?

Olivier Luyckx: The EU is absolutely the key player, and in this particular case, I think the Commission has a major role. We also work hand in hand with the EEAS.

The European: How many projects are actually running, and how is this business organised locally and in the regions?

Olivier Luyckx: We currently have 60 projects. When we started the process, as a first step, we aimed to promote awareness of CBRN threats and the CoE concept, including these national and regional centers. Then we shifted into second gear. We set up the secretariat and assessed needs, which we translated into projects and activities: training, equipment delivery, awareness, campaigns and all these things. We’re now in third gear, which involves more operational activities, including the organization of exercises. These exercises are table top, and real life, both national and international.

The European: And what about UN bodies?

Olivier Luyckx: Several UN bodies are also involved in the CoE activities. The main actor is currently UNICRI, whom we have actually contracted as a partner to set up and support the eight regional secretariats. A UN correspondent runs the regional secretariat, and assists us with dialogue at national, as well as regional level.

“History tells us that there is no lasting development without security, as seen, for example, in diverse environments such as Libya, Somalia, Central Africa, the Democratic Republic of the Congo, Haiti, and Afghanistan.”

Olivier Luyckx

tries, raise awareness about CBRN threats, and enhance their preparedness and response capacity, so they can anticipate incidents and manage them efficiently if they eventually happen.
The European: How is your budget controlled?
Olivier Luyckx: We have an entire division here working full-time on the implementation of this initiative. The controls are at different levels: at an operational level, actions are monitored internally. At a financial level, ex ante and ex post controls are conducted. External evaluations are also carried out for each individual action and at the level of the initiative. We also have an audit ongoing by the European Court of Auditors, who have attended a number of round tables. They have visited a couple of countries and they seem enthusiastic about our way of implementing the CoE.

The European: So you really have a firm grip on the whole thing?
Olivier Luyckx: Yes, there is no doubt about that. Before we sign anything in relation to any of the 60 projects, we check how much money will be allocated to each activity. We even control the use of expertise: who will go there, who will give the training, who will be trained.

The European: What would be your wish for 2030 for the CBRN CoE?
Olivier Luyckx: My hope is to have 60 countries with embedded centres of excellence, and maybe opening one or two more. These CoE would offer numerous success stories and results. The CoE network would consolidate as a robust system where CBRN materials are properly dealt with at all levels, from regulations and safeguards to their transport, sale and use, including waste management. We aim at supporting our partners in achieving EU standards for their security and safety.

The European: Congratulations – and thank you Mr. Luyckx for this interview.
We need to build a community of users on secure, safe and resilient societies

Horizon 2020 – chances to reduce CBRNe risks

by Philippe Quevauviller, DG Migration and Home Affairs, European Commission, Brussels

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020). It is the financial instrument implementing the Innovation Union, the “Europe 2020 flagship initiative”, aiming to secure Europe’s global competitiveness. By coupling research and innovation, Horizon 2020 is helping to achieve this goal with emphasis on excellent science, industrial leadership and tackling societal challenges. It covers many different research programmes, among which the Secure Societies Programme, which is featured in this paper.

Objectives of the Secure Societies challenge

The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation. Among the different thematic areas, the Secure Societies challenge focuses on the protection of citizens, society and economy as well as infrastructures and services. More specifically, through the development of new tools, technologies and methods, it aims to:

- enhance the resilience of our society against natural and man-made disasters and to develop novel solutions for the protection of critical infrastructure;
- fight crime and terrorism through the development of new forensic tools to the protection against explosives;
- improve border security including improved maritime border protection and supply chain security and support the Union’s external security policies including through conflict prevention and peace building, and
- provide enhanced cyber-security with activities ranging from secure information sharing to new assurance models, bringing together all security stakeholders with the active involvement of end-users.

CBRNe-related threats

Threats of either accidental or intentional character are regulated by a range of policies which involve security practitioners. They follow an integrated management approach which requires a solid support from research and innovation with tools, technologies, methods helping Member States to implement measures of prevention and preparedness, surveillance, response and recovery. But not all of the above research areas of the Secure Societies Programme cover CBRNe issues. This paper highlights some key CBRNe-related policy features and research areas covered by the ongoing H2020 calls for proposals (2016–2017).

Critical Infrastructure Protection (CIP)

Policy background

The new approach to the European Programme for Critical Infrastructure Protection (EPCIP) aims to ensure a high degree of protection of EU infrastructures and increase their resilience against all threats and hazards, including CBRNe-related ones. Complementing the CIP policy, the guidelines for trans-European energy infrastructure stipulate that the Union’s energy infrastructure should be upgraded in order to increase its resiliency and security.

Philippine Quevauviller

has been Research Programming and Policy Officer in the Directorate General on Home Affairs of the European Commission since 2015. Holding two PhD in oceanography and environmental chemistry, he has been a researcher in chemical oceanography from 1984 to 1989, working at the University of Bordeaux, then at the Portuguese Environment Ministry in Lisbon, and at the Dutch Ministry for Public Works in The Hague. Mr Quevauviller joined the European Commission in April 1989, firstly as a Scientific Officer at the Research General Directorate, then as a Policy Officer at the Environment Directorate-General in 2002. In October 2008, he went back to the Research General Directorate where he managed research projects on climate change impacts on water systems/resources and natural hazards. In April 2013, Mr Quevauviller moved to the Secure Societies Programme (firstly at DG Enterprise, then DG Home Affairs since early 2015) where he is responsible for programming and managing security research projects, in particular on disaster risk and crisis management (natural catastrophes, accidents, terrorist threats).
ience against such failure. Finally, creating the environment for safe transport is essential for European citizens. EU transport policies cover a wide range of security and safety policies in the air, road, maritime and rail areas which all relate to technical standards for preventing/detecting risks and responding to major threats, including terrorist attacks, crimes and accidents.

Disaster Resilience Societies (DRS)

Policy background
In the context of disaster risk management (DRM), the Union’s civil protection policy is mainly represented by the EU Civil Protection Mechanism (UCPM) managed by DG ECHO, with an operational dimension coordinated by the Emergency Response Coordination Centre (ERCC). This policy is linked to the United Nations’ Sendai Framework for Action 2015–2030 “Building the resilience of nations and communities to disasters”. It requires a scientific and technological support for the improvement of the effectiveness of systems for preventing, preparing for and responding to natural and man-made disasters, including CBRN-related ones (e.g. acts of terrorism and technological, radiological or environmental accidents, including marine pollution).

This is complemented by the CBRN Action Plan (DG HOME) and the EU Action Plan on Enhancing the Security of Explosives (DG ENV) which, while not legally-binding, identified Key Actions related to prevention and risk reduction, which are commonly accepted by Member States. This area is also prone to international cooperation, e.g. through the CBRNe Centres of Excellence initiative (DG DEVCO/ CBRN Coe).

In the area of major (industrial) accidents, the Directive 2012/18/EU the so-called “Seveso III” directive (DG ENV), imposes operators to take all necessary measures to prevent major accidents and to limit their consequences for human health or the environment; it is focused on the unintentional (accidental, including natural hazards) potential events in the establishments, thus usually not related to intentional acts (attacks).

In the health sector, the Decision 1082/2013/EU on serious cross-border threats to health (DG SANTE) addresses the preparedness and response planning, monitoring, early warning of, and combating serious cross-border threats to health, which besides pathogens include inter alia impacts of biological or chemical agents.

Finally, the Drinking Water Directive (DWD) regulates the quality of water intended for human consumption (DG ENV), hence with the aim to protect human health by ensuring that drinking water at the consumer tap is wholesome and clean. Policy measures address all possible contamination causes, including from treatment and distribution, by setting strict minimum parametric values to be complied with at the consumer tap. They actually focus on safety aspects and do not deal with security threats.

Policy development and implementation rely on effective interactions among policymakers, research, industry and practitioners in the EU Member States.”

Philippe Quevaouiller

The main thematic priorities listed in the Agenda are: terrorism, organised crime and cybercrime, all of which may include CBRN aspects, e.g. in the forensics sector.

Border and External Security (BES)

Policy background
Control of export and Union Custom Code are regulated through the Council Regulation (EC) N° 428/2009 on a Community regime for the control of exports, transfer, brokering and transit of dual-use items (which may include CBRN materials) is setting rules that Member States have to apply to control the transfer of certain dual-use items within the Community in order to safeguard public policy or public security. The increase in global terrorism has expanded customs to become a major player in the field of supply chain security. The deployment of detection technologies plays an essential role. Regarding border security, EUROSUR targets the development of technologies and capabilities which are required to enhance systems, equipment, tools, processes, and methods for rapid identification to improve border security, whilst respecting human rights and privacy, including both control and surveillance issues and promoting an enhanced use of new technology for border checks.

Horizon 2020: Some CBRN research trends
Linked to the above policy framework, and built-up upon the legacy of major FP7 CBRN-related projects such as EDEN, GIFT- CBRN etc. and H2020 on-going projects such as TOXI-TRIAGE, ROCSAFE etc., current DRS research priorities (2016-2017) turn around the need to secure our societies against any kind of
disasters and improve related resilience. The objective of the DRS sub-call is to reduce the loss of human life, environmental, economic and material damage from natural and man-made disasters, including from extreme weather events, crime and terrorism threats, which obviously include CBRNe risks. In particular, at present the wide range of sectors, disciplines and actors involved in disaster risk management are not sufficiently interlinked, which prevents efficient response planning and the building of realistic multidisciplinary scenarios. Integrated tools hence need to be developed to support such actions. Stronger partnerships among research, policy, (research or monitoring) institutes, industry/SMEs communities and practitioners, in particular first responders, are required for better preparedness of societies to cope with complex crisis situations.

CIP call 2016–2017

Current CIP research priorities (2016–2017) of the Secure Societies Programme are focusing on prevention, detection, response and mitigation of the combination of physical and cyber threats to the critical infrastructure of Europe (CIP-01-2016-2017). The broad scope will investigate how to tackle impacts of disruptions in the operation of critical infrastructures. The call will have to focus on one of the following critical infrastructures: water systems, energy infrastructure (power plants and distribution), transport infrastructure and means of transportation, communication infrastructure, health services, and financial services. Proposals should cover: prevention, detection, response, and in case of failure, mitigation of consequences (including novel installation designs) over the life span of the infrastructure. They should not only address in details all aspects of both physical (e.g. bombing, plane or drone over-flights and crashes, spreading of fires, floods, seismic activity, space radiations, etc.) and cyber threats and incidents, but also systemic security management issues and the combinations of physical and cyber threats and incidents, their interconnections, and their cascading effects. Innovative methods should be proposed for sharing information with the public in the vicinity of the installations, and the protection of rescue teams, security and monitoring teams.

DRS call 2016–2017

Supporting the EU Civil Protection Mechanism, the SEC-01-DRS-2016 call has been looking into improved response planning and scenario building in situations of emergency situations (including CBRNe related-ones), integrating support tools that can be used operationally by a large variety of decision-makers, back-office experts, and first responders and demonstrating them in representative and realistic environments and situations involving firefighting units, medical emergency services, police departments, and civil protection units. This was complemented by the SEC-02-DRS-2016 call dealing with situational awareness systems to support civil protection preparation and operational decision-making.

