Horizon 2020 - Reflecting on changes proposed for the EU research agenda?

Conclusions and Proposed Amendments

Conclusions

There is no question that the proposed framework programme for research – Horizon 2020 – is important as part of the next Multiannual Financial Framework. For example, in the discussions on the Multiannual Financial Framework which took place in the General Affairs Council of the European Union on 27 January 2012, this issue was raised by most of the Member States as one of their priorities.

What is important for QCEA in examining these proposals in details is the question of how the funding is to be used, the extent to which this contributes to peacebuilding or not, the extent to which it is driven by the narrow agenda of the defence industry and the extent to which the European Union remains in control of participation in the programme by actors whose activities may undermine the values and legal obligations of the European Union.

We believe that the proposals for Horizon 2020 – though they show some degree of improvement over the Research Framework Programme 7 (FP7) – still fall short of our expectations on all these points.

There is evidence that the allocation of funds to security research both in absolute and percentage terms will be greater under Horizon 2020 than under the FP7. The fact that it is grouped under subheading 'Inclusive, Innovative and Secure Societies' which also includes elements which under FP7 would have been included under the heading of Socio-economic Sciences and Humanities – or so it would appear – means that there may also be a shift in emphasis towards security research away from other important research areas. How that will play out in practice is yet to be seen. However, at this stage, there appears to be no real guarantee that socio-economic sciences and humanities have any protected space in the programme. This is regrettable and QCEA would recommend that Members of the European Parliament address this in the legislative process.

Horizon 2020 has removed the reference to respect for fundamental human rights in the text relating to security research and has retained, if not strengthened, the reference to the competitiveness of the security, ICT and service industries. This would suggest a move towards more industry influence and control rather than away from that. QCEA would recommend that specific reference to respect for fundamental human rights is reintroduced into the wording of the relevant section of the proposals.

It is welcome that Horizon 2020 is very clear in its stipulation that 'Research and innovation activities carried out under Horizon 2020 shall have an exclusive focus on **civil** applications'[1]. The proposed Regulation does not, in fact, make reference to defence policy or defence applications of the research. However, the proposed

Council Regulation does make such reference when it says: that 'Activities ... will support the Union's policies for internal and external security, **defence** policies, ... and ensure cyber security, trust and privacy in the Digital Single Market.'[2] This opens the door to European Union funded research which is targeted to support the defence industry, not only in order for that industry to strengthen its hold on the so-called civilian security sector but also to support their defence-related activity. With the emphasis on dual-use technology in this area, this is, in any event, very difficult to guard against, but the fact that defence policies are expressly included in the policies to be supported by such research makes this 'mission-creep' almost inevitable.

The concern about the influence of the defence industry on this programme is also based on the fact that the Advisory Group assisting the European Commission in the management of the Security Research Programme has a relatively high level of input from the defence industry. Horizon 2020 will also be managed with the assistance of such Advisory Groups as set out in Article 12 of the proposed Regulation. It would be preferable if the presence of representatives from the defence industry (and from industry generally) could be restricted in some way.

The issue of ethics is addressed in all the relevant documents which make up the Horizon 2020 proposals. This is welcome. The fact that Article 16 of the proposed Regulation makes it crystal clear that the European Research Programme is available only for civilian research is also welcome.

Beyond that, the provisions regarding ethics fall short of our expectations on several specific points:

The conceptualization of ethics in all the references in the various proposals is still far too focused on bio-sciences and data protection. Ethics in sciences goes further than that and that needs to be reflected.

The fact that the ethics issue relates only to projects and is not applied to the actors undertaking the projects (i.e. there is no way in which an organization can be excluded from participation on the grounds that on an organizational level their ethics record is short of expectations) is regrettable.

The fact that Horizon 2020 is open to participants from third countries is, in general, something we would support. However, the fact that there is virtually no constraint at all on who can participate (cf: Article 6 of the proposed Participation Regulation which says that 'any legal entity, regardless of its place of establishment' can participate).

The one and only restriction we can find is in paragraph 2 of Article 6 of the proposed Participation Regulation and this is much more about reciprocity than anything else.

What are missing is some form of constraints on legal entities which, by the work they do, by the objectives they pursue, or by the places in which they operate, would potentially hinder the European Union in fulfilling its legal obligations under international law. There is a clear need to write such constraints into the proposed Participation Regulation.

Recommendations

1. To address the separation of funding for nuclear research, QCEA would recommend that this is integrated into the budget for research on 'secure, clean and efficient energy' and that nuclear research has to compete with research on other alternative non-carbon fuels on a level playing field.

2. To address the safeguarding of Socio-economic Sciences and Humanities in Horizon 2020, it is proposed that the following **amendment** is made to Proposal for a Regulation of the European Parliament and of the Council establishing Horizon 2020 – The Framework Programme for Research and Innovation (2014-2020), Annex I, Part III, third subparagraph, p. 30 as follows:

'Social sciences and humanities shall be an integral part of the activities to address all the challenges **and 35 per cent of the funding allocated under the heading inclusive, innovative and secure societies shall be earmarked for social sciences and humanities research.** In addition...'

The justification for this proposal is as follows:

If the amounts allocated in FP7 for socio-economic sciences and humanities and for security respectively is combined (as we assume it has been in Horizon 2020) then 31 per cent of the resulting total falls to socio-economic sciences and humanities. Given that these aspects of secure and inclusive societies are becoming greater in importance rather than smaller at a time when social cohesion across EU Member States is under increasing and immense pressure, a percentage increase in the share for this aspect of research is justifiable especially as the total for this combined area has seen a significant increase compared to other elements of the proposal.

3. To further address the need for social science research specifically geared to the EU security agenda, it is proposed that the following **amendments** are made to the Proposal for a Regulation of the European Parliament and of the Council establishing Horizon 2020 – The Framework Programme for Research and Innovation (2014-20), p. 77:

'The focus of activities shall be to:

   a. fight crime and terrorism;

   b. **identify the reasons why people become radicalized into violence and effective social policy measures to counter these reasons;**

   c. strengthen security through border management;

   d. provide cyber security;

   e. increase Europe's resilience to crises and disasters;

   f. **research, through engagement with citizens and elected representatives, the degree of risk society is willing to take in return for fewer intrusive counterterrorism measures;**

   g. ensure privacy and freedom in the Internet and enhance the societal dimension of security;

   h. **research the contribution that restorative justice processes can make in the 'prevent' and 'respond' strands of the counterterrorism strategy.'**

The justification for this proposal is as follows:

The proposal as it stands focuses research under the 'secure societies' aspect on the technological response to threat and response to threat. As we have tried to show, and as is evident in the comments made by the EU's own Counter-Terrorism Coordinator, there is a clear need to ensure that the social policy dimensions are also given some space in the research relating to security. The amendments proposed establish this as part of the programme.

4. For the same reason as those given in 2 above, there need to be some parallel amendments to the proposed Council Decision. Members of National Parliaments are encouraged to raise these points with relevant Ministers and Civil Servants in their governments and to propose the following **amendments** to the proposed Council Decision establishing the Specific Programme Implementing Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020), by inserting the following paragraphs:

P. 81 after Paragraph 6.3.1:

   a. 6.3.2 (new): **Identify the reasons why people become radicalized into violence and effective social policy measures to counter these reasons.**

   The ambition is to conduct research which provides both evidence and social policy proposals which will be effective in preventing the radicalization into violence and channeling social discontent into peaceful, democratic protest and dialogue.

P. 82 after Paragraph 6.3.4

    b. 6.3.5 (new): **Research, through engagement with citizens and elected representatives, the degree of risk society is willing to take in return for fewer intrusive counterterrorism measures.**

        This requires the systematic engagement in dialogue – framed and conducted in a scientific context – to establish the limits to risk and the limits to intrusion citizens are willing to accept and the trade-offs that this necessitates. This research should be geared to providing a basis for evidence-based decision-making and for policy dialogue that reflects social realities.

P. 82 after Paragraph 6.3.5 (old)

    c. 6.3.6 (new): **Research the contribution that restorative justice processes can make in the 'prevent' and 'respond' strands of the counterterrorism strategy.**

        Research should include the degree to which victims of terrorist attacks are able to engage with actual or potential offenders in restorative justice processes to aid mutual understanding of both the root causes of terrorism and the impact this has on victims; research should also look at the impact restorative justice processes can have on the prevention of radicalization into violence on the part of 'at risk' groups; finally, such research should investigate the contribution restorative justice can make to the healing of communities affected by serious terrorist crime.

