

# The exports control mechanism of biological warfare

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**B**iotecnology has the potential to solve many problems of today's life and be a blessing to our civilization, but one of its faces is dreadful — the use of biotechnology to produce biological weapons of mass destruction, called biological warfare agents. Biological warfare (BW) is the use of pathogens or toxins for military purposes. BW agents are inherently more toxic than chemical weapons and potentially more effective because most are naturally occurring pathogens — such as bacteria and viruses — which are self-replicating and have specific physiologically targeted effects.

To a country considering a BW program, one advantage of biological weapons over chemical or nuclear weapons is that there are no reliable BW detection devices currently available nor are there any recognizable signals to the human senses. Moreover, BW attack might be readily attributable to a natural outbreak, providing the attacking country with grounds for plausible denial. In addition, biological weapons can be targeted not only against humans, but also against crops, domestic livestock, and specific kinds of material, such as rocket fuels or electronics for example.

During the last decades, the use and proliferation — the term used in reference to the unwelcome spread of weapons of mass destruction — of biological weapons has represented an immediate threat to the security of every member of the world community, however despite their potentially devastating effects, biological agents have not been used on any significant scale. Perhaps the principal deterrent to the use of BW is the uncertainty about ultimate consequences, for example, of accidentally exposing friendly forces or civilian populations. But the moral barrier to offensive biological warfare development has been breached. It is estimated, that at least 10 countries are working to produce both previously known and futuristic biological weapons.

All the equipment, technology and materials needed for biological agent production are dual use. The word "dual use" means goods which are designed for civil use, but may be used for military purposes. Very little di-

stinguishes a vaccine plant from a BW production facility. Because of the dual use nature of BW research and equipment, any BW program could be easily disguised as a legitimate enterprise. BW agents which have been widely recognized as having military utility, including pathogens — such as bacteria, viruses and fungi — as well as toxins. Through advanced biotechnology techniques, toxins, bioregulators and infectious agents are subject to enhancement to increase their utility as BW agents. For example, potential types of genetically engineered disease-causing agents might include antibiotic-resistant bacteria; benign microorganisms genetically altered to produce toxins, venoms or bioregulators; immunologically altered viruses resistant to standard vaccines and not identifiable by classical serological means; bacteria genetically altered to have advanced aerosol and environmental durability. With biotechnology and genetic engineering advances since 1970, it is now theoretically possible to mass-produce lethal natural products previously available only in small, militarily insignificant quantities. With recombinant DNA technology, it is possible to produce new organisms, exploit variations of organisms, or induce organisms to respond in new ways, such as producing synthetic bioregulators or chemical toxins.

Because the danger is imminent, both from certain countries and terrorist groups, the international community attempts to stem BW proliferation. These efforts have focused on self-disclosures and declarations under the Biological and Toxin Weapons Convention of 1972 or on suppliers, as the Australia Group is doing.

The Australia Group (AG) is an informal forum of 30 industrialized countries that have agreed to cooperate in curbing the proliferation of biological and chemical weapons (BCW). This is accomplished through harmonization of exports controls and the exchange of information on BCW-related activities of concern.

The AG was formed in 1985 when the U.S. and other nations joined in imposing exports controls on a number of chemicals that could be used to produce chemical weapons. While initially organized to address the threat of chemical weapons, the AG expanded its cooperation into the biological area. The Group has drawn up control lists of dual-use precursor chemicals, biological agents, and chemical and biological equipment and related technology, which are critical to a proliferator. The lists are reviewed and refined on a regular basis. These controls adhere to international understandings agreed to by the AG. They reflect the international commitment to reinforce the international obligations agreed to in the 1972 Biological Weapons Convention and the 1925 Geneva Protocol relating to the use in war of gases and bacterial agents. By regulating exports of certain items particularly useful in the production of biological weapons, these controls will help limit the destabilizing spread of biological weapons.

Poland joined the Australia Group in November 1994, and incorporated the AG control lists to its regulations. This non-proliferation policy is an important part of our contribution for the international peace and stability. Poland's prime concern is to join NATO and the European Union as soon as

possible. NATO and EU member states play a major role in non-proliferation regimes, so our country is making efforts to have an effective exports control system in order to be seen as dependable partner. It is also our top priority economic policy to encourage foreign investments in Poland. We think that exports control is an important element our efforts to establish positive environment for foreign investors and help other countries to take their decision by allowing high technology and materials to come to our country.

An effective exports control system must be premised upon a sound legal foundation. The legal foundation of Polish exports control regime is the law passed by the Parliament on the December 2, 1993, called the Law on Special Control of Foreign Exchange of Goods and Technologies in reference to international agreements and obligations, with standing regulations issued on the basis of this law. Our law provides special authority for the achievement and implementation of bilateral and multilateral exports control arrangements affecting biological weapons as well as other strategic goods and technology.

This law and regulations provide legal grounds for the prohibition and restriction of exports and imports if there is any threat of proliferation through a licensing system, and ensure that end uses of such items are firmly in accord with the purposes for which the export or import was authorized. The controlled items cover the former COCOM lists, as well as the lists of the Nuclear Suppliers Group, the Missile Technology Control Regime, and of course the Australia Group lists. These lists were published as Appendices to the "Monitor Polski" — the "Polish Official Journal", issue of March 1994. The Australia Group lists contain Chemical Weapon Agent Precursor Chemicals, Chemical Test, Inspection and Production Equipment, Biological Weapon Agents such as Human Pathogens (Viruses, Ricettsiae, Bacteria, Genetically Modified Micro-Organisms), Animal pathogens, Plant pathogens and Biological Test, Inspection and Production Equipment.

The exports control mechanism is based on the approval or denial decision on licenses taken by Department of Exports Control (DEC), division of the Ministry of Foreign Economic Relations. Both exports and imports are subject to control, but there is only one type of license — individual license. The licensing policy in the case of the AG controlled items is to consider license applications on a case-by-case basis to determine whether the export would make a material contribution to the design, development, production, stockpiling, or use of biological weapons. When an exports is deemed to make such a contribution, the application will be denied.

In order to fulfill its duties, DEC employs technical specialists and cooperates with experts who perform documentary and physical checks of companies and merchandise. The Department has also close liaison with other Governmental bodies and agencies. DEC is involved in international cooperation with competent institutions in the countries with active non-proliferation programs, and organizes extensive information programs on exports controls for other national institutions, especially for the business community.

To be effective, law shall include enforcement elements. Polish exports

control law establishes criminal penalties, which are essential to effectively punish and deter violations. Other legal enforcement elements include broad investigative powers, authority to punish false or misleading statements, authority for pre-license checks and post-shipment verifications, and authority to coordinate with international enforcement efforts as well as information exchange among concerned agencies and governments. However, cooperation with industry and scientific community is the highest priority of DEC activity at the moment.

Over the past years, the world has witnessed many changes — the rapid dismantling of Communism in Eastern Europe and the former USSR together with a new emerging threat generated by the proliferation of mass destruction weapons in certain areas of the world. The Exports Control Regimes have now moved from an East-West to a North-South axis. These changes imply additional and new awareness for the governmental policies and for the new multinational cooperation in the field of existing proliferation concerns. The Biological Weapons exports control regimes impose a high degree of attention and understanding upon science. It is now more complex and more difficult to understand what is required to preserve peace than in the past. When we saw what a small vial of chemical could do when unleashed in a subway, we know we have more to do in trying to stem the proliferation of biological weapons.

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### Summary

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