A call specific to CBRN, namely “Chemical, biological, radiological and nuclear (CBRN) cluster” has been launched in two steps (SEC-05-DRS-2016-2017) with the aim to help European companies to market their products globally (e.g. companies producing integrated equipment for First Responder’s, CBRN software systems, detectors, decontaminators, waste management and encapsulation equipment). A Coordinated Support Action called ENCIRCLE has been launched, which is now followed by a call for Research and Innovation Actions. The selected projects will benefit from commercial and other services provided by ENCIRCLE regarding access to the global market for their results. This should lead to a shorter time to market for novel CBRN technologies and innovations, and more business deals leading to industrial products of interest to more practitioners in Europe (and world-wide).

Conclusions

Policy development and implementation rely on effective interactions among policy-makers, research, industry (including SMEs) and practitioners (first responders, civil protection units, police forces etc.) in the EU Member States. This requires a proper exchange of information and communication about either policy updates or (research) project results, which should be tailor-made to different sectors concerned with the goal of enhancing the transfer of research solutions or new policy recommendations to users in a timely and relevant fashion. Such exchanges are also needed to identify and address users’ needs regarding research, technologies and policies, in order to better design funding programmes at an EU level. Finally, a proper transfer of knowledge from research to policy and operational sectors may have a positive impact on policy formulation and review. In this respect, the European Commission through the (DG HOME H2020/Secure Societies Programme is developing (since 2014) an initiative to build a “Community of Users on Secure, Safe and Resilient Societies” which aim to establish a mechanism of information transfer about projects from different thematic areas such as CBRNe, and enable a dialogue to be established among policy-makers, scientists, industry/SMEs, and practitioners. This initiative should help improving the uptake of research outputs and built up synergies in different thematic areas. In the CBRNe sector, such synergies are illustrated by close working relationships established among the above mentioned FP7 and H2020 projects.

1 Further information about past and on-going research funded under the 7th Framework Programme (2007–2013) and the H2020 2014–2015 calls for proposals is available in a recently published mapping document available on-line, see: https://ec.europa.eu/home-affairs/financing/fundings/research-for-security_en
2 SWD(2013) 318 final
4 Decision 1313/2013
6 Doc. 8509/08
8 OJ L 154/5 of 29.05.2009
9 COM(2008) 68 final
New approach to CBRN-E risks

(ed/ak, Berlin; cm, Aachen) For over a decade, the mitigation of CBRN threats has been part of the European Commission’s activities. Based on a report of the CBRN Task Force, the Commission presented its EU CBRN Action Plan in 2009. This Action Plan was followed up by the “Communication on a new EU approach to the detection and mitigation of CBRN-E risks” in 2014, focusing on activities to tackle threats posed by terrorists using chemical, biological, radiological, nuclear materials as well as explosives.

Excerpts from the 2014 communication:

“[T]he threat from CBRN materials and explosives remains high and is evolving. [...] The EU debate on radicalisation recently intensified. Latest reports suggest that of particular concern are returnees from Syria. Some of these and other radicalised individuals, having access to and working in sensitive areas might use their insider knowledge to strike against critical infrastructures, such as a water purification plant, or they may disable railways electrical power supplies. Such insider threats may have transnational impacts and therefore also pose threats to EU security. [...]”

While work at national level continues to play a vital role in the fight against terrorism, a robust, better designed, and proportionate strategy to anticipate and deter future CBRN-E risks at EU level is needed, including tackling illegal methods of production, handling, concealing and storing these materials. It is therefore important to adopt a proactive approach and to put effective, proportional safeguards in place, including prevention, preparedness and response measures at EU level, while respecting fundamental rights. [...]”

A new approach to the detection and mitigation of CBRN-E risks

The objectives of this Communication are to better assess the risks, to develop countermeasures, to share knowledge and best practices, test and validate new safeguards with the ultimate goal of adopting new security standards. [...]”

Better detection

 [...] The Commission will
- support further short-term trials for practitioners in order to improve detection ... ultimately leading to creation of an EU approach to public events security
- review and build on the gap analysis on the detection of explosives
- carry out a gap analysis on the detection of CBRN materials
- prepare analytical papers and overviews of CBRN and explosives threats and risks indifferent areas of public security, including transport to support policy
- organize and support more actions dealing with the issue of insider threats [...].

Major historical CBRN incidents and attacks

<table>
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<tr>
<th>Year</th>
<th>Type</th>
<th>Location</th>
<th>Description</th>
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| 1976, July | Chemical accident  | Seveso, Italy  | • Overpressure value in the manufacture of the disinfectant hexachlorophene  
• Release of highly toxic and cancer-causing dioxin compound TCDD into the environment  
• 447 people were found to suffer from skin lesions or chloracne  
• 3,300 animals found dead  
• 80,000 animals had to be slaughtered |
| 1984, December | Chemical accident | Bhopal, India   | • Gas leak incident at a pesticide plant in Bhopal  
• Over 600,000 people living in the nearby shanty town exposed to methyl isocyanate (MIC) gas and other chemicals  
• At least 3,787 people killed (government figures refer to 15,000 over the years)  
• At least 558,125 people injured |
| 1986, April | Nuclear accident   | Chernobyl, Ukraine | • An explosion and fire at the Chernobyl nuclear power plant released large quantities of radioactive particles into the atmosphere (Level 7- maximum classification)  
• Radioactive particles spread over much of western USSR and Europe  
• 31 people died during accident  
• Long-term effects like cancers, radiation syndrome or leukemia still being investigated |
| 1995, June | Religious terrorist attack | Tokyo | • The religious movement Aum Shinrikyo released sarin nerve gas in Tokyo subway  
• 13 people died  
• More than 6,000 others were suffering the effects of the nerve gas  
• This worst attack in modern Japanese history prompted global concern about terrorist groups obtaining chemical weapons |
Major historical CBRN incidents and attacks

- 10 people were killed
- 150 people were injured
- Several nearby localities were flooded (village of Kolontár and town of Devecse), about 40 square kilometers of land were affected
- 150 people were injured
- 10 people were killed

Ajkai, Hungary

- Burst of a dam at the Ajkai Timföldgyár alumina plant, freeing about one million cubic meters of toxic liquid waste (red mud)
- Several nearby localities were flooded (village of Kolontár / town of Devecse), about 40 square kilometers of land were affected
- 150 people were injured
- 10 people were killed

Fukushima, Japan

- Nuclear accident (level 7), following a major earthquake
- A 15-metre tsunami disabled power supply and cooling of three reactors of the Fukushima Daiichi nuclear power plant leading to meltdowns and hydrogen-air explosions
- 200,000 people evacuated
- 10,000 tons of radioactively contaminated water flowed into the ocean

Damascus, Syria

- Syrian military rockets containing chemical agent sarin stroke suburbs around Damascus
- at least 3,600 people displaying “neurotoxic symptoms” (Médecins Sans Frontieres)
- Estimates of death toll among civilians: from at least 281 people to over 1,700
- Deadliest use of chemical weapons against civilians since Iran-Iraq War

The external dimension

CBRN-E threats know no borders, as shown by the SARS and bird-flu (H1N1) viruses [...]. Threats from commercial and homemade explosives, such as the 2010 Yemen cargo bombs, are another example of external threats that go beyond EU borders. For this reason, we need to build relationships with, and support preparedness and detection measures, in third countries to ensure that we can adequately protect the EU. [...]

Conclusions

With the innovation and opportunism shown by terrorists seeking to inflict damages using CBRN-E materials, the EU needs to adopt a more proactive approach to detecting CBRN-E materials. This new step by step approach includes considering each threat and environment, using better research, testing and validation, promoting awareness building, training and exercises while engaging all stakeholders. With this approach, the Commission believes it can play an active role at EU level in helping Member States and other important actors to make Europe a safer place for its citizens. [...]

Using better research, testing and validation

[...] The Commission will
- continue to ensure that research takes security policy needs into account...
- further support CBRN-E research, testing and validation activities, and progress towards appropriate detection standards adapted to each type of environment...

Training, awareness and capacity building

[...] The Commission will
- further develop training tools, encourage the sharing of best practices and develop guidance materials to support practitioners with state-of-the-art training, in particular helping law enforcement practitioners improve their detection practices...
- continue to raise awareness of the limitations of explosives detection equipment...
- address the human factor risks by promoting a programme to ensure that those who operate detection equipment are well trained and motivated, and improve communication between industry, security service providers and Member States through workshops and tools and improve the level of security...
- ensure CBRN risks are taken properly into account in the development of the European Emergency Response Capacity
- closer links with training and exercises provided in the framework of the EU Civil Protection Mechanism should be explored [...].

Promote more lead country initiatives and work with industry

[...] The Commission will
- proactively engage with stakeholders and organise meetings with Member States’ representatives on CBRN-E affairs to better handle prevention, preparedness and response measures;
- set up a platform for the exchange of information between the Commission, Member States and other stakeholders, and organise regular workshops on the research needs of end-users; continue to help Member States put forward lead country actions under one or more of the actions in the CBRN or explosives action plans. The Commission will in particular encourage initiatives that address detection issues.

2010, October

Industrial accident

Ajkai, Hungary

- Burst of a dam at the reservoir of the Ajkai Timföldgyár alumina plant, freeing about one million cubic meters of toxic liquid waste (red mud)

2011, March

Nuclear accident

Fukushima, Japan

- Nuclear accident (level 7), following a major earthquake
- A 15-metre tsunami disabled power supply and cooling of three reactors of the Fukushima Daiichi nuclear power plant leading to meltdowns and hydrogen-air explosions
- 200,000 people evacuated
- 10,000 tons of radioactively contaminated water flowed into the ocean

2013, August

Military chemical attack

Damascus, Syria

- Syrian military rockets containing chemical agent sarin stroke suburbs around Damascus
- at least 3,600 people displaying “neurotoxic symptoms” (Médecins Sans Frontieres)
- Estimates of death toll among civilians: from at least 281 people to over 1,700
- Deadliest use of chemical weapons against civilians since Iran-Iraq War

2014–2016

Ebola epidemic

West Africa

- Ebola fever: disease caused by one of five different Ebola viruses
- Contagious from contact with body fluids from infected people
- First human outbreaks in 1976
- Epidemic in 2014 to 2016 in West Africa (outbreak in Guinea, Sierra Leone, Liberia)
- 28,712 cases (WHO figures)
- 11,372 people died
Maximising complementarity and synergy of security, space and defence research activities

EDA: protecting forces in theater and citizens at home

by Dr Panagiotis Kikiras and Shahzad Ali, European Defence Agency, Brussels

The European Defence Agency (EDA) has developed activities aimed at strengthening European armed forces capabilities to safely operate in a CBRN environment, while contributing to civilian-led crisis response operations, if needed. Defence against Chemical, Biological, Radiological and Nuclear (CBRN) threats is of the utmost importance for both the protection of forces in theatre, as well as citizens at home.