5. To ensure that the greatest possible care is taken to avoid European Research Funding being channelled into defence-related military research, Member States should be encouraged to consider an amendment to the proposed Council Regulation, Part III, page 81 as follows:

'Activities will follow a**n** ~~mission-oriented~~ approach ~~and~~ **which** ~~integrate~~ **frames the research within** the ~~relevant societal dimensions~~ **social policy concerns at the root of the EU's response to serious acts of terrorism**. They will support the Union's policies for internal and external security~~, defence ~~policies, and the relevant new provision of the Lisbon Treaty, and ensure cyber security, trust and privacy in the Digital Single Market.'

Members of National Parliaments are encouraged to raise this point with relevant Ministers and Civil Servants in their governments.

The justification for this amendment is as follows:

If research is 'mission-oriented' it will immediately focus on specific technical and technological responses to specific perceived threats. If research is first and foremost framed within the social policy concerns, then the question of which technology comes second. And whilst we are not arguing that there should be no technological research – some is clearly necessary – the primary approach to deciding which technologies should be the focus of research should be determined by the social policy objectives and not the other way around. This, too, would help in ensuring that the agenda is set by those who need to ensure security and not those who have a vested interest in developing specific technologies, often with a dual-use aim in mind.

6. In order to address the concern about the influence on the Security Research Programme which is exercised by the defence industry through the Advisory Groups, it is recommended that <u>Article 12 of the Proposed regulation</u> is **amended** as follows:

For the implementation of Horizon 2020, account shall be taken of advice and inputs provided by: advisory groups of independent, high level experts set up by the Commission; **no more than 10 per cent of the members of any such group shall represent the industry sector most likely to benefit from the programme**; dialogue structures created under international science and technology agreements; forward

looking activities; targeted public consultations; and transparent and interactive processes that ensure responsible research and innovation is supported.

The justification for this amendment is that it is essential for the good governance of the research programme that the European Union can demonstrate that sectoral industrial interests do not unduly influence the decisions about the allocation of funding.

7. In order to ensure that the security research agenda is critically assessed for its compliance with the requirements of Article 16 of the Proposed Regulation, we recommend that there is a requirement for the annual action programme and the calls for proposals of the security research component of Horizon 2020 to be subjected to an ethics review during the development of the annual action programme as part of the process of developing each call for proposals.

The legal text where this could be incorporated is the Council Decision establishing the Specific Programme Implementing Horizon 2020, Article 5. **A new paragraph 7** could be inserted into this Article which would state that:

The work programmes for the implementation of that part of Horizon 2020 which is referred to in Article 3, Paragraph 3, subparagraph f of this specific programme and any calls for proposals issued as a result of such programmes shall be the subject of an ethics review of the programme and the calls respectively before they are issued.

Members of National Parliaments are encouraged to raise this point with relevant Ministers and Civil Servants in their governments.

The justification for this proposed amendment is to ensure that the extent to which the tension between fundamental rights and the security agenda are implicit in the programmes or calls is made explicit and are addressed in the formulation of the programmes and calls to the effect that the compliance with Article 16, paragraph 1 of the Proposed Regulation is complied with.

8. With regard to the ethics issues we have raised, we do not see that there is any specific formula for amending aspects of the proposed texts as they stand. Rather, we recommend that the European Commission, in implementing Horizon 2020, makes significant efforts to support (and encourage through the annual programming of Horizon 2020 funding) research which systematically addresses the range of research activities which raise clear ethical issues; this should, among other things, lead to a widening of the ethics agenda beyond bio-sciences and data protection.

9. In order to address the concern about participation in Horizon 2020 by organization, who by the objectives they pursue, or by the places in which they operate, would potentially hinder the European Union in fulfilling its legal obligations under international law, we recommend the following amendment to Article 6 of the Proposal for a Regulation of the European Parliament and the Council laying down the rules for the participation and dissemination in 'Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020):

'The relevant work programme shall restrict the participation in Horizon 2020 or parts thereof

(a) Legal entities (including any affiliated entities) whose participation, by the objectives they pursue, their place of establishment, the nature or the location of their activities, would cause the European Union to breach international law or international humanitarian law as established by a resolution of the United Nations Security Council or by a judgment or advisory opinion of the International Court of justice, shall be excluded from participation in Horizon 2020.

(b) where conditions for the participation of legal entities from Member States in the third country's research and innovation programmes are considered prejudicial to the Union's interests.'

The justification for this amendment is to ensure that the European Union is able to comply with its legal obligations under Article 3 (5) of the Treaty of Lisbon which provides that the Union shall contribute among other things, to the strict observance of and the development of international law, and in particular of the principles of the UN Charter and with its obligations with regard to its duties arising from UNSC Resolutions and judgements/advisory opinions of the ICJ. By inserting the proposed paragraph (a) into the Article 6 of the proposed Regulation of the European Parliament and the Council laying down the rules for the participation and dissemination in 'Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020), the European Union would ensure that it has the legal basis in this context for complying with that paragraph of the Lisbon Treaty.

Introduction

QCEA has done analysis work on the European Research Framework Programme since 2006 when we first became aware of the security research programme which was then still run under the so-called 'Preparatory Action Security Research (PASR)'. Our main concerns then were the transparency of how the programme had come into being, who was setting the agenda and the high level of interest from and benefit to the defence industry incorporated into this programme.

Our interest in the European Security Research Programme has continued to focus on security research but has also widened to look at the involvement of third countries in security research programmes, and broader peace issues raised by the security research programme.

In the context of our programme on sustainable energy security, the research potential for driving forward innovative solutions to energy efficiency and therefore demand reductions for fossil fuel-based energy supply is of significant interest to QCEA.

This paper therefore analyses the proposals issued by the European Commission in November 2011 for the research framework programme 2014 to 2020 under the title Horizon 2020 from these different but interconnected angles.

The Main Building Blocks of the Proposal

The Proposal consists of five linked and interconnected documents. They are:

Horizon 2020 – The Framework Programme for Research and Innovation – Communication from the Commission (which we will refer to as **The Communication**)

Proposal for a Regulation of the European Parliament and Council establishing Horizon 2020 – the Framework Programme for Research and Innovation (2014-20) (which we will refer to as **The Proposed Regulation**)

Proposal for a Regulation of the European Parliament and Council laying down the rules for the participation and dissemination in Horizon 2020 (which we will refer to as **The Proposed Participation Regulation**)

Proposal for A Council Decision establishing the Specific Programme implementing Horizon 2020 (which we will refer to as **The Proposed Council Decision**)

Proposal for a Council Regulation on the research and training programme of the European Atomic Energy Community (2014-18) complementing Horizon 2020 (which we will refer to as **The Proposed EURATOM Programme**)

Links to all of these in the 22 official languages of the European Union can be found on the Research & Innovation Horizon 2020 Official Documents website.

The Communication

This is a relatively short document which sets out what the European Commission wishes to achieve with these proposals and how it expects to do this. From the point of view of our areas of interest, the key part of this is the explanation of the structure of Horizon 2020 as compared to the current 7th Research Framework Programme.

Whereas the current (7th) Research Framework Programme consists of five Programmes or major building blocks which are: Cooperation, Ideas, People, Capacities and Nuclear Research[3], the Horizon 2020 proposal[4] foresees three distinct priorities: Excellent Science, Industrial Leadership, and Societal Challenges. To what extent this change in the structure will have an impact on actual funding decisions remains to be seen.

The Proposed Regulation

This is a long document, some 119 pages of it, which sets out the proposed legal basis of Horizon 2020. This is the document which the European Parliament and the Council will, respectively work with, propose amendments to and, finally, agree in an amended form.

It is divided into three Titles (or sections) and a number of Appendices:

Title I – Establishment: this formally establishes Horizon 2020; it sets out some definitions of terms, the understanding of what the EU added value in this programme is, the general objectives, the overall budget (see below for more detail on this), and the association (or participation) of third countries (see below for more detail on this).

