At a glance
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Preparatory action on defence research

Investment in defence research has been decreasing in the EU over the last 10 years. In 2013, the Commission proposed to strengthen the EU defence and security sector and suggested launching a preparatory action (PA) on defence. Following a pilot project adopted in 2014, the preparatory action is expected to be adopted for three years with a budget of €90 million. If successful, the Commission plans to establish an EU-defence research programme for the 2021-2027 period.

Defence research in Europe

Maintaining technological supremacy, which gives a decisive operational advantage, remains crucial in defence. In this context, research and development (R&D) is essential to achieve strategic autonomy in defence in terms of autonomous assessment, intervention and technological and industrial capabilities. Investment in defence R&D is also key to maintaining the European defence technological and industrial base.

Data show that the defence R&D budget of European Defence Agency (EDA) members, all EU Member States except Denmark, fell from €9.8 billion in 2006 to €7.6 billion in 2013 (-22 %) but rose to €8.8 billion in 2014. The defence research and technology (R&T) budget, part of the R&D budget, declined from €2.7 billion in 2006 to €2 billion in 2014 (-26 %). Defence R&T represents 1.02 % of total defence expenditure and European collaborative defence R&T accounts for 8.6 % of the defence R&T budget. This is far from the collective benchmark objectives (2 % and 20 % respectively) adopted in November 2007 by the EDA's Ministerial Steering Board. By way of comparison, the US federal defence R&D budget fell to US$77.9 billion in 2016 after reaching US$92.6 billion in 2009 (-13 %). Experts estimate China's defence R&D budget at around €20 billion. Meanwhile, 92 % of European defence research is concentrated in three EU Member States: France, the UK and Germany.

The emergence of a EU defence research programme

In an April 2002 resolution on the European defence industries, the European Parliament called upon the Commission to establish an advisory council to improve the way defence research was pooled and coordinated. In 2003, the Commission proposed consulting the Member States and industry to identify common needs in order to create an EU-funded defence and security research programme. The European Council decided in June 2003 to form the European Defence Agency (set up in July 2004), which aims to 'support defence technology research, and coordinate and plan joint research activities'.

In 2007, the Commission noted the discrepancy between EU and US investment in defence research, acknowledged the fragmentation of EU R&D, and suggested that it made sense 'to find ways to pool research and network resources in the defence area'. Since the 2009 Lisbon Treaty, the EDA and its role in support of defence research have been set out in Articles 42 and 45 of the Treaty on European Union (TEU), in the section on Common Security and Defence Policy (CSDP).

Security research and dual-use research in the framework programmes

As proposed in its 2003 communication, in 2004 the Commission launched a three-year preparatory action on security research with a final budget of €45 million. This initiative was followed in 2007 by the inclusion of a security research programme in the Seventh Framework Programme for research (2007-2013) with a budget of €1.4 billion. This was continued under the current framework programme, Horizon 2020, with a budget of €1.6 billion for 2014-2020.

Article 19(2) of the Horizon 2020 Regulation adopted in December 2013 states that the research and innovation activities carried out under the programme 'shall have an exclusive focus on civil applications'. However, the Horizon 2020 specific programme provides for cooperation with the EDA for the dual-use of the technologies developed under Horizon 2020. The EDA is an observer in the programme committee for the

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Author: Vincent Reillon, **Members' Research Service**
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Secure Societies Challenge and takes part in the Horizon 2020 Protection and Security advisory group. EDA is also consulted to provide feedback on the work programmes regarding critical areas and technologies for security and defence (nanotechnologies, ICT, aeronautics, etc.).

The preparatory action on defence research

Origins of the proposal

In its 2013 communication on the defence and security sector, the Commission considered exploiting the dual-use potential of research and launching a preparatory action for CSDP-related research. The European Parliament and the Council registered their support in November 2013. With the idea of strengthening Europe's defence industry, the European Council welcomed the Commission's initiatives to stimulate dual use research and in December 2013 approved the launch of the preparatory action. The Commission took note of this positive feedback in its 2014 communication 'A new deal for European defence' and set out guidelines for the implementation of the preparatory action (PA). It proposed to set up a Group of Personalities (GoP) in order to provide advice on how to design the preparatory action. In its May 2015 conclusions on CSDP, the Council approved the creation of this group and the stakeholder consultation process organised by the Commission and the EDA. The European Council noted in June 2015 that the budget for the PA needed to be appropriate, 'paving the way for a possible future defence research and technology programme'. The PA is a key feature of the European defence action plan to be adopted by the Commission by the end of 2016.

The GoP, set up in 2015, adopted its report in February 2016. The experts noted that 'no single European country can afford to maintain a full-spectrum defence industrial base and corresponding military capabilities on its own'. Joint cooperation is needed and the EU can act as a facilitator. They considered that the PA should be designed to deliver results within a limited timeframe, in order to draw conclusions for the establishment of an EU-funded defence research programme under the next multi-annual financial framework (2021-2027).

The PA proposal was supported by the AeroSpace and Defence industry association. The European Network Against Arms Trade (ENAAT), however, has criticised the fact that part of the EU budget would be invested in military projects.

Pilot project on defence research

In autumn 2014, Parliament proposed an amendment to the 2015 budget to introduce a pilot project on defence research. This amendment mentioned clearly that the pilot project should be executed by the EDA. This pilot was seen as a way to test and assess certain governance aspects for the PA and the capacity of the EDA to act as an executive agency to implement research projects in the field of CSDP. The Commission and the EDA signed a delegation agreement in November 2015. The projects selected ('Unmanned Heterogeneous Swarm of sensor platforms', 'Inside Building Awareness and Navigation for Urban Warfare' and 'Standardisation of Remotely Piloted Aircraft System Detect and Avoid') for a total budget of €1.4 million (around €450 000 per project, over 12 or 18 months), are expected to start in November 2016.

Proposal for the PA on CSDP-related research and specific implementation requirements

In its 2017 draft budget, the Commission proposed to establish the PA on CSDP-research with a budget of €25 million for the first year (€90 million expected for the three years). As noted by the GoP, the specific characteristics of defence-related research required the adaptation of the rules that apply to Commission-funded research under Horizon 2020 regarding intellectual property rights (IPR), participation and dissemination. Participation in the PA will be open to EU Member States and Norway only. The calls will be classified and the proposals will be evaluated by experts from the defence ministries. The funding rate will cover 100 % of the costs and no dissemination of the results is planned.

The rules of participation and the work programme for the PA should be agreed by November 2016. For the first year, most of the funding should be attributed to a large scale demonstration project regarding autonomous systems (drones). The first call for projects is expected by mid-2017 after the signature of the delegation agreement between the Commission and the EDA, which will be managing the PA.

EU-funded programme on defence research

If the PA is evaluated positively, the Commission aims to propose an EU programme on defence research for the next multiannual financial framework. The GoP suggested that the budget for such a programme should be €3.5 billion, while a European Parliament study considered that the budget of a Union programme should be between €0.5 and 3.3 billion a year. The legal base upon which to establish this programme, and its links with the next framework programme for research (FP9), will also have to be defined.