Synchronisation of R&T investment

The European Commission (EC), the European Defence Agency (EDA) and the European Space Agency (ESA) aim at maximising complementary and synergy of civilian security, space and defence-related research activities. This synchronisation of R&T investment takes place in the context of the European Framework Cooperation (EFC). The EC, EDA, and ESA explore together possible cooperation in the fields of CBRN, unmanned aerial systems and situation awareness capabilities as sensors, cyber security and information management.

EDA has been mandated by its participating Member States to develop the cooperation modalities under the EFC, in close consultation with EC and ESA. In support of such coordination the three organisations will provide for one another the relevant project information relating to the preparation of calls for proposals or invitations to tender, the evaluation of these proposals or tenders as well as the implementation of research activities.

Joint Investment Programme

Principles: Protection against CBRN threats is the first mature topic within the EFC. Notably, a Joint Investment Programme (JIP) bringing together Member States and industry was launched in 2012 with a view to stimulate and coordinate European defence research in the field of CBRN protection and identify critical technologies for future CBRN equipment and solutions.

The Joint Investment Programme on CBRN Protection (JIP CBRN) is a centrally-managed programme with a budget funded by all contributing Member States (MS). Twelve MS

JIP experience: The detailed objectives of the programme included the R&T goals which were generated from military CBRN protection capability needs, allowing for the involvement of a wide range of entities competent to address the shortfalls on a competitive basis. It also increased the opportunity for the “Contributing Members” to cooperate with each other and to exchange information and know how. Two calls have been launched, resulting in the selection of 14 CBRN Protection Research projects, whereby 6 have so far been finalised and 8 are on-going, having already attracted much attention from both European and non-European stakeholders.

The selected R&T projects addressed the following topics:

- Improved Standoff Detection of C Agents;
- Simultaneous Analysis of CBR Agents (Mixed Samples);
- Next Generation Point Detection for B Agents;
- M&S of CBRN System Architectures;
- Next Generation Personal Protection;
- Next Generation Collective Protection;
- Next Generation Decontamination; and
- CBRN Sensor-Networking.

The future of CBRN research in EDA

EDA is in the process of updating the CBRN Strategic Research Agenda, which will provide a roadmap for future investments based on the identified (and remaining) technology gaps and priorities identified with the involvement of MS

Collective expertise: The cooperation between EDA and ESA is a prime example on how we are able to use the collective expertise from the scientific communities in the armed forces, defence research establishments, government laboratories, and the public and private sector to enforce the security of our citizens. The results will enable us to exploit space systems to provide fast and accurate response to CBRN threats, increasing public situational awareness and enhancing prediction and early warning.
New drivers for innovation: Times in which defence research was at the onset of key technological advances (GPS, Internet et alii) are far away. Today, civil and commercial markets are driving innovation in most underlying technologies. That is the reason why EDA is increasingly engaging with non-traditional defence R&T communities and innovators in order to speed access to emerging and potentially disruptive research results and possibly identifying areas in which additional investments are needed to fully address future capability needs. EDA will launch, later this year, in the CBRN area, one of the first defence innovation challenges, in view of identifying innovative ideas with potential impact either on future defence capabilities or on existing capability gaps.

Conclusions
CBRN protection is an important dual use domain in which Member States have jointly invested at a European level. In view of emerging CBRN threats mid- to long-term, Member States see a need for enhanced technological development. End users require that the CBRN detection technologies must be high in performance and low in detection thresholds in a miniaturised, unmanned, self-movable and autonomous way that is much easier to handle. Stand-off detection and improved point detection of threat agents are needed to have more time to react and protect.

In this context the European Defence Agency will continue supporting Member States and provide a broad framework to conduct cooperative research in the fields of basic and applied science, to carry technology development up to the level of demonstration projects.

Dr Panagiotis Kikiras is Head of Unit, Innovative Research at the European Defence Agency.
Shahzad Ali is Project Officer, CBRN and Human Factors at the European Defence Agency.

1 Austria, Belgium, Czech Republic, Germany, Spain, France, Ireland, Italy, The Netherlands, Poland, Portugal, Sweden.
2 https://www.eda.europa.eu/what-we-do/eda-priorities/research-technology

“End users require that the CBRN detection technologies must be high in performance and low in detection thresholds in a miniaturised, unmanned, self-movable and autonomous way that is much easier to handle.”

P. Kikiras/Sh. Ali
For many years, military, security and safety services have been testing and finally using unmanned systems. The author’s aim is to provide a short history of these robots and describe the way they are employed today in the field of civil safety and security. They may even explain how this new deal implies some changes in command system processes and... in the mindsets of incident commanders (ic) themselves.

**Robots for civilian and military purposes**

Counter Improvised Explosive Device (IED) crews were the first to acknowledge these unusual tools. After the goties, ruggedized, versatile and multi-terrain robots progressively emerged. Unmanned Ground Vehicles (UGVs), and this generation of tools moved from C-IED missions to the CBRN sector market and then, more recently, to generic firefighting and oil and gas applications.

Apart from military applications, many public agencies are now using UGVs, particularly in special risks mitigation, security, and counter-terrorism missions. The manufacturers have been developing a global range of UGVs, from light versions (less than 1 kg) to the heaviest ones (more than 10 tons), offering a wide choice to end users concerned with professional constraints, agility, payload, sensors and work power.

On the other hand, the widespread deployment of Unmanned Aerial Vehicles (UAVs) during the Afghanistan and Middle East conflicts has definitely consolidated the concept and the machines, and paved the way for the development of interfac-

**UGVs and UAVs in civilian safety and security**

Drones were first used in a professional capacity through an unusual channel, namely the leisure industry. At the same time, aerial imagery was also extended to the military domain, the intelligence and fire services. Nowadays, all classes of UAVs are fully employed in tourism and industry, sensitive area survey, natural disaster fighting and law enforcement missions. In our particular area of interest, civil protection troops currently use the full range of UGVs and UAVs throughout the world (in this case, due to restrictive European regulations MALE and HALE drones are replaced by aerial imagery using regular aircraft equipped with drone optronic tools). Based on ten years’ experience of robotics R&D and use in the Bouches-du-Rhône fire department (CBRN,
floods, wildland fires, industrial incidents), it is safe to say that aerial imagery and ground data (e.g. sensors information) are also challenging civilian incident command methods. Unmanned tools’ sudden advent on the incident scene naturally provides much more data than previously to incident commanders. Clearly, this information is immediately usable by the branch or squads directly employing these unmanned tools. For example, during a CBRN mission, the users of the UGV, directly assess and use the sensor measurements. But for larger incidents reporting and the use of this information raises difficulties in two main areas.

**Data analysis and media communication on site**
The numerous incidents we handled using aerial imagery generated by drones, demonstrated that it is not useful to put the laptop or control screen in the field command post or in the crisis room: everybody will “watch the TV”. We now have the ability to forward in real time the toxic concentration, for example under a tank, but without interpretation such information is not helpful to the policy maker. Consequently, the incident command system has to manage correctly this data, in a kind of “assessment box” (we call it field intelligence) linked to the planning function. After verification, selection and interpretation, some items or a synthesis can be given to the IC, and to the ad hoc sections (operation, assessment, reporting and if needed logistics) of the command system.

**Robots will not replace humans**
Another consequence of the use of robots is the opportunity given to public information officers to use or to display some selected rushes of imagery in their media conferences. We have to be sure that, if we don’t choose to disclose some of the non-sensitive imagery collected, journalists, who already have their own UAVs, will respect the regulations and not steal images on site.
So, robots are not close to replacing humans. On the contrary, they require a human workforce to analyse and use this new incoming information.

**Prospects for the use of unmanned systems**
These tools have progressively brought about a change of attitude in our incident commanders. In most cases, robots are not doing the job instead of humans, but they increase safety and assessment, by supporting first responders. The need to change the command systems to deal with these uncommon tools came as a surprise.
In the future, security and safety troops will have to integrate the new properties of robots. Firstly, these devices will increasingly become autonomous (today most robotic safety tools are remote-controlled). The second unknown frontier will be the emergence of artificial intelligence in competition with operator reasoning. The future for security and safety agencies will definitely be shaped by the use of robots. The help these unmanned devices can offer is indisputable, and we can only imagine the next step.

“Robots are not close to replacing humans. On the contrary, they require a human workforce to analyse and use this new incoming information.”

* Contributions from: E. Rodriguez, Major, Marseilles, S. Mazziconacci, Captain, Marseille and E. Dombre Emeritus CNRS Research Director, Montpellier
Changing CBRNe threats require adapted equipment for civil and military users

**CBRNe protection for all missions**

by Dr Andreas Arnold, Director Product Management & Business Development, Blücher GmbH, Erkrath

The comparison of current threats with common scenarios of the past, and the analysis of mission concepts, incidents and challenges repeatedly emphasize emerging requirements for personal protective equipment against CBRNe (Chemical, Biological, Radiological, Nuclear and Explosives) threats. These range from equipment providing highest mobility, high availability, preparedness, operational capability and effectiveness over protection against a wide range of various threats to attractive affordability of the equipment.

Increasingly occurring CBRNe threats
While traditional threats as they result from the use of chemical weapons in cold war scenarios are still widely taken into account when defining protection characteristics of equipment, protection against current threats is additionally required. Over the last years, requirements like the protection against airborne particulate contamination, such as biological agents, radiological materials, e.g. resulting from dirty bombs or aerosolized persistent and highly toxic chemicals have been defined more frequently.

As a result from increasingly frequently occurring threat of IEDs (Improvised Explosive Devices) to soldiers and security forces, protection of the entire body, not only the vital organs, against small and secondary fragments from a variety of materials, is required.

Not only caused by increasing civil-military cooperation, these demands are currently spelled out by military as well as by civil forces, such as first responders, police and riot control forces, or specialists like medical emergency and EOD (Explosive Ordnance Disposal) teams.

Modern Personal Protective Equipment (PPE)

Integrated air permeable aerosol protection: One of the responses to the demands for enhanced protection is the development of an air permeable, aerosol protective fabric system, which overcomes the wear physiological deficiencies of conventional air tight barrier technologies. CBRN protective suits with such integrated aerosol filters, which are optimized with dedicated design elements for highest protective system performance, have already been procured by the German and Norwegian Armed Forces, and further models (e.g. SFI-NG – Special Forces Intervention Coverall – Next Generation) are currently being evaluated by police and military special operations units of other nations. Recently developed stretchable aerosol protective fabrics enable the design of air permeable CBRN protective undergarments, which are the preferred solution for specialists such as EOD teams, special forces, pilots and tank and vehicle crews.

IED fragment protection: Another innovation is the combination of fiber technology and textile processing know-how, which has put forth fragment protective products to be worn as underwear or combat shirts and face or neck protection, which are providing low burden protection of the entire body against the threats arising from IEDs. Furthermore, a similar approach has led to clothing elements which integrate cut and slash resistant into dedicated areas of protective garments of police forces without reducing their mobility or increasing the burden on the wearer.