Title II – Implementation: This is a rather long section. The key elements of interest are Article 12 relating to external advice and societal engagement, article 16 relating to ethical principles, and Article 21 relating to international cooperation.

 Title III – is short and to the point and relates to the repeal of previous provisions and the entry into force of this one.

Annex I is really the core of the proposal and goes into significant detail for each of the three priorities which make up this proposed programme.

Annex II is the budget breakdown into the major building blocks (the three priorities and their sub-divisions) and other financial detail.

The Proposed Participation Regulation

This regulation sets out the rules for participation but also for access to information and data both in terms of 'background' – i.e. what research partners bring to the project and 'results' – i.e. outcomes and outputs from the project.

QCEA's interest in this part of the proposals is related primarily to rules of participation as they relate to third countries.

The Proposed Council Decision

This goes over much the same ground as the Proposed Regulation.

The Proposed EURATOM Programme

This part of the proposal relates to nuclear energy and radiation protection research. It is proposed under the EURATOM Treaty and therefore has a different basis and a different time period during which it will be in place (2014 to 1018).

However, it echoes the approach taken by The Proposed Regulation in so far as this is relevant; there is a strong indication that streamlining the approach across all aspects of EU-funded research has been a driving force.

The fact that – as for previous Research Framework Programmes, this aspect of EU Research Funding is handled separately from other Research Funding and under the EURATOM Treaty is regrettable. Article 1 of the Treaty states (*inter alia*)

'It shall be the task of the Community to contribute to the raising of the standard of living in the Member States and to the development of relations with the other countries by creating the conditions necessary for the speedy establishment and growth of nuclear industries.'[5]

And, in Article 2, paragraph c of the same treaty it goes on to say:

'(The Community shall) … facilitate investment and ensure, particularly by encouraging ventures on the part of undertakings, the establishment of the basic installations necessary for the development of nuclear energy in the Community;'[6]

In other words, the EURATOM Treaty is focused on promoting nuclear energy and not on identifying the pitfalls of it. This Treaty was written in the 1950s, a period very different from the present. Much information about the cost, dangers, and long-term effects of nuclear power generation – as well as the developments of alternative renewable non-carbon energy sources has been developed in the intervening 60+ years. Given the level of question marks over the whole question of the contribution which nuclear power has to make to the energy mix (especially after a number of serious nuclear energy related accidents) would suggest that it would be better to integrate any nuclear research into the overall energy research and to judge its usefulness (and therefore the justification for funding it) in that context.
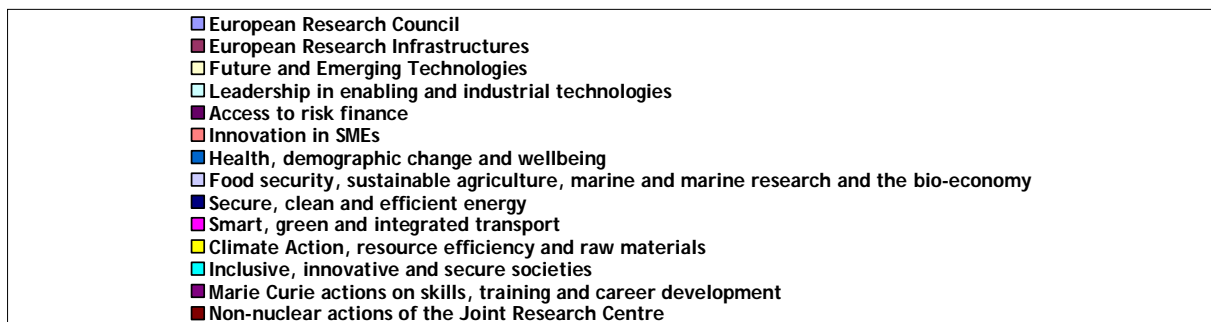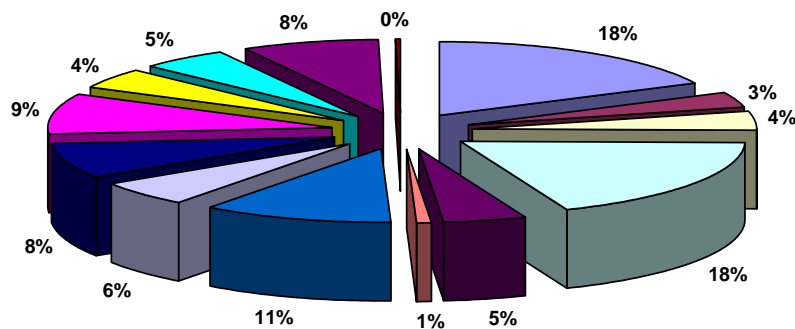
And whilst the financial reference amount for the this aspect of research represents only a small proportion of the overall research budget, it does represent the equivalent of around 30% of the funding allocated to secure, clean, and efficient energy.

How much and for what?

Clearly, the amount of money proposed to be made available for research is an important aspect of these proposals. The numbers in the various Commission documents are not entirely simple to interpret and they are not entirely consistent with each other, but the following picture emerges with regard to the allocation of funding from within the Horizon 2020 envelope[7] (which amounts to somewhere in the order of € 80 billion over seven years).

Looked at in terms of all the different budget lines foreseen the picture is this:

Proposed Funding Proportions for Horizon 2020 by category

- ■ European Research Council
- ■ European Research Infrastructures
- ■ Future and Emerging Technologies
- ■ Leadership in enabling and industrial technologies
- ■ Access to risk finance
- ■ Innovation in SMEs
- ■ Health, demographic change and wellbeing
- ■ Food security, sustainable agriculture, marine and marine research and the bio-economy
- ■ Secure, clean and efficient energy
- ■ Smart, green and integrated transport
- ■ Climate Action, resource efficiency and raw materials
- ■ Inclusive, innovative and secure societies
- ■ Marie Curie actions on skills, training and career development
- ■ Non-nuclear actions of the Joint Research Centre

Looking at only the three main headings, the rather surprising picture that emerges is the following:

Horizon 2020 - Proportions of Funding by Main Headings

33%

43%

24%

🟩 Excellent science 🟪 Industrial Leadership 🟧 Societal Challenges
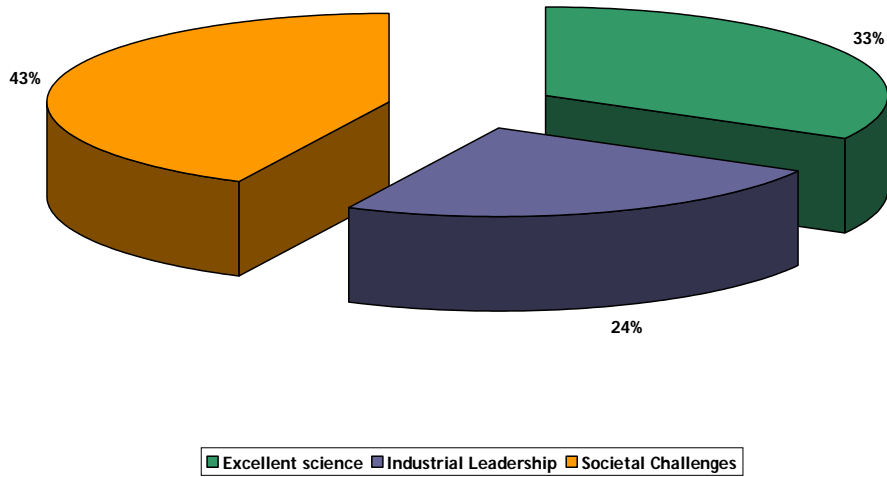
What is, on first glance, surprising, is the large proportion allocated to societal challenges. But it is worth remembering that security research fits into this main heading in the Horizon 2020 framework.

It is therefore, worth looking at this subsection of the proposal in further detail. What this shows – in so far as it is possible to compare given the way the proposal is packaged differently from FP7 – is that each element of the societal challenges heading is set to have a significantly larger allocation than under FP7[8].

