

Bio laboratories and biological safety: modern approaches within the context of international relations

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Abstract: the article is dedicated to analysis of modern situation regarding to biological safety and creation of biolaboratories for the benefit of specific countries.

Keywords: biological safety, biological agent, biolaboratories, Central Asia, Biological Weapons Convention.

Introduction. The COVID-19 outbreak led to a new polemic regarding to programs of research of biological agents, as well as of activity of biolaboratories within the system of international relations. Biological agent is a bacteria, virus, protozoan parasite or fungus that is intentionally used as a biological weapon, as well as for the purpose of bioterrorism. Artificially created and modified microorganisms can have negative impact of human health in different forms, i.e. from quite mild allergic reactions to fatal outcome. As many biological agents replicate quickly and demand minimum of resources for spreading, they are potentially dangerous under a wide range of conditions.

Biological weapon costs cheaper than a nuclear one, but it can be much more lethal. After two world wars, many countries initiated large-scale programs of research and development of biological weapon. As a result, a number of dangerous infection agents, such as anthrax, botulinum toxin, Yersinia pestis (pneumonic and septic plague), and the Ebola virus were created. These are only a few microorganisms, which appeared resulting from international programs of biological weapon.

In 1972, the world community adopted Biological Weapon Convention, which prohibits usage and accumulation of biological agents. Nowadays many countries including China promote the establishment of verification mechanism within this Convention prohibiting production, development and stockpiling of bacteriologic (biological) and toxic weapons for security purposes. However, the USA remain almost the only country, which is strongly opposed to this proposal for the last 20 years.

The COVID-19 outbreak divides the scientists into two scientific communities today; the first ones consider the source of the virus to be a laboratory, while the second ones suppose that the virus has natural origin. Despite public announcements of World Health Organization concerning the natural origin of the virus, the USA brought a class action against China in the amount of 20 trillion US dollars. The US government claims that this viral disease is a biological weapon, developed for decimating of population. However, these claims remain a speculation in the absence of any conclusive evidence.

Accusations of Washington against Beijing regarding to “concealment” of supposed origin of COVID-19 in Wuhan raised questions of a net of secret biological laboratories of the USA located near the Chinese borders, where they act over the decades. Thus, Hua Chunying, the representative of the Ministry of International Affairs of PRC, noted during the press conference that took place on May 8, 2020 that despite China had only two P4 laboratories (4th level of

biosafety), which dealt with dangerous viruses, the USA had about 13 active structures of this kind. Furthermore, there are 1,495 P3 objects in the USA, “apart from many others laboratories, which they built in territories of the former Soviet Union such as Ukraine, Kazakhstan and in other places all over the world”. Creating the laboratories abroad, the USA seek to avoid a potential “leakage”, as well as legal problems and pressure of world community.

Nowadays the USA provide an active humanitarian assistance to Tajikistan in matters of health and laboratory studies. One should note that sharing common borders with Afghanistan and China, Tajikistan is a key ally in promoting regional stability and security under the leadership of Washington. Activities of United States Agency for International Development prove it in particular. Thus, the US government offered two tranches in amount of 866,000 and 2,6 million US dollars through USAID in June in order to increase the ability of Tajikistan to respond to the ongoing COVID-19 pandemic.

In so doing, a Level-3 Biosecurity laboratory was put into operation with funding from European and American funds in Dushanbe in 2013. Total amount of construction and equipment was more than 3 million US dollars. In addition to this, trainings on biological safety take place in Afghanistan and Tajikistan regularly within the project “EU Centers of Excellence on Chemical, Biological, Radiological and Nuclear Risk Mitigation (CBRN CoE)”. Thus, seven trainings were held in Dushanbe from June to October 2018 within the “Project 53”.

US foreign agencies pay close attention to Tajik specialists from the following services: Sanitary and Epidemiological Service, Laboratory for bacteriology, virology, parasitology and food safety, Veterinary services, Laboratory services in Dushanbe, Khatlon Province, Kurgan-Tyube, Baljuvon District, Temurmaliq District, Kulob, Sughd Region (the city of Khujand).

The choice of Central Asia and namely of Tadjikistan is not accidental. The region is known for its rich diversity of microorganisms and fauna, which is beneficial for creation of new biological agents and implementation of inventions in genetic engineering. Moreover, loyalty of local authorities promoted by their interest in additional investment allows creating of new foreign laboratories.

Scientists of various countries express concern about engineering projects of US Defense Advanced Research Projects Agency (DARPA). Thus, nowadays this research arm of the US military is exploring the possibility of deploying insects to make plants more resilient by altering their genes. Some experts say the work may be seen as a potential biological weapon. However, the US side declares that its goal is to protect the nation’s food supply from such threats like drought, crop disease and bioterrorism by using insects to infect plants with viruses that protect against such dangers. According to Richard Guy Reeves, biologist from Max Planck Institute for Evolutionary Biology, this technology is more feasible as a weapon than as an agricultural tool.

Thus, the emergent system of international relations allow the leading states to create biolaboratories abroad using investments and other tools of active financial support. However, the owner has not any risks or responsibility in case of possible “leakage” of biological agents. The current global situation shows that Biological Weapon Convention needs annexes that would allow ordering the Governments to provide the openness of biolaboratories for the safety of all humankind.