



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 3.7.2002
SEC(2002) 698

COMMISSION STAFF WORKING PAPER

**REPORT OF THE R&D EXPERT GROUP ON COUNTERING THE
EFFECTS OF BIOLOGICAL AND CHEMICAL TERRORISM**

COMMISSION STAFF WORKING PAPER

REPORT OF THE R&D EXPERT GROUP ON COUNTERING THE EFFECTS OF BIOLOGICAL AND CHEMICAL TERRORISM

Executive Summary

Following the conclusions of the Ghent Summit of 19 October 2001 on the response to the events of 11 September and the fight against terrorism, the Research Council of 30 October endorsed the Commission's initiative to convene a group of national experts to compile an inventory of research efforts in this field, to determine gaps and define needs and opportunities. This document aims at presenting the main findings of the expert group and at proposing follow-up actions to the recommendations formulated by the expert group.

1. Background

General context

1.1 The Gent Summit of 19 October 2001, responding to the events of 11 September 2001 and the fight against terrorism, called on the Council and the Commission to prepare a programme aimed at improving the co-operation between Member States in the fields of risk evaluation, alert and intervention, and in the fields of research.

1.2 On the initiative of Commissioner Philippe Busquin, the Research Council of 30 October agreed to set up an R & D Expert Group to look at the research questions linked to the detection and identification of biological and chemical agents and at the prevention and treatment of attacks from such agents.

Composition and mandate of the Expert Group

1.3. At its first meeting on 12 December 2001, the Expert Group adopted its mandate, which consisted of three main objectives:

- Prepare an inventory of the research activities in the Member States and at EU level currently in progress for countering the effects of biological and chemical terrorism;
- Examine how these existing research activities can best be mobilised and coordinated;
- Identify the research gaps and what additional research is needed in the short and long term, taking account of the opportunities provided by the new Framework Programme for research, the activities and programmes of the JRC, and the relevant initiatives in the Member States.

1.4 Further to the invitation of Commissioner Busquin to research ministers, each Member State nominated representatives coming from relevant Government Departments: defence, health, research, civil protection and from research

establishments. The Group is chaired by the Commission and involved the participation of interested Commission services (DGs Research, Environment, Enterprise, Health and Consumer Protection, and Joint Research Centre).

Working methods of the Expert Group

1.5 The Expert Group has met three times since the October Council. At the first meeting on 12 December 2001, the Group agreed on its working methods and on the format for collecting information on research activities. Topics to be covered included:

- General description of main research activities underway
- Principal research teams
- Collaboration with other EU countries
- Suggested research areas to be addressed at EU level

1.6 The Commission Services prepared an analysis of the Member States contributions, including recommendations, which were discussed and agreed at the third meeting in May. This also included a summary of research conducted under the Framework Programme 5 in Member States and by the JRC.

1.7 The Commission has also explored with Member States the opportunities for progressing this work through the European Research Area and the next Framework Programme.

1.8 Member States provided information on their activities in this area within the limits imposed by the sensitivity of the topic and the overlap between research, surveillance, defence and contingency planning. As a result, only a very general summary of research activity in the European Union can be provided in contrast to a complete and detailed picture.

2. Main findings

On-going research activities in Member States

2.1 The R & D programmes and capabilities vary significantly between Member States. Where some Member States have specific research programmes on countering the effects of biological and chemical terrorism in place, these are generally linked to defence research, are publicly funded and undertaken in Government research institutions. Member States reported that there was substantially more research taking place to counter biological terrorism than chemical events.

2.2 The majority of Member States have sophisticated surveillance systems in place for monitoring the occurrence of naturally occurring infectious diseases. In most Member States it is these existing systems that would be used to monitor a deliberate release of bio agents. In conjunction with this, Member States are developing new diagnostics for rapid detection and have expertise in risk analysis, which is used to prepare for outbreaks.

2.3 In addition the majority of Member States have extensive research programmes aimed at protecting the population from naturally occurring infectious diseases and exposure to known chemical toxins present in the environment. Research programmes aimed at infectious diseases more generally, takes place in Government research institutes as well as academic institutes. There is also relevant research taking place in industry, notably by the pharmaceutical and biotechnology companies. Much of this research may also be relevant to deliberate release of bio and chemical agents and could be applied in these circumstances. There is less reported research on physical protection and decontamination than detection and biological countermeasures.

On-going international cooperation of research activities

2.4 There are no specific key actions within the Framework Programme 5 aimed at countering the effects of chemical and bio terrorism. However within the four thematic programmes some research which may be of relevance is supported. For example:

- The Energy, Environment and Sustainable Development programme include research on risk assessment and biological hazards.
- The Quality of Life programme includes research on detection of food borne pathogens, vaccines development and mechanisms for control of infectious diseases etc.
- The Competitive and Sustainable Growth Thematic programme includes projects on measurement and testing aimed at fighting fraud and crime.

2.5 The **JRC's** activities include two new prospective studies launched in January 2002 on:

- a. Scientific aspects of biological and chemical terrorism
- b. Social, economic and psychological vulnerabilities of modern society to terrorist.

Initial results are expected in mid summer 2002 with final results available by the end of 2002.