Comparison of proposed allocation

Health, demographic change and wellbeing   Food security, sustainable agriculture, marine and marine research and the bio-economy   Secure, clean and efficient energy   Smart, green and integrated transport   Climate Action, resource efficiency and raw materials   Inclusive, innovative and secure societies

🟧 Horizon 2020 ⬜ FP7 approx comparison
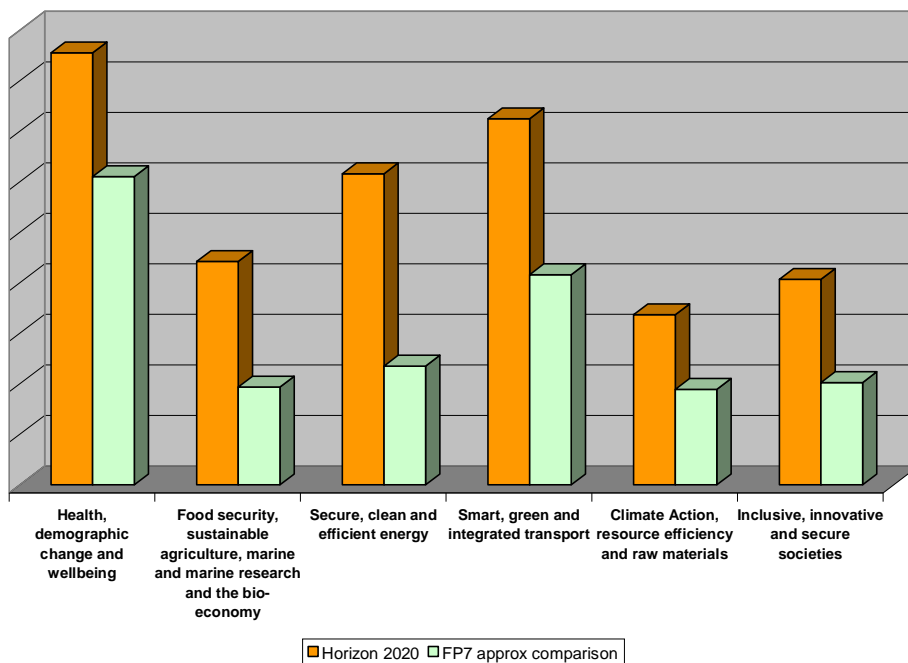
Overall, the share of this main heading has increased from around 36 per cent of the total programme under FP7 to around 42 percent of the total programme under FP7.

There are, however, still significant differences in terms of the percentage increase between these different elements. This is shown in the following graph[9]:

Percentage increase by sub theme
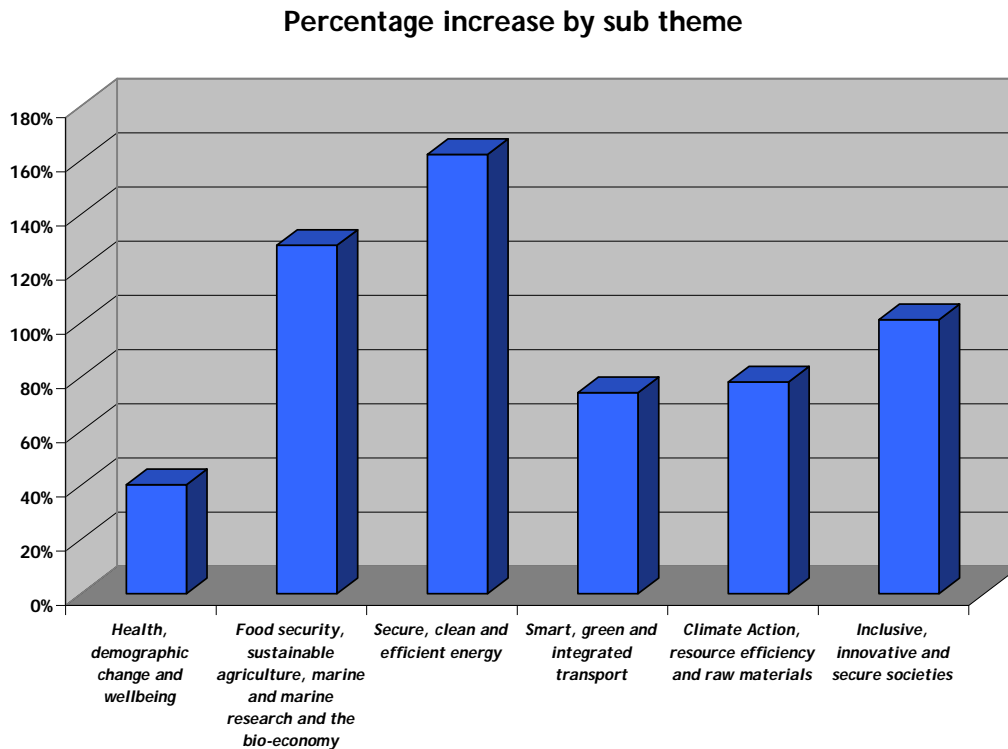
The Security Agenda

European Security Research is relatively new in the context of European Research Funding. Funding has been established for this area as follows:

The Preparatory Action for Security Research

This was established at least in part as a response to the events of September 11, 2001 in New York and the counter-terrorism agenda which developed from that. It funded research from 2004 to 2006. The definitive study on this programme and its creation is Arming Big Brother.

What is clear is that the development of this programme of research has a very close link with the EU Response to Terrorism and the way the security research agenda is framed is at least partially indicative of the priorities of that agenda. The other driving force of the agenda is the defence industry (see below) and these combined agendas are important in terms of what is included (and what is not) in the theme and the annual programmes arising from it.

Security Research Programme under FP7

This was followed by the integration of Security Research into the 7th Research Framework Programme as a separate theme.

There has not been a full assessment of this programme because it is still ongoing. However, some interim analysis has been undertaken by several analysts. Two sources of information are 'EU Security Research and Peacebuilding - a case of institutional and political disconnect' published by QCEA and Neoconopticon published by Statewatch.

The Proposals in Horizon 2020

Unlike in FP7 where security research is one of ten main themes, security research in Horizon 2020 is contained within one of the three main priorities (Societal Challenges) and within that priority as part of one of three sub-headings (Inclusive, innovative and secure societies). In introducing the challenges to be tackled with this area of research, The Proposed Regulation states as the three main challenges[10]:

1. Significant inequalities persist in the Union both across countries and within them (*inclusive societies*).

2. Europe's productivity and economic growth rates have been relatively decreasing for four decades (*innovative societies).*

3. Many forms of insecurity, whether crime, violence, terrorism, cyber attacks, privacy abuses and other forms of social and economic disorders increasingly affect citizens (*secure societies).*

The explanatory text that follows and elaborates each of these themes then sets out the focus of activity under each of three headings. It is worth quoting these lists in full[11]:

Inclusive societies

The focus of activities shall be to:

(a) Promote smart, sustainable and inclusive growth;

(b) Build resilient and inclusive societies in Europe;

(c) Strengthen Europe's role as a global actor;

(d) Close the research and innovation divide in Europe.

Innovative societies

The focus of activities shall be to:

(a) Strengthen the evidence base and support for the Innovation Union and European Research Area (ERA);

(b) Explore new forms of innovation, including social innovation and creativity;

(c) Ensure societal engagement in research and innovation;

(d) Promote coherent and effective cooperation with third countries.

Secure societies

The focus of activities shall be to:

(a) Fight crime and terrorism;

(b) Strengthen security through border management;

(c) Provide cyber security;

(d) Increase Europe's resilience to crises and disasters;

(e) Ensure privacy and freedom in the Internet and enhance the societal dimension of security.

What is maybe remarkable is that the specific focus of the last of these is more specific and more tangible than the other two. It is also worth noting that in the introductory text to the section on secure societies, we find reference not only to 'support for the Union policies for internal and external security and to ensure cyber security'[12] but also to '**at the same time improving the competitiveness of the Union's security, ICT and service industries'**.[13]

Compare this with the objective of the security research programme under FP7:

> Among the objectives of the Security theme are:
>
> - to ensure optimal and concerted use of available and evolving technologies to the benefit of civil European security;
> - to stimulate the cooperation of providers and users for civil security solutions; **improving the competitiveness of the European security industry** and delivering mission-oriented results to reduce security gaps.[14]

The reference to competitiveness has been extended from the security industry to the ICT and service industries. This latter (the service industry) is not defined.

