NATO's practical support to Ukraine

At the Wales Summit, NATO Allies agreed to increase support to Ukraine through the establishment of four trust funds in the areas of command, control and communications; logistics and standardization; cyber defence; and military career transition. They also agreed to assist Ukraine with the rehabilitation of injured military personnel. At the same time, the NATO Science for Peace and Security programme has suspended its activities with Russia and reallocated funding to its scientific cooperation with Ukraine. As a result, the budget allocated to projects on Ukraine this year has more than doubled compared to last year, making Ukraine the number one beneficiary of the NATO Science for Peace and Security Programme (SPS), totaling 2.2 million EUR for 2014 alone, and an estimated 10 million EUR for the 2014-2017 period. This includes 15 new SPS projects, based on Ukrainian proposals, in a vast variety of areas such as radiation protection, nanotechnologies, Unmanned Aerial Vehicle (UAV) sensors, Chemical, Biological, Radiological and Nuclear (CBRN) agents, smart energy etc.

Additionally, Allies have provided substantial new contributions to the Professional Development Programme which is supporting capacity building and reform efforts in Ukraine's security and defence institutions.

At the December 2014 NATO Foreign Ministers' meeting the four Trust Funds became operational and a fifth Trust Fund on medical rehabilitation was set up.

All those initiatives are part of NATO's overall effort to support Ukraine's defence and security sector reforms. They build on efforts invested since the June 2014 Foreign Ministers' meeting.

Logistics and Standardisation Trust Fund

Lead Nation(s): The Czech Republic, the Netherlands and Poland. The NATO Support Agency (NSPA) will act as the implementing body and will be responsible for the management of the Trust Fund.

Additional contributions (as of 1 December 2014): Denmark, Turkey.

Objective: to help reform Ukraine's logistic system and increase its interoperability with NATO, notably through the adoption of NATO standards for the tracking and management of national military equipment and supplies.

Duration: the project will run for an initial period of two years. It will culminate with the certification of Ukraine's logistic system.

The Command, Control, Communications and Computers (C4) Trust Fund

Lead Nations: Canada, Germany, United Kingdom. The NATO Communications and Information Agency (NCIA) will act as the Executing Agent and together with the Defense Investment Division and will be responsible for the management of the C4 Trust Fund.

Additional Contributing Nations: (as of 1 December 2014): Denmark, Latvia, Lithuania, Turkey.

Objective(s): The aim of the C4 Trust Fund is to help Ukraine modernize its C4 structures and capabilities, and facilitate their interoperability with NATO to enhance Ukraine's ability to provide for its own security and contribute to NATO-led exercises and operations. Based upon availability of funds and the priority areas for assistance to be identified through the Feasibility Study, practical assistance could include: assessment, introduction, and implementation of modern C4 architectural network; procurement of C4 equipment; acquisition of modern Communications and Information Services (CIS) and technologies; and the provision of associated CIS training.

Duration: The project will run for an initial period of two years.

The Cyber Defence Trust Fund

Lead Nation(s): Romania. Acting through a Romanian state-owned company with a rich experience in cyber defence (RASIROM R.A.), Romania will also be responsible for the project's implementation as the Executing Agent.

Additional Contributions (as from 1 December 2014): Estonia, Hungary.

Objective(s): to help Ukraine develop technical capabilities to counter cyber threats. Based on availability of funds, assistance could include the establishment of an Incident Management Centre for the monitoring of cyber security events and the provision of necessary hardware equipment to ensure the security of its connections; and the establishment of laboratories to investigate cyber security incidents. The project also provides for the training of personnel in the use of these technologies and equipment, as well as practical advice on policy development.

Duration: up to 24 months

The Military Career Management Trust Fund

Lead Nation(s): Norway. NATO's Political Affairs and Security Policy Division (PASP) will act as the executing body and will be responsible for the management of the fund.

Additional Contributions (as from 1 December 2014): Greece, Luxembourg, Portugal, Turkey.

Objective(s): The project aims at assisting the Ukraine's Ministry of Defence with the development of a sustainable and effective resettlement programme for military personnel returning to civilian career. Assistance will be provided through expert advice on policy development and application of best practices from other NATO countries. The project builds up on other re-training activities, which are currently carried out by NATO and funded by the NATO Civil Budget.

Duration: The project will be carried out over a period of 3 years.

The Medical Rehabilitation Trust Fund

Lead Nation(s): Bulgaria. The NSPA will act as the implementing body.

Additional Contributions (as from 1 December 2014): Slovakia.

Objective(s): This project aims at ensuring that injured Ukrainian servicemen and women have access to appropriate rehabilitation services and that the local Ukrainian medical centres are properly equipped to deliver those rehabilitation services. Based upon availability of funds, assistance could include the provision of direct medical support, physical and psychological therapy to the patients; the construction, renovation, refurbishment and equipping of Ukrainian facilities; and the delivery of vocational training to help further develop specialized medical staff.

Duration: to be determined in due course.