Modular, and in the future most likely even system integrated approaches of merging the CBRN and the fragment protective function, have already led to products for users like EOD teams or inspectors, who require a fragment protective upgrade of
their CBRN PPE or vice versa even without having EOD suits with a weight of more than 30 kg in their standard equipment.

Research & Development: Long-term projects, driven by indications of needs of the users which are not yet found in requirements specifications, are dealing with novel adsorbents such as metal organic frameworks, which are expected to extend the range of hazardous chemicals against which the suits will protect, and reactive and catalytic technologies decomposing hazardous chemicals into less toxic fragments. Such systems will certainly facilitate the safe disposal of contaminated clothing, the long-term goal might be protective equipment based on such technologies. The integration of sensing and detection devices into the suits as well as the incorporation of adaptive technologies, which are actively switching the protective state, are still considered as long-term goals.

Outlook

The bidirectional exchange of capabilities and requirements between the end users and industry is an essential basis to steer research & development work towards solutions, which then allows providing a real benefit to the users; whether it is a tangible improvement of comfort, ergonomics and fit, a measurable improvement of lifecycle cost or a technical improvement of enhanced protection. Again, as in similar cases in the past, standardization work needs to keep pace with the definition of new requirements and the development of novel technologies, such as standards for dermal protection against certain aerosols, toxic industrial chemicals, and protection from IED fragmentation. Only an established and jointly accepted framework of suitable standards will allow procurement as well as end users to compare different available solutions and to identify the ensembles which are satisfying their needs in a quantitative and qualitative way.

Standardization work needs to keep pace with the definition of new requirements and the development of novel technologies."

Andreas Arnold

“..."
Modern CBRN technology points to modular systems for civil and military use

Preventing for the future with innovative decontamination systems

by Thomas Popp, General Manager, Kärcher Futuretech GmbH, Schwaikheim

The evolving change of worldwide CBRN threats and combating those threats since the first use of chemical weapons in the first World War is highly visible. Today, the world is facing scenarios like the Ebola epidemic in West Africa, chemical warfare in Syria and nuclear hazards such as in Fukushima. These recent incidents dramatically demonstrate the importance of close cooperation in the CBRN community. More, the globally increasing industrialization and increasing risk potential from the use of hazardous chemicals (Toxic Industrial Chemicals/TIC; Toxic Industrial Material/TIM) illustrate how to prepare for the future.

A civil-military comprehensive approach

One answer is state-of-the-art CBRN techniques and procedures. Today, not a single product can provide a complete solution. The development of CBRN technology clearly points to modular based systems. Another aspect of critical importance is the close cooperation between civil and military organizations. This without exaggeration is an indispensable condition to protect the people and save lives.

The technical basis for the ICMC system is a flexible and mobile system equipped for limited CBRN decontamination of vehicles, personnel, terrain and infrastructure.

Source: Kärcher Futuretech GmbH
mission functions while down selecting Kärcher Futuretech CBRN technology to meet those mission functions. Hence the approach of these countries in respect of organizational profile and equipment integration is completely different.

**Netherlands: operational readiness**

In the Netherlands, the Intensification of Civil Military Cooperation Agreement (ICMC) between the MoD, the Ministry of the Interior and Justice aims to develop and extend a 24/7 guaranteed MoD support structure to mitigate and challenge homeland incidents and disasters.

**Technical capabilities:** The technical basis for the ICMC system is a flexible and mobile configuration equipped for limited CBRN decontamination of vehicles, personnel, terrain and infrastructure or a combination of those was in demand. Major requirements were scalability, specificity and modularity. Furthermore a 10-ft-ISO container suited for standard (military) transport, and climate conditions (AECP-200) was required. A thorough multi-criteria-analysis led to the down selection of a tailored Kärcher-Futuretech 10-ft-container-system. The ICMC system is currently being assembled within the KärcherFuturetech plant.

**Operational capabilities:** The civil-military Cooperation Agreement requests a deployment from two locations in the Netherlands, 24/7 within 6 hours from time of incident to operational solution. The system is operated by four personnel and committed to maximum use two times within 24 hours and to be operational within three hours. The CBRN system must be self-sustaining to include decontaminants and a specified quantity of water. It is operationally configured with a maximum weight of 5000 kg per container. The system has to be capable for all military tasks including “out of area”-operations as a „one size fits all“ solution for:

- Small groups of protected and unprotected persons
- Armed and non armed Vehicles
- Terrain and infrastructure
- Application of all “ready to use” decontamination agents.

**Spain: cross-linked CBRN protection**

The CBRN project in Spain is named SIRT (Sistema Integrado de Riesgos Tecnológicos). The UME structure divides Spain into five regions with its headquarters at the Torrejon Airbase near Madrid.

"Recent incidents dramatically demonstrate the importance of close cooperation in the CBRN community."

- Thomas Popp

The specific resources are as different as the topographic and climatic characters of the landscapes in which up to snow ploughs, engineer machines to armoured trucks. Light rotary, helicopters and even amphibian aircraft play an important role in the CBRN planning for Spain and its large forests, high
mountains, remote areas and densely populated metropolis. Firefighting vehicles, rescue and corpse dogs and 500 person module camps for victims combine to make a strong response capability.

A process of testing under real conditions
For the SIRT project, several prototypes of different systems for diverse operational tasks under a CBRN incident were purchased to be tested. The evaluation even took into respect aspects like communication, and moving of injured persons.

Operational capabilities:
- CBRN detection and intervention: Punctual and stand-off chemical detection with provisional and validated chemical identification.
- CBRN sampling. Industrial emergencies intervention.
- CBRN Decontamination: decontamination of personnel (EDP), sensitive material (EDMS) and vehicles decontamination (EDMP).
- Contaminated water treatment.
- Petrol split control.
Within the SIRT project supplier consortium, Kärcher Futuretech, is one the partners having delivered systems for all three decontamination fields.

A complete CBRN portfolio of equipment
Highly mobile, robust and operationally fielded from single devices to complete systems, Kärcher Futuretech delivers hardware for every level of mission complexity and any level of logistical service required by customers to fulfill their different tasks. For military as well as civil organizations Kärcher Futuretech is a dependable industry partner with a unique ability to customize solutions to specific mission profile demands.

EDP: Personnel Decon Station
The Kärcher Futuretech EDP operates with three parallel decontamination lines, external shower for first responders, complete gender separation, dressing area with disposable clothing and collection of personal belongings.
Easy to understand instructional pictograms and a traffic light system make the EDP intuitively operable. As an ambulatory decon-station the EDP can process a large number of affected persons. Mounted in a 20’ ISO Container, the EDP enables for quick deployment, the inflatable tents for quick assembly.
The EDP is divided into three main areas:
- checking and registration;
- showering;
- checking and departure.
Clean and dirty areas are marked by different colors. Airflow from clean area to dirty area and the curtain system to separate lines increases the protection. Heating and air conditioning systems serve for convenience at any outdoor temperatures.

EDMS: System for decontamination of sensitive Equipment and Interior
The system includes Hot Gas/Steam chamber for decontamination of personal equipment like protection suits and masks and the innovative vacuum chamber technology, which enables a safe ChemBio decontamination of sensitive material with even complex surfaces, holes and pores (both techniques are also already introduced to the German Armed Forces and other nations with the TEP 90 system). The vacuum decontamination chamber, parts of the EDMS System are modular equipment components for interior decontamination such as spray extraction devices and fogging devices.

EDMP: System for decontamination of vehicles, persons and road sections
The EDMP system is based on the innovative Cage Based Modular Decon Systems. Based on a lightweight but robust cage frame, the new modular system consists of individual, compact and interoperable transport units, which are rapidly mounted, e.g. up to 9 modules on a 20’ transportation platform compatible with the ISO twist lock system.
The “choose the modules you need”-principle allows selection of specific decontamination functions necessary for individual decontamination scenarios.
The EDMP System contains two water transport modules with pumps and heating included, a power generator module with hydraulic engine, a universal treatment module for high-pressure cleaning and decontaminant application, a personnel decontamination module including a fully equipped shower tent with heating and a generator unit fora full-scale power supply and equipment for treatment of road sections. UME was the first customer beyond the German Armed who introduced this new innovative modular concept for decontamination.
EU-US relations

The United States of America are not Trump and the US President is not America! Since the election of the new president, the relations between Europe and the USA have changed from mutual trust to a certain mistrust in the American leadership. For Europe, the US remain indispensable especially in the area of security and defence, where Europe is a reliable partner to the United States particularly through the North Atlantic Alliance. Without any doubt, it is up to Europe and the Member States of the European Union to bring about a return to solid cooperation and normal transatlantic relations.

Source: Diego Cambasio, CC BY-SA 2.0, Flickr.com
The recent NATO summit in Brussels, as embarrassing and wasted as it was, brought at least two concrete insights – none of them reassuring though. First, even the last remaining optimist had to realize that Donald Trump will never become a serious politician, coming not even close to what it takes to be the President of the United States. Instead, he will remain the embarrassing populist who cultivates lies and declares contradictions to be logic – neither suited for, nor truly interested in governing the largest military, political and economic power on earth. The loss of America’s moral authority as the former defender of “the West” is already striking. Second, the United States’ international leadership role will decline, partly because the besieged White House will remain in a constant defense mode for the coming months if not years, and partly because of the paralyzing divisions between America’s political elites and society. Time and energy will be consumed by domestic fights and political navel-gazing, instead of developing and implementing coherent policies.

Chancellor Merkel’s advice that Europe has to take its fate in its own hands is as true as it is telling, particularly as it comes from a highly respected leader who typically does not lean towards emotional rhetoric. Indeed, the times where US reliability could be taken for granted are likely to be over. At the same time, swift alternatives are not at hand. Those in Brussels and elsewhere who dream of a true European Union standing fully on its own feet tend to forget the severe crisis the EU has been in for a number of years now. Members in the East are placing their national priorities over a European consensus and are making collective decisions increasingly difficult. Members in the South often blame “Brussels” or the EU for their own incapability and unwillingness to reform. Furthermore, BREXIT has shown that a majority in a key EU state is – rightly or wrongly – no longer convinced that European integration brings prosperity and security. Even the positive results of the recent elections in France cannot hide the fact that populists in many EU countries are gaining influence by rejecting everything the Union stands for: consensus, commitment and solidarity.

Hence, disappointment over incompetent leadership on the other side of the Atlantic should not lead to premature conclusions. With regard to security and defense, the United States remains an indispensable partner for Europe particularly when it comes to deterring Russia’s aggressive policies in the East or dealing with the chaos in the Middle East. More common European efforts in the military field are desperately necessary but they cannot replace US capabilities. In that sense the EU term CSDP (Common Security and Defense Policy) is incorrect: “Defense” in the strict sense is provided by NATO together with the United States. EU military efforts are about cooperation, capacity building or common procurement in order to strengthen European capabilities either for defense purposes or for crisis management. Here, even Donald Trump has a point when he urges Europe to spend more on defense – not to please Washington but to build up significant military capabilities.