2.6 The JRC has established a Bioresponse Working Group including Member States experts to assess possible scenarios involving the introduction of deliberately transformed organisms for terrorist purposes (e.g. agri-food chain) and to evaluate the potential consequences. The JRC is also currently in the process of updating its on-line database relevant to biological and chemical terrorism. This database would be available to all authorised competent authorities of EU Member States at their request.

2.7 There are existing networks at European and international level for many infectious diseases, but not specifically concerned with bioagents. The focus of these networks is coordination of surveillance and not generally research activities. Some small-scale co-operation between Member States, notably between neighbouring countries was also reported, for example in the areas of development of risk assessment models and diagnostics for exposure to chemical agents.

2.8 Co-ordination of European defence research is primarily through Western European Union, and the Research panel of the Western European Armament Group (WEAG). Within the EUCLID research programme carried out by the WEAG, the CEPA 13 (Commun European Priority Area) deals with Radiological, Chemical and Biological Defence. Otherwise, NATO has also its own science programme which provides support for international collaboration between scientists from countries of the Euro-Atlantic Partnership Council (EAPC).

Lessons from the analysis

2.9 Through analysis of the inventory, Member States identified both research and non-research areas that would benefit from additional stimulation at a European level. In non-research areas, improved co-ordination in surveillance and outbreak investigation were identified as a high priority and to be considered by other Commission services (in particular DG Health and Consumer Protection) and Member States groups. Risk communication and training were also highlighted.

2.10 In research, Member States identified several areas that would benefit from additional research effort at a European level as well as areas that would benefit from improved European co-ordination. Member States suggested more research topics for countering bio agents than chemical agents.

2.11 Research to strengthen surveillance activities was considered to be a high priority both for additional research and for coordination of existing national programmes. Risk assessment and research on physical protection methods were considered to be medium level priorities for improved collaboration.

2.12 Rapid means of diagnosis and identification are of utmost importance for early detection and management of deliberate release of bio or chemical agents and new diagnostics were identified as a high priority for further research. Biological countermeasures were also considered a high priority including research on vaccines, therapeutics and underpinning basic research. New products and processes for decontamination were considered to be of medium level priority.

3. Next Steps

Recommendations of the Expert Group

3.1 On the basis of the analysis, the Expert Group made the following recommendations:

Recommendation 1 – The European Commission to stimulate reinforced coordination in appropriate areas of research. Examples of research topics identified by the Expert Group for improved coordination include, among others, research aspects to underpin surveillance and outbreak investigation, risk assessment and physical protection as well as training activities.

Recommendation 2 – The European Commission, DG Research to consider, with others involved, these issues when developing the call for proposals for research to support European policy in the Framework Programme 6,

particularly concerning issues related to civil protection, including biosecurity and crisis management.

Recommendation 3 – Member States and the European Commission should examine the possibility of stimulating research within the Framework Programme 6 priority themes. Examples of research topics highlighted by the Expert Group for further long term research include, among others, new rapid diagnostics for identifying potential bio and chemical agents, new vaccines against potential bio agents and novel therapeutics.

Recommendation 4 – The Expert Group should continue its work, on an ad hoc basis in order to provide the European Commission with a network and mechanism for determining the research efforts needed in the EU and in the context of ERA.

Recommendation 5 – The European Commission's Joint Research Centre should keep in contact with the Expert Group, in order to inform it about its activities in this area.

Recommendation 6 – The European Commission should ensure that all activities that relate to the Ghent Conclusions continue to be coordinated.

Follow-up to the recommendations

3.2 After consideration of these recommendations, the Commission's services believe that the European Research Area provides a good framework for taking the research recommendations work forward. It generates the conditions to exploit the research potential in Europe by enabling a real coordination between Member States. The new Framework Programme, to be launched at the end of 2002, will help to make a reality of the European Research Area.

3.3 Without prejudice to the decisions which the Commission will subsequently take following the procedures foreseen in the Framework Programme 6 on the areas to be pursued, the research recommendations (1 – 3) will be taken forward by the Commission, in conjunction with Member States where applicable, through the three components of the Framework 6, taking into account the relative importance of other research priorities. The Framework Programme 6 provides a mechanism for fostering coordination of research through the programme on strengthening the foundations of the European Research Area. There are opportunities for specific measures in the context of research to support the Community's policy needs (anticipating the EU's scientific and technological needs) and longer term basic research in the context of the thematic priorities.

3.4 The Commission will continue to provide Secretariat support for the Expert Group as deemed necessary. This Secretariat will establish and maintain a restricted access website on the CIRCA system. It will be used as a method for communicating with members of the Expert Group and also provide a mechanism for exchange of information between Member States. The Expert Group will also be invited to form working groups to take forward specific research topics where particular Member

States have an interest. The group will be able to convene at short notice in case of emergency.

3.5 The European Commission's Joint Research Centre will keep the Expert Group informed about the progress of the Bioresponse Working Group, the prospective studies, and of any relevant new activities and developments in the context of the Framework Programme 6. Furthermore, it will promptly inform the Council of the findings of the two prospective studies launched in 2002.

3.6 The Ghent summit conclusions also included a reference to improved co-operation between Member States regarding "risk assessment, early warning, the storage of such means as well as research". The Commission will continue to ensure close cooperation between these activities through sharing information and participation in relevant meetings.
