

**MEETING OF THE STATES PARTIES TO
THE CONVENTION ON THE PROHIBITION
OF THE DEVELOPMENT, PRODUCTION
AND STOCKPILING OF
BACTERIOLOGICAL (BIOLOGICAL) AND
TOXIN WEAPONS AND ON THEIR
DESTRUCTION**

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Item 5 of the provisional agenda

**Consideration of the content, promulgation, and
adoption of codes of conduct for scientists**

GERMAN POLICIES FOR BIODEFENCE RESEARCH

Prepared by Germany

1. The Bundeswehr Institute of Microbiology's main task is to be prepared to detect biological warfare agents. This requires the conduct of pertinent microbiological research at the highest scientific level, which must also incorporate issues connected with epidemiology, epidemic management, pathomechanisms and the prevention, recognition and treatment of health problems caused by biological warfare agents to ensure that the Bundeswehr Medical Service is equipped to preserve and restore the health of soldiers who are in danger of or have experienced exposure to biological agents.

German Policies for Biodefence Research

2. As part of its research activities, the Federal Ministry of Defence is pursuing a research and development programme in the field of biological protection, with work being carried out at two of the Bundeswehr's institutes. The first is the Institute of Microbiology in Munich, which belongs to the Medical Service and which is responsible for medical protection measures, i.e. health preservation and restoration. The second is the Research Institute for Protective Technologies and NBC Protection in Munster, which is responsible for testing, research and development in the area of biodefence technologies. Biodefence technology encompasses, for example, the development of automated detection systems for early identification and alert, the efficacy of disinfectants for decontaminating materials and the safety of protective mask filters and clothing.

3. The biodefence activities in the two Bundeswehr institutes are complemented by research and development contracts awarded to the civil sector. The need to deal on a scientific level with issues of protection from the effects of biological weapons results from a long-term analysis of

security risks by the Federal Republic of Germany and its allies. It is founded on the legitimate right of a nation to defend itself and to protect its armed forces against conventional weapons and potential weapons of mass destruction. The main purpose of the scientific work carried out in the field of biodefence is to acquire new information and data in order to be able to:

- i Evaluate biological risks and hazardous situations,
- ii Develop biodefence principles, concepts, processes and measures. In close cooperation with the NBC defence this includes reconnaissance, stand-off biological detection systems to warn and alert, the further development of personal and collective protection systems and decontamination measures for people and equipment,
- iii Provide the necessary diagnostic means to detect biological agents so as to allow specific early and specialized diagnosis,
- iv Provide measures for therapy and prophylaxis
- v Provide political and military decision-makers with advice whenever they are required to plan, organize and apply biodefence measures or conduct negotiations in the field of biological disarmament and arms control, and
- vi Provide subsidiary Bundeswehr support for civil-military cooperation in the field of disaster relief and civil defence in the event of biological hazard situations.

4. The research is carried out on organisms that are pathogenic to varying extents to humans and animals and which primarily belong to biological safety levels 3 and 4. In the Federal Republic of Germany, the handling of such pathogens is restricted to legally authorized institutions which are subject to regular state monitoring by civil regulatory and supervisory authorities and a stringent biological security regime. In Germany no additional special regulations apply to the military establishment. For example, the authorities only grant certain people a permit to work with these pathogens. This comprehensive security regime is based on European Union directives that have been incorporated into Germany's national laws and decrees: the Biological Material Regulation (Biostoff-Verordnung), the Infection Protection Act (Infektionsschutzgesetz) and the Genetic Engineering Act (Gentechnik-Gesetz). These laws also apply to the Bundeswehr.

5. The Federal Republic of Germany complies strictly with the Geneva Convention and the Biological Weapons Convention and has pledged "never to develop, produce, stockpile, acquire or retain any biological agent other than for peaceful purposes". This pledge is also reflected in the WEU treaties and in the War Weapons Control Act (Kriegswaffenkontrollgesetz), which prohibit offensive research. Research activities in the field of biodefence are declared and made available to the United Nations in the context of confidence-building measures.

6. The Bundeswehr's biodefence research and development programme is subject to the following control and monitoring mechanisms:

- i Parliamentary control, e.g. in the form of an annual declaration of all projects involving genetic engineering,

- ii The expert internal examination of all research and development projects by the responsible Bundeswehr agencies as part of the approval procedure,
- iii The submission of an annual report to the United Nations as a confidence-building measure,
- iv The publication of the topics, goals and content of all medical research and development projects on the Bundeswehr website,
- v The examination by the responsible state civil authorities (Landesbehörden) of all projects which are to involve the use of genetically modified organisms,
- vi The examination of all projects involving experiments with animals by the responsible state animal protection commissions (Landestierschutzkommissionen) and the Bundeswehr Animal Protection Commission.

7. The network of various authorization and monitoring agencies ensures that research concentrates exclusively on defence. Activities with potential for offensive use, such as investigation of the resistance of microorganisms, genetic manipulation of organisms and aerosol experiments, are avoided in principle. Were they to be proposed nonetheless, the need to conduct such a project would be assessed according to particularly strict criteria in consultation with independent, non-Bundeswehr experts. Furthermore, organizational measures are in place to make the abuse of biological agents more difficult. These include:

- i Military security clearance for the military and civilian personnel employed at Bundeswehr biodefence research facilities,
- ii The imposition of restrictions on admission to military property and Bundeswehr biodefence research facilities,
- iii The imposition of restrictions on admission to laboratories with a certain biosafety level,
- iv Careful selection of cooperation partners and visiting scientists,
- v The provision of adequate specialized training and regular practice for personnel,
- vi Annual inspection of facilities in military research institutions working with genetically modified organisms by civil authorities,
- vii Compliance with the numerous laws, regulations, technical rules and DIN standards that apply to research facilities.

8. Another important way to prevent abuse is to maintain the transparency of biodefence research and development activities. This is achieved by regularly publishing the research programmes and results nationally and internationally and presenting them at congresses. Additional controls include national cooperation with state-run, university and private institutions, international involvement in EU and NATO working groups and evaluation of the research activities and facilities by the German Science Council, commissioned by the German Parliament. However, transparency does not eliminate the need for responsible handling of the information obtained. The Bundeswehr's strict policy of focusing its biodefence research purely on defence reduces the likelihood that findings with considerable potential for abuse may be

produced, but in individual cases it may be advisable to publish findings in a way that prevents potential proliferators and terrorists from simply copying them. Thanks to its consistent and exclusive focus on defence, Bundeswehr biodefence research has not to date produced any findings which should not have been pursued for ethical reasons or which should not have been published due to the risk of proliferation.

9. Anyone in possession of fundamental biotechnological skills and expertise basically has the capacity to abuse them. In Germany the combination of parliamentary control, the judicial and administrative system with its network of authorization and monitoring agencies, the presentation and discussion of research programmes in expert groups and the incorporation of Germany's internationally binding renunciation of an offensive biological weapons programme into national criminal law provide a strong guarantee against all forms of abuse of biodefence research.

10. If these conditions have been met, it could in fact be a worthwhile consideration to introduce a further pillar in the form of a code of conduct for scientists working in this field.