In times when traditional transatlantic bonds are eroding, the challenge for Europe is threefold. First, it has to improve its military forces not only by providing more resources but also by overcoming national idiosyncrasies for the benefit of common solutions. Second, European leaders have to cooperate with those in the US administration who understand the value of allies and alliances – these are not few. Third, there is a need to explain to the European public the quandary of not writing off the United States even if its President is nothing but a disgrace for the community of liberal democratic nations. Donald Trump may be dispensable – the United States is not.

This article reflects the author’s personal opinions.
The nature of global challenges requires a mix of alliances

The return to transatlantic normality

by Dr Christina Balis, Director of Services and Products Strategy, QinetiQ Group plc, London

The transatlantic relationship has long ceased to be what it once was. It might be tempting to think that the current crisis in relations between the US and Europe is largely the result of President Donald Trump’s election last year and the emergence of a new ‘America First’ doctrine challenging long-held unity within NATO. Compelling as both might be in the European imagination, they are the logical continuation of a trend long underway, signalling the end of an exceptional period in transatlantic relations.

The end of transatlantic cohesion

It was a common refrain, during the time I was deeply involved in transatlantic debates 15 years ago, that despite the occasional disagreements the US-European bond was unshakable because the two sides shared the same fundamental interests and values. Even in the midst of the 2003 Iraq crisis, this belief held strong against the background of an unwinnable coalition war in Afghanistan in solidarity with a shocked America attacked 18 months earlier. However, this view of transatlantic cohesion is becoming increasing difficult to defend. Demographics, geography and political economy shape each side differently and drive different policy choices. Outside the fight against terrorism and the proliferation of nuclear weapons, America’s foreign policy interests do not mirror those from across Europe. Our economic philosophies also diverge in many areas, ranging from competition and consumer protection to the environment and the role of government and regulation. Populism is correctly seen as a threat by supporters of the liberal world order, but it would be simplistic to regard it as the principal cause for the challenges we face in the West. Populism is nothing new and a recurrent theme across history. It would be naive to assume that once populism has abated, the liberal order can easily be resurrected and the transatlantic bond renewed. Such a view neglects systemic geopolitical transitions, in addition to generational shifts across the Atlantic.

Without a doubt, there are plenty of areas where transatlantic cooperation will remain vital. But we are well past the point where a united “West” can lead or formulate common positions on global issues. The diversity of national interests and the nature of global challenges will require reliance on a mix of alliances and organisational constructs.

The decline of NATO’s exceptionalism

General Hastings, the first NATO Secretary General, famously stated that the alliance’s goal was “to keep the Russians out, the Americans in, and the Germans down”. Since then, there have been recurrent attempts at adaptation to make the case for NATO’s continued relevance. Lord Ismay pithily identified the three actors that for the past century have held, and to a large extent still hold, the key to the balance of Europe. And in the context of today’s antagonism with Russia, it is tempting to see NATO’s renewed relevance confirmed.

Yet, the world in which we live is far too complex and requires new terms of reference. NATO can no longer serve as the monolithic security guarantee or an effective tool in protecting the national security interests of its members. NATO will remain an important security forum in Europe, not the defining security institution it has been for the past 65 odd years. Cyber security, to take probably the toughest security challenge facing us today and in the future, is evolving to a systemic threat extending to civil society, governments and commerce – none of which can ever be adequately protected by a construct like NATO. The security challenges beyond Russia are numerous and can only be addressed by varying coalitions of the willing.

The future transatlantic security relationship is more likely to be built around a web of bilateral, trilateral and regional ties within and outside the NATO framework – the kind of variable geometry we have already experienced within Europe and are observing in other parts of the world, such as Asia and the Middle East. From the deepening bilateral ties between Germany and the Netherlands and the five-member Nordic organisation known as NORDEFCO to the UK-led nine-nation Joint Expedi-
Managing complexity

What we witness today is not so much the demise of the Western liberal order or the breakdown of the transatlantic security bond, but a combination of a return to normality in the international system and a belated adjustment of the transatlantic community to a more complex world. The return to bilateralism and minilateralism we witness across the world is a reminder that foreign and security policy today is too complex and multi-faceted to be conducted through specific multinational institutions alone. There’s not only Europe à la carte, but also NATO à la carte, UN à la carte, GCC à la carte, and so on. Defenders of the liberal order might lament the current fluid state of affairs and see all this as a major setback to what was achieved in the 20th century. Yet, in reality, all this forms part of a natural transition to a new order where agility, rapid adaptation and ‘network advantage’ (a business term that refers to the existence of varied alliance portfolios requiring active, tailored management) hold higher significance for countries’ continued survival and prosperity. As the art of diplomacy regains some of its old lustre, and qualities such as flexibility and cool-headedness are back in demand, we all stand to benefit from the admonition of Talleyrand, this diplomatist par excellence: “Above all, gentlemen, not too much zeal”.

The views expressed are Dr Balis’ own and do not necessarily represent those of her employer.
The US treats “shared values” no longer as an axiom for cooperative solutions

Trump and Europe: times of new uncertainty
by Prof Bohdan Szklarski, American Studies Center, University of Warsaw, Warsaw

Security, trade, climate regime – the European Union (EU) and the United States of America (USA) used to be on the same side. Disagreements, even serious ones, were quietly resolved. Since 20 January, the predictability has gone. We are reading between the lines for the "real" meaning of American words. What does the president say? Uncertainty, unpredictability, lack of strategic dimension, Americans have started sending signals that “shared values” are no longer to be treated as an axiom that implies cooperative solutions in even most crucial issue areas such as security and trade. Trump’s withdrawal from the Paris climate agreement or reluctance to confirm the article 5 of the NATO treaty even when speaking in the Alliance headquarters speak volumes. Omissions may be just slips in communication or they may be signals. Signals that European-American relations are no longer automatic, no longer axiological, no longer predictable, and no longer pleasant.

Trump’s visit to Warsaw
On his way to the G20 meeting in Hamburg, Donald Trump stopped for a brief one-day visit in Poland. He was invited to attend a summit of the so called Three-Seas Initiative (3SI), a gathering of leaders from 11 states representing the so called “New Europe”, an initiative of a joint Polish-Croatian project, launched in 2015. Trump came ready to provide both in a symbolic and material way. The first came in the form of much awaited endorsement of Article 5 of the NATO treaty. The second in an offer to sell Liquid Natural Gas (LNG) gas in the future. The third was praising Poland’s wartime heroes. As the South and Nord Stream 2 gas pipeline projects are for Poland like betrayal and makes Warsaw determined to seek special relations with the USA, Trump seemed to understand all these intricacies and promoted the USA as a security and energy guarantor of the region.

Controversial issues of major concern
Trump’s Warsaw speech indeed identifies major controversial issues in the EU-US relations which raise the potential for redefinition of what used to be known as the transatlantic partnership. The “America First” philosophy is potentially a source of huge conflict with EU leaders: The President might be at some point inclined to push towards a split of the EU in order to weaken its own allies. In the past, based on value and commitment sharing, the US was seen as a potential mediator and compromise facilitator and strongly advocated European integration. Trump’s bilateralism stands in the way of strong allied ties as they tend to downgrade the potential for transactional deal-making.

Conflictual issues between the US and EU

Refugees: Trump’s anti-refugee and anti-immigration statements make him an unlikely constructive actor in that policy area. The seeming stability in the refugee and migrant situation in Europe is fragile. The future of the EU and Turkey agreement is not assured and the continued refusal to extradite Fethullah Gullen and continued support for the Kurds, does not bring the US in the role of a mediator.

Trade: Trade policy especially has emerged as a possible new crisis area for the EU in the years ahead. The European Court of Justice makes Trump happy, because it has ruled that any new trade agreement that goes beyond external tariff cuts, must be ratified not only by the European Parliament, but also by all national – and some sub-national – parliaments across the EU (39 in total).

Digital data sharing: Trump’s security primacy makes the US more likely to delay implementation of security sensitive data sharing arrangements which European allies consider crucial for their security. The adoption of the General Data Protection Regulation (GDPR), which will come into force in May 2018, as well as in the eventual


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agreement with the US on the new Safe Harbour agreement on data transfers, privacy concerns loom large on the horizon.

Security: In June 2016, the EU published its European Global Strategy, attempting to set out a coherent framework for its relations with the outside world. From this followed both a new level of cooperation with NATO on meeting different “hybrid” threats, as well as plans for new steps in security and defense cooperation inside the EU. Europe remains a marginal player on a wide variety of security issues.

NATO-US-EU: Dependence on NATO and US support makes Trump’s even hard to come Article 5 confirmation crucial in contributing to security predictability. His extension of trans-actionism into the security sphere is particularly disturbing in Europe. European allies have begun (again) consultations on tighter military cooperation.

The Minsk Process: To deal with Russia’s aggression against Ukraine continued to be run by Germany and France, but in substance went nowhere. The low level attrition fighting in the Donbas area continues with the US providing Ukraine with enough military supplies to anger Moscow but not to make a difference in the battlefield.

EU sanctions: The sanction regime on Russia has been extended for another six months. US Congress more than the White House shares European concerns. Its extension of sanctions in recent weeks seems like a move consistent with EU policy. Russia investigation in Washington seems to be staying Trump’s hand from making any changes to the superpower relations. The Trump-Putin meeting in Hamburg was inconsequential.

Syria: The results of peace talks, started in a UN framework, continued bilaterally between the US and Russia, but have now been taken over by Russia and Turkey with a role also for Iran are uncertain. The EU’s role in it is minimal. It seems that Syria has been left in Europe to US leadership the same as Afghanistan. Trump’s undermining of the Iran nuclear deal angers many European leaders as another sign of American unilateralism.

Populism: Trump’s populism is seen as a natural reference point for all those who wish to undermine or make less certain the Euro-Atlantic cooperation as a foundation of EU strength. USA no longer to be taken for granted is a message strengthenng populists in EU. Across European countries, previously dominant political parties have lost support to populist forces focusing on anti-immigration, anti-trade and anti-Europe issues. Many mainstream parties are trying to regain voter support by copying some of the policies of their populist challengers, including being “tough” on the EU. The EU itself seems to have halted the slide in support and legitimacy it has suffered in recent years, at least for now.

Capitalism: Today even the views of capitalism seem to divide more than unite Washington and Brussels. Capitalism can be viewed from the customer side (US) or the side of rules and competitors (EU). The US administration views capitalism almost entirely through the prism of consumer benefits. In Europe, however, antitrust officials have a different mindset. European regulators and politicians do not subscribe to such a philosophy.