That is all that The Proposed Regulation says about this theme. There is, however, more detail to be found in the [Proposed Council Decision](). Annex I, Part III, Section 6 sets out in some detail (taking up pages 80 to 83) the types of activities to be supported by the sub-theme 'Security Societies' of the 'Inclusive, Innovative, and Secure Societies' section of the proposal.

In an initial introduction to this section, it repeats the threats that 'the European Union, its citizens and its international partners are confronted with'[15]. It goes on to say that: 'in order to anticipate, prevent and manage these threats, it is necessary to develop and apply innovative technologies, solutions, foresight tools and knowledge, stimulate cooperation between providers and users, find civil security solutions, improve the competitiveness of the European security, ICT and services industries and prevent and combat the abuse of privacy and breaches of human rights….'[16] It then goes on to say that 'Activities … will support the Union's policies for internal and external security, **defence** policies, … and ensure cyber security, trust and privacy in the Digital Single Market.'[17] This must be seen in contrast to and in the context of Article 16, Paragraph 2 of The Proposed Regulation which states that: 'Research and innovation activities carried out under Horizon 2020 shall have an exclusive focus on **civil** applications.[18]

Under the five headings highlighted above, it then goes on to set out a number of specific considerations which are worth reflecting on:

(a) Fighting crime and terrorism: the focus is on avoiding incidents and to mitigate the potential consequences. But given that the specific language talks about protecting critical infrastructure, systems and services, it is clear that this is not about prevention in terms of addressing root causes. Critical infrastructure is seen as systems to support health, food, water and environmental security with communications, energy, logistics and supply chains added as part of the networks that would support that critical infrastructure.

(b) Strengthen security through border management: the focus is on surveillance and control technology and reference is made to 'exploiting the full potential of [EUROSUR]()'[19]. Testing of effectiveness, compliance with legal and ethical principles, proportionality, social acceptability and the respect for fundamental rights are all included here as part of the activities to be funded.

(c) Providing cyber security: Whilst the focus on cyber security is hardly surprising – it already features in the current research programme funded under the security research theme – the fact that here the proposal is that 'Research will prevent, detect and manage in real-time cyber-attacks across multiple domains and jurisdictions'[20] seems to take the idea of research a long way into implementation and use of technologies. Given the high level of involvement of relevant industries in such research, there is a real potential for

mission creep making research projects into fully-fledged application systems under the control of industry with potentially only limited democratic oversight.

(d) Increasing Europe's resilience to crises and disasters: this section – even more than the others – has the hall-mark of what I like to call the bucket approach: put as many things into a sentence as you can think of just in case you've forgotten something. Here we read of: 'civil protection, fire fighting and marine pollution, humanitarian aid, civil defence, conflict prevention, development of medical information infrastructures, rescue tasks and post-crisis-stabilisation'[21] all sharing one parenthesis. There is also (and reflecting the reference to defence policies referred to above) the following sentence: 'this also requires **integrating civilian and military capabilities** in tasks ranging from **civil protection** to **humanitarian relief**, **border management or peace-keeping**'[22]. Again, it is important to ask: where is the border line between research and application and implementation of what will amount to policy? And where is the democratic governance of any of it?

(e) Ensuring privacy and freedom in the Internet and enhancing the societal dimension of security: it is interesting that it is here where thinking about safeguards come into the proposal. There is: 'Technologies will be developed allowing users to control their personal data and its use by third parties'[23] for example. And, also significantly:

> Better understanding the socioeconomic, cultural, and anthropological dimensions of security, the causes of insecurity, the role of media and communication and the citizen's perceptions, are therefore essential. Ethical issues and protection of human values and fundamental rights will be addressed.[24]

It will be important to ensure that in the implementation of this part of Horizon 2020 these aspects are safeguarded and funded appropriately.

Missing links

The focus, then, is – as in the Preparatory Action and under the 7th Framework Programme – the technological response to threats and the consequences of threats. But responding to terrorism and to terrorist threats is not just about technology; not just about surveillance and technical resilience. The EU Counter-Terrorism Coordinator, in an article published in 2011 as a reflection on lessons learned from the post 9/11 era, says:

> Research can increase both security and freedom ("privacy by design"). The challenge is for the internal security community to develop a culture of forward planning to identify its real needs — otherwise the choices will be made either by what the industry wants to supply or what scientists want to develop.
>
> To minimize the impact of any attack, we have to increase the resilience of our critical infrastructure, and the resilience of society. The more a society is willing to accept risks, the less its government is pushed to adopt intrusive counterterrorism measures that restrict freedom and privacy.[25]

Two points here are important: it is the security community (by which he appears not to mean the industry but rather the state organs of security)that needs to set the agenda – and by implication, there is a suggestion that they are not doing this enough and not strategically enough; and, from our point of view even more importantly, that there has to be a discussion within society – and that has to include elected representatives and civil society – about the level of risk we are all willing to take in order to arrive at a sane balance between security and restrictions to freedom and privacy.

These two considerations are essentially missing from the Horizon 2020 proposals for security research. The fact that security research is now included in a broader priority which arguably includes what within the 7th Research Framework Programme might have been included in the theme called 'Socio-economic Sciences and Humanities' suggests that there may be a drift of funding into the direction of technology-driven research and away from social science research which could and should contribute to the 'prevent' agenda of the counter-terrorism strategy.

Indeed, there is not just the need for research on the question of the level of risk we as a society find acceptable; there is a need for research into a range of other issues including a better understanding of 'the process of how people become radicalised into violence'[26]; there is also a need to understand how – given the social context we live in – young people can be given a stake in society which will turn them away from violence; and, very importantly, there needs to be research into the role of restorative justice in this area. A more detailed discussion of this can be found in '[Restorative Justice and victims of Terrorism]'[27].

Is it a purely civil agenda?

The final section of this part of the document looks at specific implementation aspects which again raise the question of whether or not this aspect of Horizon 2020 can, in practice, be restricted effectively to purely civil applications. The wording here becomes very woolly when it says 'Whereas research will have a civil security orientation, coordination with the activities of the European Defence Agency (EDA) will be actively pursued in order to strengthen cooperation with EDA,...'[28]. Again, the door is open to a fudge between military and civilian research and applications and the fact that much of the technology at issue is actually or potentially dual-use does not help.

So here there is then the question of who is actually driving the programme and who gets the funds in practice; and what does that say about the purely civil application of research funds (as opposed to having a civil orientation)? A quick look back at the Preparatory Action and the Security Research Programme under FP7 can be instructive here.

The European Commission is assisted by Advisory Groups in the management of FP7 (and was assisted by such groups in previous Research Framework Programmes). The assistance of such groups under Horizon 2020 is foreseen in Article 12 of the Proposed Regulation[29]. There is a long list of these groups but for the purpose of this section I will focus on the advisory group for the security research programme.

This is composed of 22 people. The represent the following organisations[30]:

- **Cassidian**, a French security company focusing on 'Nationwide Security, Security of Deployed Forces, Security of Critical Infrastructure, Communications Network Security, Advanced Cyber Security and Through-Life Services (or round-the-clock support services)'[31]. In addition, Cassidian is a part of EADS, one of the major defence companies.

- **Finmeccanica SpA**, an Italian defence company

- *FRONTEX*, the EU Border Agency

- *The Bundeskriminalamt*, Germany (Federal Criminal Police)

- **TNO** – Netherlands Organisation for Applied Scientific Research, a research organisation who have defence as one of their research themes

- Université Catholique de Louvain, a Belgian University; the individual concerned appears to be expert in applied molecular technologies and experimental clinical research[32]

- *EUROPOL*

- Institut für Rechts- und Kriminalsoziologie – Department Law and Society, Austria

- **European Defence Agency**

- *Ministry of the Interior*, Spain

- *UK Home Office/*Office for Security and Counter Terrorism (the same person also seems to be representing the Robert Gordon University in the UK)

- Frauenhofer Gesellschaft, Germany

- Magen David Adom, Israel, the national first aid and pre-hospital emergency medical service; it is also an auxiliary service of the Medical Service of the Israeli Defence Forces.