NATO Science for Peace and Security Programme of cooperation with Ukraine: 15 new activities approved since April 2014

1. **Development of a Superselective Adsorbent against CBRN Agents.** The main objective of this project is the development of a novel composite material for the selective adsorption and extraction of hazardous radiological materials to reduce the risk of radioactive contamination after CBRN incidents. Lead nations: US, Ukraine.

2. **New Dosimetry for the Triage of Radiation Exposure.** This project aims to develop a portable, environmentally stable and energy independent dosimeter based on a luminescence method. It will thus help to improve the population triage process after a CBRN incident involving a large number of people who may have been exposed to radiation by approximating the dose they have received and determining the medical course of action. Lead Nations: Turkey, US, Israel, Ukraine.

3. **Metal Nanocrystals for Highly Sensitive Detection of Biochemical Agents.** The project will contribute to the early detection of hazardous CBRN agents through innovative nanotechnology. Scientists will research the ability of low-cost gold nano prisms to detect small quantities of chemical and biological hazardous materials, including infectious agents. Lead nations: Estonia, France, and Ukraine.

4. **Nanostructured metal-Semiconductor Thin films for Efficient Solar Harvesting.** The aim of this project is to develop new materials to allow the production of high-efficiency and low-cost solar cells which could be deployed as energy solutions for both fixed and person-borne military applications. Lead nations: US, Ukraine.

5. **Novel Nanostructures for Security Applications.** This multi-year project focuses on early stage research and aims to develop a fundamental new technology which could eventually form part of defence hardware such as launch detection systems. Lead Nations: France, Austria, Sweden, Ukraine.

6. **Development of Optical Bio-Sensors for Detection of Bio-Toxins.** The main focus of this project lies on the development of a new portable, hand-held device for highly sensitive detection of bio-toxins in low concentrations based on high sensitivity, optical bio-sensors with low power consumption. Lead Nations: Hungary, France, UK, Israel, Ukraine

7. **Redefined Chernobyl Confinement Model – Assisting Ukraine in Managing the Radioactive Dust Disturbances and Leaks and Protecting their Workers.** The project teams will develop, verify and apply a 3-D computer model for the detection of leaks as well as the distribution and movement of highly radioactive dust and aerosols inside the Chernobyl New Safe Confinement. Lead Nations: Germany, Ukraine.

8. **Compact Sensor System for Unmanned Aerial Vehicles.** This project aims to develop and test compact sensor systems for Unmanned Aerial Vehicles which can detect, identify and localize electromagnetic signals (radar, radio) in the battlefield. These sensors will use micro technology, especially appropriate to the power and weight-constrained environment of UAVs. Lead Nations: Spain, South Korea, Ukraine.

9. **A Sensor Network for the Localization and Identification of Radiation Sources** The project aims to develop and test core technologies of distributed sensor networks with a wide area coverage that are able to locate and identify difficult-to-detect radioactive sources that are hidden in crowded places without specific entrance and exit points. Lead Nations: Bulgaria, Greece, Japan, Ukraine.

10. **Fighting Maritime Corrosion and Bio fouling with Task-Specific Ionic Compounds.** In this project, researchers aim to develop an advanced formula for a more environmentally friendly combined anti-corrosion/anti-fouling paint that will increase the safety of ships, reduce the maintenance, and allow for the most efficient fuel/speed ratio. This will be of particular significance for Navy vessels that often spend long periods of time in harbours or sail slowly which makes them prone to bio fouling, resulting in greater fuel consumption and reduced speed. Lead Nations: Belgium, Germany, Ukraine.

11. **Modelling and Mitigation of Social Disasters Caused by Catastrophes and Terrorism.** This two-year project aims to develop analytical tools to help predict, manage and analyze the reactions of the public during and in the aftermath of natural or manmade crises. Lead Nations: Moldova, Romania, Ukraine.

12. **Ultra-Fast Adaptive Optical Elements.** This project will develop new technology for electronically-controlled optics for military applications, including lenses and beam shapers. This technology will allow high-speed control of optical characteristics for use in such applications as projectile tracking, night vision and military communications.

13. **International Expert Support for Ukraine's Security and Defence Review.** The workshop will bring together leading think tankers, experts as well as representatives from civil society to discuss as series of Green Papers on the key areas of the Ukrainian Comprehensive Security and Defence Review. Lead Nations: Estonia, Ukraine.

14. **Nanomaterials for Security.** The workshop will bring together experts from NATO countries and Ukraine to exchange latest research results on defence and security applications of nanotechnology with a focus on novel detection technologies for explosives and CBRN agents. Lead Nations: Slovenia, Ukraine.

15. **Hands-On Cyber Defence Training Course for System/Network Administrators of Ukraine.** Trainees will be introduced to fundamental cyber security protocols, services and technologies and learn about as well as apply core concepts in the field of cyber defence such as identifying system vulnerabilities and monitoring network traffic. Lead Nations: Turkey, Ukraine