A wide scope of mutual entanglement

In any alliance or partnership, a certain firm unquestionable axiological set of respectful mutual perceptions serves as an anchor and prevents conflicts from escalating. Unfortunately, this set is going to be changed and can be demonstrated with the Umbrella Agreement from 2 June 2016, which illustrates the full complexity of the transatlantic relations and sheds light upon the scope of mutual entanglements that may not be so easy to undo. The Trump administration elevated trans-actionism, deal making, and bilateralism into philosophy that exploits alliances and undermines unwritten commitments. A philosophy unacceptable for the EU.

1 See page 21 for the European Council’s conclusions on this issue
Joint Air & Space Power Conference 2017
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The world wants to know if the US is still the leader of the free world

Is America reliable?
by Dr Harlan K. Ullman, Senior Advisor, Atlantic Council / Business Executives for National Security, Washington D.C.

From Britain and the western shores of Europe across the world through the Middle East and Southwest Asia to the distant reaches of the northwest Pacific Ocean, many states are asking the questions “is America reliable and can be depended upon to continue as the leader of the free world?” Or “is make America great again” the slogan disguising a Washingtonian retreat from the world stage? Many friends, allies and potential adversaries want to know the answers to these questions.

Yes, America is reliable
The most straight-forward answer is yes. America is reliable and dependable. But these are the wrong questions. The most important and indeed key question is whether President Donald J. Trump will be reliable and dependable in continuing America’s leadership and role in the increasingly complex, interrelated and in too many places dysfunction international order. And if Mr. Trump places less value in America’s long-standing international role, are his advisors and people to whom he might listen capable of changing his mind?

Where and what for stands Trump?
After eight months in office, it is not clear where President Trump stands on these issues or on what America’s global role should be. Clearly, despite personal changes noted below, a White House that appears in shambles and is consumed with investigations over Russian interference in the U.S. elections and how several of the President’s principal advisors may have been engaged in or by Moscow simply lacks the bandwidth to concentrate on the panoply of crises, issues and decisions it faces from health care to increasing force levels in Afghanistan and Iraq. Further, the President’s first overseas trip contrasted kowtowing to the Saudi royals in Riyadh with insulting America’s twenty-eight NATO allies in Brussels. And Mr Trump’s seemingly favorable view of Russian President Vladimir Putin flies in the face of popular US opinion that regards the Kremlin as a major adversary and exacerbates the European allies’ concerns over Russia’s ZAPAD 17 military exercises taking place in Belarus.

A lack of perception
Regarding the capacity of the president to listen to good ad-
“President Trump is emotional, quick to anger, has a short attention span and seems to have difficulty with the English language. Worse, his attitude has always been combative. Compromise is for weaklings.”

Harlan K. Ullmann

vice, he rejected the recommendation of his Secretary of State Rex Tillerson; Secretary of Defense Jim Mattis; and National Security Advisor Lt. Gen. H.R. McMaster to restate the importance of Article 5, the centerpiece of the NATO alliance which promises that an attack against one shall be considered an attack against all at the summit preferring instead to chastise the allies for not spending enough on defense and demand they make up past arrears – which demonstrated that Mr. Trump knew very little about the alliance.

How to pick the right and honorable counselors? While Steve Bannon who believes globalization is economically harmful to America and understand that the basis of the president’s political support at home is the 30 or 35% who are true believers and want change in Washington especially to “drain the swamp”, has been removed from office, the president still takes his former advisor’s frequent telephone calls. Given the president’s embrace of “make America great again” and populist economic views, people should be worried about the future reliability and dependability of this president regarding international matters. And recall that even with the most impressive advisers, presidents can still make colossal blunders and mistakes. The second Iraq War is a case in point.

Colossal blunders and mistakes in the past
When George W. Bush took office, his national security team possessed A+ resumes and experience. Vice President Dick Cheney had been chief of staff to President Gerald Ford and defense secretary under the president’s father overseeing the rout of the Iraq army from Kuwait in 1991. General Colin Powell had been national security advisor to Ronald Reagan; Chairman of the Joint Chiefs under President G.H.W. Bush and named as Secretary of State. Donald Rumsfeld had also been President Ford’s chief of staff before becoming Secretary of Defense for the first time before he was re-appointed by Bush. Yet, this “dream team” was responsible for arguably the greatest American strategic catastrophe since the American Civil War and certainly since the Vietnam debacle.

While Mr Trump was credited in hiring three generals – Messrs. Mattis, McMaster and John Kelly, former Homeland Security Secretary and now chief of staff– Barack Obama had done so too. But General James Jones, his national security advisor, Admiral Dennis Blair, Director of National Intelligence, and General Eric Shinseki, Secretary of Veteran’s Affairs lasted more than two years. And the President did make Lt. Gen. Michael Flynn his first national security advisor who was forced to leave after less than four weeks in office and is being investigated for potential criminal wrong doing.

Not educated for compromise
The best guess is that President Trump is not going to change his personality or modus vivendi in his seventy-first year. He is emotional, quick to anger, has a short attention span and seems to have difficulty with the English language. Worse, his attitude has always been combative. Compromise is for weaklings. Why that may have been acceptable in the real estate and media business, it is a prescription for disaster in governing and in politics. Friends, allies and potential adversaries can hope for the best in calibrating the president’s reliability and dependability. If any of his three generals are asked, they each would tell the president to hope for the best and plan for the worst. And if forced to make a bet, this writer fears that friends and allies should follow the latter.

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At long last we are getting an inkling of what “America First” might mean. Though few noticed at the time, the slogan that the new president tweeted far and wide during his first months in office apparently didn’t, after all, signal the dreaded isolationism we assumed it did. Many observers interpreted it as an indication that the president would now focus on domestic issues and that the United States would no longer act as a global policeman on behalf of “incompetent” allies that had failed to spend enough on their own defence.

When, after just a few days in office, Trump drew a red line that the North Korean dictator was already crossing, we thought the new president was bluffing. And when Trump – probably due to his still insufficient grasp of the issues – said that NATO was obsolete, we took it to mean that the US would now turn inwards, leaving Europe to pay more attention to its own security.

It soon dawned on Trump that policy (both foreign and, especially, domestic) is complex. This summer, with staffing issues wreaking havoc among his advisers, his first domestic policy initiatives souring and suspicion that Putin may have put him in office hanging over him, Trump saw North Korea’s missile provocations as a welcome opportunity to tell the world, in his usual way, that a puffed-up dictator does not have the right to acquire weapons that could threaten the United States.

True, Trump’s crisis management tweets were a combination of bluster and bluff. But they did clarify the meaning of “America First”, now and in future: signifies hard-line protectionism, not excluding armed conflict.

However, as his response to Kim Jong-un shows, Trump is aware of his global and domestic (protectionist) responsibility. He also knows that the North Korean dictator has a clear-cut plan. Though for the time being Kim Jong-un’s capabilities are more fantasy than fact, Trump realises that a move to destroy North Korea’s nuclear potential would pose too great a danger for the United States and South Korea. The international community’s only option is to talk Kim Jong-un into giving up his plan.

Trump’s predecessors have allowed the North Korean leaders to acquire nuclear weapons. Meanwhile North Korea’s constitution declares warring off an attack by the US as its highest policy goal and acquiring a nuclear counterstrike capability as the only way to do so.

The likely consequence of the new – perhaps only potential – North Korean capabilities will be the need to include North Korea in global policy-making. The nuclear issue is no longer a matter of proliferation but rather of policy, involving many strategic options that the world will have to address in coming decades.

Where did we go wrong in interpreting the “America First” philosophy? We confused protectionism and isolationism. Trump tweeted, that he would be strongly protecting American interests around the world at all times, and this means that intervention could become standard operating procedure. This shows that countervailing views are being voiced in the White House by competent advisers – Mattis, Kelly and Tillerson, who is increasingly finding his footing. Their influence can be seen in the new regional approach to Afghanistan strategy and also in the more moderate North Korea policy. Trump has taken a clear stand; he will also come to understand that crisis management cannot be conducted in the social media but instead requires diplomatic negotiations in which loquacity is never helpful.

We can only hope that domestic tensions (racism / Putin / Paris climate agreement) will not put so much pressure on the president that he can no longer control the foreign policy chaos he is creating; and that he will at long last find additional advisers who can help him with policy issues.

However, the incredible American-Russian soap opera will remain a focus of the Trump administration. But there is no cause to shift back to Cold War policies. The blocks are gone, the nuclear arms race is in principle over, the ideological justification for conflict has been removed. And yet the two sides continue to demonise each other – for domestic reasons. Putin cunningly uses words to deflect attention from Russia’s weaknesses, while Mr Trump less clever attacks Putin to ward off accusations of possible Russian involvement in his campaign and growing domestic opposition to him personally.

The world is now fragmented, and in international relations new regional powers have become a force to be reckoned with on the world stage. If Moscow and Washington see eye to eye, the new situation can be managed to stabilise global security and peace. Europe could serve as a go-between. The French-German couple – with France as member of the UN Security Council and nuclear power and Germany with the most powerful economy in Europe – could assume this role for Europe.
Energy Solutions

The world is striving for a future based on sustainable energy. The trend is definitely in favour of having a choice of reliable renewable energy sources – wind, solar, bio-mass – which are connected to batteries and run by an energy-management system. These hybrid systems are needed as off-grid solutions for industrial applications, in development cooperation for industrial and agricultural projects, in crisis preparedness and peacekeeping operations, among other purposes. Alongside existing centralised infrastructure, electrical power in the future will rely on modern decentralised “microgrids” using alternative energy sources.
There is still hope that American society will eventually support the climate agreement

The world’s destiny hangs on the future of the Paris Agreement
by Olzod Boum-Yalagch, Chairman of the Mongolian Green Party, Ulanbattaar

The Paris declaration shows us that humanity could and should survive as a common world. This is a collective aim which should not be hampered by borders and walls between countries.

The Paris declaration
Today’s endeavors to protect nature and fight climate change do not only focus on the elimination of the causes of emissions, but also address the economic, social and technological reasons for the extent to which we have destroyed our environment. Scientific evidence clearly shows that we need to limit global warming to 2°C, ideally less, if we want to avoid climate change becoming irreversible and catastrophic.

For this reason, human society has set itself the goal of cutting greenhouse emissions as soon as possible and the ambitiously aim of offsetting the gases accumulated since 2000, with a goal of zero net emissions before the end of the century. Another goal of this agreement is to support poorer countries financially in lowering their emissions, which should bring investment in environmental soft technology to those countries, and provide growing job opportunities and higher living standards. This endeavour could be led by powerful nations and leaders wanting to make history.

Mongolian view on Trump’s “no go”
For us Mongolians, US President Donald Trump is a man with extensive albeit not always successful business experience, who knows how to communicate with people and appeal to the desires of the masses. And, if we understand correctly, Mr. Trump would like to satisfy the desires of the American people and the wider world to make our planet more sustainable and peaceful and to avoid conflicts and solve problems through dialogue amongst countries. That is why we also hope that Mr. Trump, business man that he is, will support new and innovative technology that will be both good for our planet and make America great again! We do not think that America should be made great again with environmentally unfriendly policies like supporting coal mining and fracking industries, which engender social tensions and make America part of the problem rather than the solution.