- EOS, Belgium, a scientific magazine

- Crisis Management Initiative, Finland, a crisis management NGO

- *Polish Civil Protection*, Poland

- Siemens Building Technologies GmbH &Co. oHG, Germany, a company which focuses among other things on surveillance technologies for buildings

- **SAGEM Securité**, France, one of the major defence companies

- *The Swedish Civil Contingencies Agency*, Sweden

- *European Civil Aviation Conference*

- Deutsch Post World Net, Germany

In other words, of the 22 Members, five represent the defence sector and there are other representatives of industry among them.

This is a group that is possibly a little better balanced than the Group of Personalities which was at the heart of setting up the Preparatory Action which included eight representatives of Industry of whom six were from the defence sector. The companies involved then who are still on the Advisory Group are: EADS (through Cassidian), Finmeccanica, and Siemens. The only research institute then involved and still part of the Advisory Group is TNO[33].

The European Security Research Advisory Board which was set up in 2005 and which oversaw the Preparatory Action and the early implementation of the European Security Research Programme under FP7 included again, a number of industry representatives. Finmeccanica, EADS, SAGEM and Siemens were there. In terms of the reearch institutes, it was the Frauenhofer Gesellschaft who was involved at that time[34].

The point of all this analysis: there is significant involvement of interested parties (i.e. organisations whose business focus is on security and defence and who in turn bid for money from this programme and obtain research funding) who were heavily involved in the conception and implementation of this programme. A substantial subset of these interested parties comes from the defence industry. There is rather less involvement from the civil sector and even less involvement from civil society who might bring into the debate the issues around civil society perception of security, security threats, security responses and social acceptability of such response.

The fact that the legal basis for security research in the context of Horizon 2020 still fudges the issue of defence research does nothing to reassure on this issue.

Of course, the research framework programme is managed by a programme committee which has the final say. This committee is more powerful than the Security Advisory Group. It is composed of representatives from the Member States (one per Member State); they could be a scientist, a defence minister, a security expert, or a civil servant; importantly, the membership is not publicly known.

The bottom line: there is a need to address the issue of democratic control of the annual research programme which in the end determines where the money goes. If the calls for proposals are for unmanned aerial vehicles (UAVs) or surveillance systems then that is what the proposals will address. It is at the stage of the calls for proposals where the agenda is being set in detail. It is therefore imperative that the calls for proposals themselves, and indeed the annual action programmes on which they are based, are subjected to an ethical review to ensure that at least the minimum standards stipulated by (then) European Commissioner Franco Frattini in 2007 are met:

We need to listen to the technical experts to tell us what is technically feasible. Then we need to listen to experts on fundamental rights to see whether there are consequences of using these technologies that would put these rights in danger. It is only when we have considered all sides of the equation that we can find a balanced response.[35]

The European Parliament – supporting the Defence Industry?

The Kangaroo Group

The European Parliament has taken a significant interest in security research and in the defence industry for some time. One of the sources of this interest is located in what is called the Kangaroo Group, an international non-profit association, which brings together the industry and parliamentarians and other representatives of EU Institutions. Until the end of the 2011, this group (though in no way officially part of the European Parliament) had its address within the European Parliament buildings in Brussels. In January 2012 it moved to new premises a few metres away from the European Parliament Building.

The list of members of the group shows representation of MEPs from four of the different political groups: the president of the organisation is a member of the European People's Party (EPP) and the vice chairwoman is from the Progressive Alliance of Socialists and Democrats (S&D). The other two groups represented are the Alliance of Liberal and Democrats for Europe (ALDE) and the European Conservatives and Reformists (ECR).

The Committee on Industry, Research and Energy (ITRE)

During the mid-term review of the current Research Framework Programme, the Committee on Industry, Research and Energy (ITRE) produced an own initiative report on the mid-term review of the 7th Framework Programme for Research (2011/2043(INI)). This report was written for the committee by Jean-Pierre Audy, a French Member of the European Parliament from the Group of the European People's Party (Christian Democrats).

The key cause for concern in this draft report was paragraph 14 which read:

Proposes that an **ambitious European research plan for technology and defence be adopted between the Union and the Member States and receive significant initial financing from FP7 and the European Defence Agency** on the basis of Article 45(d) of the EU Treaty, with a view to enhancing the industrial and technological base of the defence sector while at the same time improving the efficiency of military public spending;[36]

This article was removed from the final report and thus not adopted; this was a result of the very fast intervention of two Members of the European Parliament and a degree of public support for striking out this paragraph communicated to a large number of MEPs. So the attempt to bring defence research into the Research Framework Programme was averted, but it has not gone away.

The Committee on Foreign Affairs Report

In November 2011, the European Parliament Plenary adopted an own initiative report which had been drafted by Krzysztof Lisek on behalf of the Foreign Affairs Committee. The title of the report was: Report on the impact of the financial crisis on the defence sector in EU Member States and carried the reference (2011/2177(INI)).

There are a number of points made in the report which are worth highlighting here:

Paragraph 8

'Considers that the **economic and financial crisis can be used as an opportunity for the integration of EU defence policies**, as it can provide the impetus for finally creating and implementing ambitious reforms long in the making;'

Paragraph 9:

'... urges Member States to accept that increased cooperation is the best way forward and that, in particular, through... (C) **enhanced cooperation in research and technological development**, ... the Member States can develop capabilities in a more cost-efficient way, ...'

Paragraph 36:

'Stresses in particular that **security research needs to be maintained as an independent component** in the next Horizon 2020 Programme; takes the view that the **scope of the 'Security' theme should be expanded** to reflect the **necessity for innovation and technology transfer between the civil and the defence industry**, but maintains that, while taking due account of any relevant defence-related requirements in the programmes and projects, the theme should keep its civilian focus;'

Paragraph 37:

Points out that, just as the results of civilian research often have defence applications, the spin-offs from defence research frequently benefit the whole of society; recalls in particular the examples of the internet and GPS; takes the view that, **in the long run, more specific focus on defence research could be envisaged in the next Framework Programme**, in order to stimulate European collaborative research and help bring together dispersed national funds;

Paragraph 38:

Stresses, however, that no resources must be transferred from civilian research and **that any EU-funded defence research activity should first of all follow the objective of the development of EU crisis management capabilities and focus on research with dual applications**;[37]

Thus, the attempt to open up European Security Research to overtly defence-related aspects is still there in the background; the reference to 'defence research ... could be envisaged in the next Framework Programme' suggests that there might be moves to bring forward amendments to that effect during the legislative passage of Horizon 2020.

Ethics

Which brings us to the question of ethics in the context of European Research. This is of course not restricted to Security Research.

The current legal framework – FP7

In the current legal basis for the European Research Framework Programme 7, an introductory recital (paragraph 30 of 35) states:

Research activities supported by the Seventh Framework Programme should respect fundamental ethical principles, including those reflected in the Charter of Fundamental Rights of the European Union. The opinions of the European Group on Ethics in Science and New Technologies are and will be taken into account. Research activities should also take into account the Protocol on the Protection and Welfare of Animals and reduce the use of animals in research and testing, with a view ultimately to replacing animal use.[38]

Article 6 of the same document, headed 'Ethical principles', then sets out the requirement that all research activities funded under the Programme shall be carried out in compliance with fundamental ethical principles.

It excludes from funding research

- Aiming at human cloning for reproductive purposes

- Intended to modify the genetic heritage of human beings which could make such changes heritable

- Intended to create embryos solely for the purpose of research or for the purpose of stem cell procurement.[39]

Finally, it goes on to say that some human stem cell research may be financed under certain circumstances.

In short, the whole of the ethics issue revolves around bio-ethics as far as this regulation is concerned.

There is no reference to ethics involved in other areas of research and no reference to ethical issues relating to dual use research and research outputs. The general reference to the Charter of Fundamental Rights is welcome, but does not address the critical issues that can arise in research which even with the best will in the world are likely to straddle the boundary between civilian and military interests.

Ethics in Horizon 2020

The Proposed Regulation

The Proposed Regulation has two recital paragraphs relating to ethics. They are paragraphs 24 and 25 of 37 respectively. The first of these is similar to recital 30 in the legal basis of the current Research Framework Programme but, curiously does not refer to the Charter of Fundamental Rights. It does, however, explicitly refer to Article 13 of the Treaty on the Functioning of the European Union (animal welfare subject to respect for legislative or administrative provisions and customs of the Member States relating in particular to religious rites, cultural traditions and regional heritage[40]), and Article 168 of the same Treaty (relating to human and public health). The second of these recitals more specifically addresses the issue of human embryos and stem cells.