The stakes
The global fight for climate justice already began with the Paris Agreement and people are putting their lives on the line to stop fossil fuel worldwide for a cleaner, healthier future. The global green movement leads the way by investing in renewable energy that we already enjoy in abundance. Renewable energy market prices, in the main, have been halved compared to coal prices thanks to government levies on CO2 emissions which foster investment in research into solutions to keep the costs of photovoltaic, wind and energy storage systems lower than the fossil-based ones with their fuel logistics.

Our appeal to the president and politicians of America is to base the development of American industry on renewable energy resources, rather than fossil resources, to ensure a secure and bright future for the American people and the rest of humanity.

Olzod Boum-Yalagch
has been chairman of the Mongolian Green Party since 2012 and main coordinator of the Green Coalition since 2006. Born in 1960 in Ulaanbaatar, Mongolia, he received his university education in bio-physics in Mongolia, in forest management in Thailand and travel management in Germany.

“Mr Trump should understand at least that the world will exist with or without USA and in the 21st century, the century of globalization in which, human society should keep closer together to solve local problems with support of the entire world.”
Energy Solutions

As the leading power in the world, the USA should play the key role in shaping a future for the planet. Human society can fight climate change with the developed countries taking the lead. However, this calls for cooperation between the nations and not confrontation, which the Trump administration unfortunately has failed to recognize over recent months. Mr Trump should at least understand that the world will go on with or without USA and in the 21st century, the century of globalization, human society should close ranks to solve local problems with the support of the entire world.

The US may not continue to be isolated
The civil societies of this world have condemned the decision of the USA, the second biggest contributor to emissions, for not accepting the Paris Agreement while Donald Trump looks for separate “more favourable” conditions for his country. People in the world still believe that American society will eventually support the Paris Agreement and develop suitable conditions for implementing green technology for the sustainable use of natural resources. They still hope that America will significantly reduce the risks and impacts of climate change and that American society will outlive the president, who wants to put America first at the expense of others.

“We are happy to know that of the 197 signatories to the Paris Agreement, 158 have already ratified it (Mongolia ratified it on 21st September 2016, and was the 31st country to do so!), and that our neighbour, the Peoples Republic of China, the biggest polluter, has offered to take the lead in implementing the Paris agreement in our region.”

Olzod Boum-Yalagch

Information

Mongolian Green party
The Mongolian Green party is part of the Global Greens under the Charter of the Global Greens. It supports all conflict management by the UN and views the Paris Agreement as a success for world diplomacy in that it offers a solution to the global problem of climate change brought about by human activity. It also thinks it is the right answer of global society to the unsustainable development concept prized by the industrialised parts of our world.

web: www.globalgreens.org/party/mongolian-green-party
The planning of “smart energy” micro grids will become part of NATO training courses

Making progress in energy efficiency for NATO forces

by Susanne Michaelis and Lukas Trakimavičius, Emerging Security Challenges Division, NATO HQ, Brussels

Over the past years, enhancing the energy efficiency of military forces become an increasingly prominent part of NATO’s agenda. The issue has found its way into Summit Declarations, with NATO Heads of State and Government stating their determination to “work towards significantly improving the energy efficiency of our military forces”. The stakeholder community within and beyond NATO has grown steadily. Exercises have featured various “smart” energy solutions. Finally yet importantly, the NATO Energy Security Centre of Excellence has devoted a large share of its activities to the military energy efficiency challenge.

Establishing resilient energy supply

The move to enhancing the energy efficiency of NATO’s armed forces remained so compelling that it was not derailed by Russia’s low-level war against Ukraine and NATO’s subsequent re-emphasis of collective defence. While the NATO Allies’ pre-2014 frame of reference had been shaped by the fuel supply challenges in Afghanistan, Iraq or Mali, it became increasingly clear that “smart energy” was also going to be relevant for collective defence. For example, establishing a resilient energy supply for forward deployed forces in Eastern Europe requires sound and resilient energy logistics. With the compelling logic of “smart energy” clearly established, how will the story unfold from here?

The game is going on

Three steps appear essential:

1. The first step is the mainstreaming of “smart energy” into NATO’s policies and activities. One major challenge is standards – the key to interoperable forces. They are one crucial factor in NATO’s unrivalled military competence, irrespective whether the issue is purchasing ammunition or integrating technologies into micro grids to power a field camp. Consequently, NATO has started the process of updating existing policies and standards. However, NATO is also looking into new standards, notably regarding smart micro grids for field camps. Smart micro grids are a “quick win” for reducing fossil fuel consumption with relatively little effort and cost. As more nations are planning to procure technologies for micro grids, it makes sense to focus on standards, for example for the accurate measurement and logging of data, for enabling the smooth integration of different technologies into the energy management system of a camp. The proposal to establish a Smart Energy Training and Assessment Camp (SETAC) in the framework of NATO’s smart seeks to accelerate progress in this regard. Once a lead nation has been found, the SETAC could also play a role in encouraging the harmonisation of data collection (power production, generator effectiveness etc.). Another option could be a NATO Science for Peace and Security project that aims at developing a NATO camp planning model to improve the energy efficiency and reduce the life cycle management costs. Yet another area of mainstreaming pertains to the NATO Defence Planning Process (NDPP). If energy efficiency were recognised as a so-called “Minimum Capability Requirement”, and be integrated into the NDPP, it would boost the importance and visibility of the subject across the entire Alliance.

2. The second step is the further broadening of the exchange of information and best practices. As mentioned above, the “smart energy” stakeholder community has grown, with more experts from more interested nations. This community has been instrumental in achieving many important milestones:

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While a healthy competition among companies is always desirable, NATO and its member nations will also have to put their money where their mouth is and procure ‘smart energy’ equipment”.

Susanne Michaelis / Lukas Trakimavičius

the Green Defence Framework, the Policy of Power Generation for Deployed Force Infrastructure, and greater involvement by NATO’s Military Committee. The number of energy security training courses that either centre on or at least feature modules on “smart energy” is growing, not least due to the initiative of the Centre of Excellence in Vilnius. The training of energy efficient behaviour will become part of NATO training courses, as well as the planning of “smart energy” micro grids. The European Defence Agency will also contribute its share to the evolving training landscape.

3. Third and finally, one must continue to bring relevant industry on board. NATO is only a facilitator between industry and nations, but its role is quite significant. A very good example was the exercise “Capable Logistician (CL-15)” in Hungary, which featured 14 companies who demonstrated their energy efficient solutions. In the past, technological solutions were developed in the military and later became available for the civilian consumer. When it comes to “smart energy”, however, the choreography may be different: the civilian sector may often have the solutions that the military is looking for. Trusting and trustful relations between NATO and the private sector are therefore more important than ever. With CL-19 almost around the corner (where NATO is planning to bring together power equipment for field camps that nations procured for demonstration projects), there will be further opportunities to deepen established ties.

A challenging approach

This three-step approach will be challenging to implement, and for a number of reasons. One pertains to the stakeholder community: as that community continues to grow, coordination and, in some cases, necessary strategic leadership will be difficult to ensure. Another challenge is NATO’s bureaucratic landscape. “Smart energy” cuts across a wide range of issues, which means that, for example, NATO’s two Strategic Commands, NATO HQ, NATO’s Science and Technology Organisation, and the NATO Energy Security Centre of Excellence have to interact seamlessly. The third challenge is to demonstrate to the companies involved in developing “smart energy” equipment that their technological and financial investment will ultimately reap the desired benefits. While a healthy competition among companies is always desirable, NATO and its member nations will also have to put their money where their mouth is and procure “smart energy” equipment.

The prospects are good

After all, NATO Allies did not only manage to stop the decline in their defence expenditures, but are finally spending more. With a rougher security environment both to NATO’s East and South, this turn in defence spending did not come one moment too soon. While the discussion on defence spending and transatlantic burden sharing is likely to centre on high-visibility items like fighter jets or naval vessels, energy remains a critical enabler that only military amateurs would dare to ignore. By investing into efficient diesel generators, renewable energy technologies, sophisticated energy distribution systems and advanced energy storage, governments can make sure that NATO remains not only the strongest military alliance in the world, but also the most effective.

The article expresses the authors’ personal views.
The 2030 energy goals can only be achieved by decentralized energy supply

Microgrids: an effective tool in developing countries

by Martin Schuster, Head Cross Power, Pfisterer Holding AG, Winterbach

The prerequisites for the development of African and Asian countries are political stability, food, and energy supply. Providing energy has been recognized as a key factor by many organisations, and set as a top priority, often with ambitious aims. Let’s take the example of Africa. Electrification of sub-Saharan countries is expected to have reached a high level by 2030. However, from today’s view, these goals will not be achieved. This article presents an analysis of a few of the reasons for this as well as some possible solutions. For sure, the possibilities of off-grid and on-grid power supply are evaluated as well.

Current situation

1.2 billion people around the world have no access to electrical networks and are therefore dependent on inefficient and sometimes dangerous alternatives such as kerosene lamps, candles and car batteries. 95% of these people live in sub-Saharan Africa and developing Asia. African countries suffer most clearly from this very low electrification rate. Moreover, a very critical fact is the insufficient security of supply in existing grid connections. The latest report from the International Energy Agency (IEA) points out a non-availability of grids in Sub-Saharan Africa of 540 hours per year on average. Another factor that weighs heavily on the development of countries is the number of schools without electricity. Apart from political instability, which also has a major impact on the power supply structure, whether public or private, population growth can also be considered as a problem. Currently, the expansion of energy capacity is virtually identical to the population growth. But nowadays investments are made for the most part in large power stations. The power is used in large cities, industrial companies, and also large mines, whereas rural areas continue to be disregarded and not much is invested in the construction of grids.

New possibilities

At this point, the big central solution – conventional large power stations with nationwide grids like in Europe – is a phase that should be skipped in Africa, whose future lies in a multitude of small solutions. An excellent example of this leapfrogging of technical stages of development is mobile telephony which has spread like wildfire. It would never have been possible to connect people all over the continent to conventional fixed-line telephone networks. Energy supply in Africa must follow that pattern, jump from the off-grid situation into the modern solution with small decentralized energy systems. This opportunity is confirmed by an Association of German Engineers (VDI) study conducted in 2015. Even for Germany, if we were starting from scratch again, a cellular network of connected micro-grids would be the optimum solution.

Renewable energies on the rise

In recent years, technological development has also advanced by leaps and bounds in the field of decentralized energy supply. Almost perfect arrangements for decentralized energy supply systems are feasible thanks to the continued drop in prices for photovoltaic installations and for batteries. Renewable energy such as solar and wind are increasingly being used. Energy can be stored in batteries, and diesel generator sets are only required as a backup solution. In Southern Africa, these decentralized hybrid units can be operated almost exclusively with renewable energy. This is a totally environmentally friendly and nearly CO₂-free mode of energy production. These decentralized hybrid systems
Energy Solutions

“Decentralized hybrid systems allow the rapid implementation of projects aimed at improving infrastructure in rural areas, such as lighting, water supply, irrigation for cultivation of crops, food processing and remote mines.”