The Proposed Regulation also has a main article relating to Ethical principles (Article 16). This time the reference to the Charter of Fundamental Rights of the European Union is picked up here in paragraph 1 sub paragraph 1, as is a general reference to Union and international legislation and a specific reference to the European Convention on Human Rights and its Supplementary Protocols.[41] A second sub paragraph of paragraph 1 also refers to a number of other rights (privacy, protection of personal data, physical and mental integrity of a person, non-discrimination), to the need for a high level of human health protection and to the principle of proportionality.

Paragraph 2 of this Article contains the restriction of funded activities to those with an 'exclusive focus on civil applications'[42]. This is new in Horizon 2020 and to be welcomed.

The remainder of Article 16 follows the content of Article 6 of the current regulation exactly.

What is important to note is that the reference to fundamental rights in the proposal is much stronger than in the current framework in that it specifies in Article 16, Paragraph 1:

> **All the research and innovation activities carried out under Horizon 2020 shall comply** with ethical principles **and relevant national, Union and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols**.[43]

This is good news; but there is little attention paid to the dilemma that must inevitably arise from time to time when security and fundamental rights stand in opposition to each other. How are they to be balanced? Which takes precedence? Given the very firm inclusion language of this paragraph, it could be argued that fundamental rights must always take precedence. Time will tell.

It would be important to ensure that some of the research funding is also applied to social science research into these difficult questions.

The Participation Regulation

The separate proposed regulation relating to participation in Horizon 2020 projects and to dissemination of results also makes reference to ethical principles and related issues.

The first is in recital 7 (of 20) and makes a broad reference to respecting fundamental rights and observing the principles acknowledged by the Charter of Fundamental Rights of the European Union. It makes specific reference to avoiding any kind of plagiarism.[44]

Article 12, paragraph 2 requires details of ethical approvals to be provided for research relating to human embryonic stem cells[45]; paragraph 3 of the same article stipulates that proposals which contravene ethical principles can be excluded from evaluation, selection or award.

Article 13 requires the Commission to carry out systematic ethics reviews for proposals raising ethical issues.[46]

Article 16, paragraph 5 provides for a grant agreement to contain provisions relating to ethical principles where appropriate.[47]

Article 19, paragraph 9 requires participants in projects to comply *inter alia* with ethical rules applicable in the country where the research is carried out.[48]

Whilst there are some references to ethics and/or ethical principles in the regulations governing participation in the current Research Framework Programme, the proposed regulation appears to be a little stronger on these issues.

The Proposed Council Decision

This document also has some references to ethics.

In the section on Innovative Societies, in paragraph 6.2.3 there is the following statement:

An **Ethics Framework** for research and innovation, based on the fundamental ethical principles including those reflected in the Charter of Fundamental Rights and all the relevant Union laws and Conventions, **will be promoted** in coordination with relevant international organisations.[49]

There is specific reference in the security research section of the document to testing the compliance of technologies and capabilities for border management with ethical principles.[50] A further reference to the ethical aspects of dual use technologies is found in paragraph 6.3.4[51]. In the section on Ensuring privacy and freedom in the internet and enhancing the societal dimension of security (paragraph 6.3.5) it says: 'Ethical issues and protection of human values and fundamental rights will be addressed.'[52]

So there is a general awareness of the ethical issues raised in the Security Research Programme in a way that was not the case in the legal basis of the current Research Framework Programme. That is progress. But does it go far enough?

What are ethics or ethical principles in this context?

The drawback of these references is that they are both general and appear almost invariably in a long list of other considerations which are equally important, or so it would seem. There is no definition of what is meant by such principles. Implicitly, the issues flagged up as having an ethical dimension are:

- Bio-sciences
- Dual use (civilian and military uses of certain types of technology)
- Privacy issues
- Data protection issues

- Compliance with the Charter of Fundamental Rights (and other international legal requirements and Conventions).

One issue to raise in response to this list is that the 'dual use' question is less of an ethical question and more of a technical one: how do we recognised a technology or component as 'dual use' and what is to be done about it? As Ben Hayes points out: 'These are questions that become increasingly difficult to answer as our societies become more militarised, but they still require a technical and objectively verifiable answer that enables classification if they are to serve any meaningful purpose in terms of checking the power and activities of the security and defence industries.'[53]

The underlying issue is that there is, within the current and the proposed research framework programmes, a supposedly civil security programme which is clearly funding dual use technology. This is unacceptable and could be a breach of the EU Treaties. This requires a political response and it requires engagement from citizens to ensure that it stops. That is, however, an agenda that goes wider than the details of Horizon 2020 because the fact that such research is included in the EU Research Framework and is strongly supported by decision-makers in the European Union reflects the fact that this is a fundamental political and public debate that needs to be pursued.

Within Horizon 2020, there is some suggestion that there might be funding for research projects which look at defining and operationalising ethical and potentially dual use issues more clearly and that is welcome.

The European Union draws on experts to assist in these matters. The main source of such assistance comes from the European Group on Ethics in Science and New Technology. This group is dominated by experts from medicine and bio-sciences, law and theology. There are no experts (as far as is possible to determine from their biographies shown on the groups' website) on dual use technology, ITC, privacy and data protection issues, and certainly none that could be said to represent civil society.

The European Commission brought together a group to consider the ethics implications of the Framework Programme (arguably in order to inform the content of the Horizon 2020 proposals in this regard) during the course of 2011. We have not been able to find any published information about this process but it appears that the conclusions of this group, whose work has now finished, may be published in 2012.

It is conceivable that many of the security research projects now have ethical review boards as part of the project design and that some of them include ethics work packages. Much useful research is being done. The extent to which it is published, analysed and incorporated into the necessary political and public debate about what is acceptable is another question. The EU needs to be seen to be listening to these voices.

In September 2011, the European Commission convened a workshop on Ethical Issues in Security Research. Some of the content of some of the presentations from that workshop are worth looking at in more detail to see where the discussion is at within and to an extent beyond the Research Framework Programme. The website has links to 17 presentations out of a total of 20 shown on the agenda.

The first, a keynote address by J. Peter Burgess, Research Professor at the Peace Research Institute in Oslo and a well-known expert on ethical implications of security and insecurity, says: '…the expert groups set up throughout the 2000s as the midwives of the European Security Research Programme …all have shown awareness of the place of security in society, while at the same time struggling to find ways to support and advance this marriage through research policy and administration.'[54]

The majority of the presentations focus on data protection issues. These are important but not the core interest which we have in this debate.

One presentation specifically looked at the question of dual-use research. It concludes that 'Research funding institutions have a strong responsibility to minimize the risks they create (e.g. by independent ethics oversight)[55].

One of the presentations looks at the way in which the Ethics Screening and the Ethics Review works and shows that between 2007 and 2011, of the 274 Security Research Projects which were either in the main or reserve list for funding, 131 (or 61 per cent) were the subject of ethical screening and 78 were recommended for further negotiations or national review.

62 projects were subjected to an ethics review and of those 58 were recommended for further negotiations or national review. Only one project during the whole of this period was rejected on ethical grounds.

It would seem that in recent years all security research projects are the subject of an ethics review.

What is also interesting in this presentation is that of the many issues listed which were raised in the ethics review process, none relate to dual-use issues; and although mission creep and potential malevolent usage is referred to, it relates to usage of the information extracted rather than to the technology that is developed as a result of the research.[56]

What is clear from the range of presentations (including those on data protection and privacy issues) is the fact that the ethics agenda is far from clear, far from embedded in either the process of project development or project approval and therefore not yet adequate to ensure that security research can actually comply with the legal requirements set out in the legal basis for the Research Programme. This makes it doubly important to invest resources into specific research to develop an appropriate ethics framework which covers the issues understood to have ethical dimensions and to investigate whether there are other research areas where these issues need to be addressed.