Martin Schuster has been Senior Advisor since 2010 and in parallel since 2014 Head of CrossPower at Pfisterer Holding AG in Winterbach. Born in 1951, he graduated from high-school and left as an Electrical Engineer the University of Karlsruhe in 1977. Mr Schuster started his professional career in 1977 at PFISTERER’s Laboratories, where he became Head of several departments (High Voltage Technique, 1985; Head of Engineering and Sales, 1987; Head of Medium & High Voltage Technology, 1995) before becoming 1999 Managing Director of PFISTERER Kontaktsysteme. From 1980 until today he has been a member with leadership positions in national and International Standardization Working Groups.

Reduces fossil fuel consumption

Today these problems are generally solved, if at all, by using diesel-powered generators. A decentralized hybrid energy supply can drastically reduce the use of diesel oil. Depending on the chosen system, up to 90 %, of the energy produced and used is renewable. This not only helps to save diesel oil costs but also brings about enormous logistical savings. Reduced fossil fuel consumption is additionally a welcome contribution to climate protection. Wherever a micro-grid is used, it must combine generators, photovoltaic installations and/or wind and/or biomass with batteries as the main core, controlled by a fully automatic management system. Only such a system for managing the different energy sources, components and loads can guarantee a stable energy supply.

Microgrids are the future

The decentralized energy supply could become the solution to one of the biggest problems in Africa. The time requirements and costs of such solutions are much lower compared to conventional centralized supply involving the construction of power plants and lines which can never cover large rural areas. Decentralized systems adapted to settlement structures would also have a positive impact on social connections in villages and settlements and could improve the personal and economic situation of many people in a quick and sustainable manner.

In a new study, the IEA shows that the goal of a 70% electrification rate for Africa by 2040 can only be achieved by choosing the small decentralized generation approach. In other words, let’s not wait for centralized solutions, but let’s start setting up local generation capabilities now. Micro-grids are the future.

Modell for energy supply in remote areas in Africa: a small village is supplied by hybrid energy allowing the population to build up irrigated farming areas.

Source: PFISTERER, Winterbach
Energy is a strategic priority for the defence sector as an enabler of all military activities

Powering military capability in a changing security environment

Interview with Denis Roger, Director European Synergies and Innovation, EDA, and Richard Brewin, Project Officer Energy & Environment Systems, EDA, Brussels

**The European:** Gentlemen, I am grateful that you give me the opportunity to discuss with you about the European Defence Agency’s (EDA) approach on Synergies & Innovation and especially on the evolution in the energy sector, a field on which The European – Security and Defence Union has been accompanying EDA’s energy activities since 2013. The new European Structural and Investment Funds (ESIF) would be very valuable for industries.

Mr Roger, you are the director of EDA’s Directorate for European Synergies & Innovation (ESI). Your directorate promotes and supports innovative research and acts as an interface between defence ministries and wider EU policies that have implications for defence.

Mr Brewin, you are the officer responsible for energy. Let me later come back to you for discussing on what is the precise objective of this programme.

**Denis Roger**

has been Director European Synergies and Innovation (ESI) of the European Defence Agency since 2014. Graduating as an engineer from Ecole Polytechnique, and Ecole Nationale Supérieure de l’Aéronautique et de l’Espace and Stanford University, he held a range of international, R&T or industry-oriented positions in DGA (the French Defence Procurement Agency), at the European Commission, as the French Defence Equipment Attaché in Australia, as the Dean of Education and Research of a Technology Institute and for defence-related companies. Before joining EDA, Mr Roger worked in the department of the French Prime Minister as the Deputy Head, International, Strategic and Technological Affairs.

Mr Roger, could you inform us a bit about your directorate’s work?

**Denis Roger:** The main missions granted to EDA by the Treaty on the European Union, focusing on cooperative defence capability and technological developments, have not changed, but the European Commission is becoming an increasingly important actor in defence. Consequently, beyond its traditional prioritisation and project promotion activities, EDA focuses increasingly on exploiting civil-defence synergies, minimising impacts of EU policies on defence operations and taking advantage of related opportunities. The ESI directorate has a coordination role in this matter, but all of EDA is involved in this evolution. Energy is a typical illustrative example with the Consultation Forum for Sustainable Energy in the Defence and Security Sector organised by EDA and sponsored by the Commission. (ed: see box on page 62)

**The European:** This is indeed a wide field. Trying to illustrate what you are responsible for, let us start with European Structural and Investment Funds (ESIF). How does EDA support access of defence industry to these funds?

**Denis Roger:** In 2013 and 2015, EDA launched calls for projects responding to 22 technological priorities identified thanks to its expert networks called Capability Technology Groups (CapTechs). The selected projects received free of charge assistance and five of them have already received financial support from ESIF. EDA’s work demonstrated the eligibility of dual-use projects and contributed to pushing the boundaries. The Commission’s Defence Action Plan confirmed that ESIF might also be used in the defence sector.

**The European:** ESI supports EDA Member States in research and technology projects. What is the objective and how do you proceed as a partner of other EU Institutions in this sector?

**Denis Roger:** EDA can rely on a wide network of governmental and industrial experts which have the main task to contribute to Defence R&T prioritisation and promote R&T projects in 14 different fields (12 CapTechs and 2 Working Groups on Energy and Cyber). Since the creation of EDA in 2004, about 200 projects representing €1 billion of funding by contributing member states have been launched.

**The European:** What is new with the development of a centralised EU Defence R&T funding?
Richard Brewin is currently the EDA Energy and Environment System’s Project Officer with responsibility for chairing the Energy and Environment Working Group and managing the portfolio of projects including the Consultation Forum for Sustainable Energy in the Defence and Security Sector. He holds a M.Sc. degree in Ecology from the University of Wales and is a Chartered Biologist and Chartered Environmentalist. He started his career as an environmental consultant and joined the UK Department for Environment, Food and Rural Affairs in 1999. Prior to his current position at EDA, Mr Brewin held several positions at the UK Ministry of Defence, lastly as Sustainable Procurement (SP) Lead and Sustainability Specialist Fellow.

“Recent and ongoing projects in line with EDA’s Capability Development Plan include a Smart Energy Camp Technology Demonstrator.” Richard Brewin

Denis Roger: It started in 2015 with the pilot project (3 activities in progress for a total of €1,3 M) and is continuing with the Preparatory Action on Defence Research (€90 M planned, first calls published on 7 June) prefiguring a wider European Defence Research Programme. Adapting to this new context, CapTechs and Working Groups are increasingly proposing relevant topics to various funding instruments not limited to EDA’s framework and including Commission’s ones.

The European: Is there an overarching strategic approach? Denis Roger: Indeed, EDA is elaborating an Overarching Strategic Research Agenda (OSRA) which aims at being the EU-level reference for defence technological priorities as the Capability Development Plan (CDP) is for capability priorities. This intergovernmental prioritisation role of EDA is essential and was reaffirmed recently in the conclusions of a Long Term Review exercise endorsed by Ministers of Defence.

The European: I now would like to address to you Mr Brewin. ESI also deals with the Agency’s energy and environmental activities. You are the officer responsible for energy. In 2014 EDA set up its Energy & Environment programme. What is the precise objective of this programme? Richard Brewin: One of EDA’s priorities is addressing energy risks and opportunities as set out in the CDP. This is managed through the Energy and Environment Programme, which seeks to integrate innovative energy efficiency and renewable energy technologies across the spectrum of military capabilities in all operating domains, while developing military capability perspectives on wider defence sustainability considerations.

The European: This corresponds to the objectives of the EU Global Strategy.

Richard Brewin: Indeed, the EU Global Strategy explains that energy insecurity and climate change are among the risks which effect national and international security. While energy and environmental considerations will not result in the need for a completely new suite of platforms, they will influence the shape of through-life military capability requirements and defence budgets. Finding innovative and sustainable solutions to improving the energy performance of military equipment can contribute to enhancing military capability while helping to manage cost and other risks.

The European: How is the stakeholder management conducted? Richard Brewin: It is managed through the Working Group Energy and Environment (WG EnE) which has members from EDA’s participating Member States (pMS), the European Union Military Staff, and the European Commission. On an ad hoc basis, representatives have attended from NATO Energy Security Centre of Excellence to ensure an approach of complementary and cooperation is maintained with NATO, as well as from the defence technological and industrial base.

The European: And all this is coordinated with your CapTechs? Richard Brewin: The WG EnE works in parallel to the EDA’s Capability Technology groups given the cross-cutting nature of the work and generally focuses on project solutions which are at higher technology readiness levels.

The European: You mentioned that you are following priorities laid out within EDA’s Capability Development Plan. Could you elaborate? Richard Brewin: Recent and ongoing projects include a Smart Energy Camps Technology Demonstrator which was installed in the European Union Training Mission, Mali. This tested...
smart energy demand monitoring and management technologies, energy storage, and the potential for renewable energy technologies integration. And we have the Smart Blue Water Camps which involve Greece as the lead nation, as well as Cyprus, Ireland, Italy, Portugal, and Spain. Each country has put forward a military site to be investigated for water management improvements from sustainability, technological, and hydro-informatics perspectives. Finally the Defence Energy Managers’ Course is developing a defence focused training course based on ISO 50001, Energy Management Systems.

The European: All these activities are directed to energy efficiency

Richard Brewin: For sure, in the first of its kind, the Consultation Forum for Sustainable Energy in the Defence and Security Sector is a DG Energy funded and EDA led initiative investigating energy efficiency and renewable energy systems for use in fixed military infrastructure, and the protection of critical energy infrastructure. New Energy storage using complex hydride Tanks for thermos-neutral (NEXTT) systems is developing a new energy storage system for hydrogen. EDA is also working with pMS to support the development of a common approach to energy data collection and analysis. And we have the Energy Strategic Research Agenda which consisted of technology assessments of civilian technologies for potential military uses.

The European: Gentlemen, we spoke of prioritisation. What is the place of energy?

Denis Roger: Energy will continue to be a strategic priority for the defence sector. As an enabler of all military activities it should increasingly be treated and managed as a capability in its own right. Managed properly, energy provides significant opportunities for the defence sector to save costs and lives, while delivering enhanced military capability to meet mission requirements.

The European: Thank you, Gentlemen, for this interview.

Information

Consultation Forum for Sustainable Energy

The Consultation Forum for Sustainable Energy in the Defence and Security Sector is a European Commission initiative managed by EDA over 24 months. It brings together experts from the defence and energy sectors to share information and best practice on improving energy management, energy efficiency, and the use of renewable energy. The work is carried out in three parallel working groups each with a particular focus: energy management, energy efficiency, and renewable energy. After the first, second and third events held in Brussels, Dublin, and Rome in 2016, the 4th edition took place in May 2017 in Lisbon. The fifth Consultation Forum was held in Thessaloniki from 19-21 September 2017.
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