What is also clear is that the whole of the ethics discussion relates strictly to the project content and not to the people and organisation doing the research. On one level this is not surprising because it is the projects that receive funding. However, the context of the research includes the organisations involved in doing the research. So, if, for example, security research is done in large measure by organisations whose main business is in the defence sector, what chances are there that mission creep into military applications will happen – almost unnoticed because it fits into the world view of the people involved? And if, for example, surveillance technology research is done by organisations who operate in an environment characterised by constant threat perception (real or otherwise), what chances are there that the research will start from the premise that most people are law-abiding citizens and do not need to be subjected to surveillance all the time?

In extreme cases, where organisations have a track record which in and of itself is not compliant with the Charter of Fundamental Rights and international law, should there not be the possibility of excluding them from EU-funded research on the grounds that such participation would undermine the EU's ability to comply with its requirements with regard to ethics and EU legislation?

Some thoughts on possible approaches to these ethics dilemmas

1. There needs to be a systematic analysis of the range of research activities which raise clear ethical issues; this needs to be researched and such research needs to be funded.

2. The ethics agenda needs to be widened beyond bio-sciences and data protection/privacy.

3. The potential for dual use of technology which results from research funded under Horizon 2020 needs to be made explicit in project design and safeguards against military and malevolent application need to be structured into the research projects.

4. All research projects which have potential ethical issues should have an ethics component in the project design involving social scientists and, wherever possible, citizens to review the social acceptability of the compromises inherent in such technology and to think through the safeguards that could limit the risks. Such work should be eligible for appropriate and adequate funding and should be seen as added value rather than an added burden.

Participation by Third Countries

Horizon 2020, just like FP7 and its predecessors, is a programme intended to be open to countries outside of the European Union. The Commission says in The Communication: 'The aim of international cooperation in Horizon 2020 will be to strengthen the Union's excellence and attractiveness in research, to tackle global challenges jointly and to support the Union's external policies.'[57] Participation is foreseen from industrialised and emerging economies, enlargement and neighbourhood countries and developing countries.

There are a number of countries that are associated to the Research Framework Programme 7 and it is likely that they will be associated to Horizon 2020 again. This requires a separate agreement and associated countries also contribute to the budget of the Framework Programme in line with their gross domestic product compared to that of the EU.

Associated Countries under FP7 are:

Switzerland, Israel, Norway, Iceland, Liechtenstein, Turkey, Croatia, (the former Yugoslav Republic of) Macedonia, Serbia, Albania, Montenegro, Bosnia & Herzegovina, the Faroe Islands, and the Republic of Moldova (given here in the order as shown in the Commission Document 'FP7 Third Country Agreements'[58]. There is a much longer list of countries designated International Cooperation Partner Countries which includes those countries who can participate but who do not have the same status as associated countries (they don't pay in and they don't have a role in the management and governance of FP7).

The detail of participation in Horizon 2020 is set out in The Proposed Participation Regulation.

The first reference to third countries in this document comes on page 3 in the explanatory note where it says: the participation of legal entities established in third countries and of international organisations in actions under "Horizon 2020" will be **streamlined and stimulated**, in line with the objectives of international cooperation set out in the Treaty, based on **mutual benefits and taking into account the conditions for the participation of European Union entities to third countries' programmes**.[59] This is, thus, about reciprocity.

This is elaborated in Article 6[60] which states that: 'any legal entity, **regardless of its place of establishment'**.

The only restriction with regard to third countries is as follows (in paragraph 2 of this Article): The relevant work programme may restrict the participation in Horizon 2020 or parts thereof of legal entities established in third countries **where conditions for the participation of legal entities from Member States in the third country's research and innovation programmes are considered prejudicial to the Union's interests**. In other words, these restrictions would apply where the third country does not give similarly good access to legal entities from Member States of the European Union.

By limiting participation in this very narrow way only, the European Union does not provide itself with the legal tools to ensure that it can fulfil its obligations under Article 3 (5) of the Lisbon Treaty which provides that the Union shall contribute, among other things, to the strict observance of and the development of international law, and in particular of the principles of the UN Charter.

In recent years, an increasing number of resolutions of the United Nations Security Council (UNSC) have imposed on members of the international community the duty to ensure compliance with their terms. These resolutions deal with matters as diverse as arms embargoes, asset freezes, no-fly zones, non-proliferation of nuclear technology, the fight against terrorism, the prevention and repression of piracy, the imposition of sanctions on named individuals or companies, the non-recognition of territorial changes resulting from the use of force, the prohibition of trade in specified products (such as diamonds), etc.

Additionally, the international Court of Justice (ICJ) has delivered advisory opinions which similarly set out obligations of the States parties to the Geneva Convention Relative to the Protection of Civilian Persons in Time of War of 12 August 1949 (Fourth Geneva Convention) to ensure compliance with international law.

Although the advisory opinions of the ICJ are not binding in themselves, it is generally accepted that they constitute an authoritative statement of the law and are therefore binding to that extent.

Recital 8[61] of the Proposed Participation Regulation sets out that participation must be in line with Article 75 of the Treaty on Functioning of the European Union (TFEU) which relates to terrorist finance, Article 215 of the same Treaty which relates to economic sanctions, and, more generally, with 'international law'. However, none of the provisions of the Proposed Regulation itself deals with this issue. That would seem to be a regrettable omission which needs to be rectified.

We are therefore recommending an amendment to Article 6 of the Proposed Participation Regulation to address this issue.

Appendix - Endnotes

[1] European Commission, COM(2011) 808, p. 19

[2] European Commission, COM(2011) 811, p. 81 (emphasis added)

[3] European Commission, Research & Innovation, FP7 in Brief, accessed on 23 January 2012 at: http://ec.europa.eu/research/fp7/understanding/fp7inbrief/structure_en.html

[4] European Commission, COM(2011) 808 final Communication – Horizon 2020 – a Framework Programme for Research and Innovation, accessed on 23 January 2012 at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0808:FIN:en:PDF

[5] EURATOM Treaty, Article 1, paragraph 2, accessed on 27 February 2012 at: http://eur-lex.europa.eu/en/treaties/dat/12006A/12006A.htm

[6] *ibid.*

[7] The analysis of these figures was done by QCEA using the information provided in European Commission, COM(2011) 811 final, Proposal for a Council Decision establishing the Specific Programme Implementing Horizon 2020 – The Framework Programme for Research and Innovation (2014 – 2910), pp. 113 - 118, accessed on 25 January 2012 at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0811:FIN:en:PDF

[8] The analysis of these figures was done by QCEA using the information as above and information obtained from
[8] Decision No 1982/2005/EC of the European Parliament and the Council of 18 December 2006 concerning the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013), p. L 412/4, accessed on 25 January 2012 at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:412:0001:0041:EN:PDF

[9] The analysis of these figures was done by QCEA using the information sources quoted above under 3 and 4

[10] European Commission, COM(2011) 809 final, Proposal for a Regulation of the European Parliament and of the Council establishing Horizon 2020 – The Framework Programme for Research and Innovation (2014-2020), p. 74, accessed on 15 February 2012 at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0809:FIN:en:PDF

[11] *ibid.*, pp. 76 - 77

[12] *ibid.*, p. 77

[13] *ibid.*, p. 77

[14] European Commission, CORDIS, FP7, Security Research Homepage, accessed on 23 January 2012 at: http://cordis.europa.eu/fp7/security/home_en.html (emphases added)

[15] European Commission, COM(2011) 811 final, Proposal for a Council Decision establishing the Specific Programme Implementing Horizon 2020, p. 81, accessed on 24 January 2012 at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0811:FIN:en:PDF

[16] *ibid.*

[17] *ibid.*(emphasis added)

[18] European Commission, COM(2011) 808, p. 19

[19] European Commission, COM(2011) 811 final, p. 81

[20] *ibid.*

[21] *ibid.*, p. 82

[22] *ibid.*

[23] *ibid.*

[24] *ibid.*

[25] De Kerchove, Gilles, EU Counter-Terrorism Coordinator, 10 years, 10 lessons: what we should learn from post-9/11 era, accessed on 15 February 2012 at: http://thehill.com/opinion/op-ed/180413-10-years-10-lessons-what-we-should-learn-from-post-911-era

[26] *ibid.*

[27] European Forum for Restorative Justice, Reading Room, Restorative justice and victims of terrorism – Are there possibilities? Accessed on 15 February 2012 at: http://www.euforumrj.org/readingroom/Terrorism/RJ.pdf

[28] *ibid.*

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