Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects

9 August 2022

English only

Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons System
Geneva, 7-11 March, and 25-29 July 2022
Item 5 of the agenda
Consideration of proposals and elaboration, by consensus, of possible measures, including taking into account the example of existing protocols within the Convention, and other options related to the normative and operational framework on emerging technologies in the area of lethal autonomous weapon systems, building upon the recommendations and conclusions of the Group of Governmental Experts related to emerging technologies in the area of lethal autonomous weapon systems, and bringing in expertise on legal, military, and technological aspects

Working paper on Lethal Autonomous Weapons Systems

Submitted by the People's Republic of China

I. Regulating Military Application of Artificial Intelligence (Al)

1. Al-related security governance is a common challenge for mankind. Faced with dramatic changes of the world, the times and technologies, all countries are encouraged to implement the Global Security Initiative on the basis of embracing a vision of common, comprehensive, cooperative and sustainable global security, to further promote the establishment of a balanced, effective and sustainable security architecture, to work together to confront and address security challenges emerged during development, and to establish an effective governance framework for global issues in traditional and non-traditional fields including AI.

2. Lethal Autonomous Weapons Systems (LAWS) is the product of the development of the Al and other emerging technologies. LAWS can be both a tool to maintain national security and a matter of humanitarian concerns. To safeguard common security and dignity of mankind, all countries have the responsibility as well as security and development needs to properly manage the security, legal, ethical and humanitarian risks caused by Al.

3. Military applications of Al should be conducive to improving the humanitarian situation on the modern battlefields by reducing combatant casualties, protecting civilians, and preventing escalation of unintended conflicts. Countries should uphold a national defense policy that is defensive in nature, develop and use AI technologies in the military domain in a prudent and responsible manner, and ensure that relevant weapon systems and their means of warfare comply with international humanitarian law and other applicable international law. Meanwhile, countries should strike a balance between legitimate defense development and humanitarian concerns, and respect all parties' needs to maintain their own security.

4. In December 2021, China submitted a Position Paper on Regulating Military Applications of Al during the Sixth Review Conference of the CCW, which put forward proposals on enhancing AI security governance. We welcome positive feedback from all parties and further discussions based on this paper.

II. Definition and Category of LAWS

5. Addressing the definition of LAWS is the key of negotiating any practical control measures. Due to the dual-use nature of LAWS-related technologies, as relevant discussions become broader, more concerns and divergencies will appear, and it could be more difficult to get any outcome. In our view, we should focus on weapons systems with autonomous killing capabilities, which means autonomous weapons platforms with a lethal mission payload.

6. In terms of lethality, CCW is not intended to prohibit all conventional weapons. Discussions deviated from lethality would not only be contrary to the goal of the CCW, but also make it difficult to have objective and fair discussions on the impacts of Al and other emerging technologies.

7. In terms of autonomy, the main purpose of autonomy is to reduce the dependence on human and external resources in military operations, to improve the adaptability to complex dynamic environment and survivability on the battlefields, and thus to better accomplish the battlefield missions assigned by human beings. The use of relevant weapons systems should be regulated specifically according to different scenarios and different degrees of autonomous capabilities. If autonomous capabilities are not used in the killing chain (e.g., drones for intelligence collection and reconnaissance), even if some weapons systems have a high degree of autonomy, the autonomy in those weapons will not lead to humanitarian concerns.

8. In addition, in order to deepen the understanding of countries, especially developing countries, of relevant technologies, the Governmental Expert Group (GGE) should distinguish between basic concepts such as remote-controlled weapons, automatic weapons and autonomous weapons, offensive autonomous weapons and defensive autonomous weapons, as well as anti-equipment autonomous weapons and anti-personnel autonomous weapons. This will make the GGE's discussions more scientific and accurate, and therefore easier to make substantive progress.

III. Unacceptable Autonomous Weapons Systems and Acceptable Autonomous Weapons Systems

9. The killing chain of weapons systems includes observation, orientation, decision, action and other critical links. Weapons systems with autonomous functions at certain links may not necessarily cause indiscriminate effects. Therefore, general prohibitions or restrictions may undermine the legitimate defense capabilities of countries, and even their rights to use relevant technologies peacefully.

10. Parities should consider classifying autonomous weapons systems into two categories: unacceptable and acceptable, and prohibit the unacceptable parts and regulate the acceptable parts, so as to ensure relevant weapons systems are secure, reliable, manageable and in line with international humanitarian law and other applicable international law. It should be emphasized that above classification will not hamper further discussions of the definition of LAWS, and the discussions of unacceptable and acceptable autonomous weapons systems should not exceed the mandate of the GGE.

11. Basic characteristics of Unacceptable Autonomous Weapons Systems should include but not limited to the following: Firstly, lethality, meaning sufficient lethal payload (charge) and means. Secondly, autonomy, meaning absence of human intervention and control during the entire process of executing a task. Thirdly, impossibility for termination, meaning that once started, there is no way to terminate the operation. Fourthly, indiscriminate killing, meaning that the device will execute the mission of killing and maiming regardless of conditions, scenarios and targets. Fifthly, evolution, meaning that through interaction with the environment, the device can learn autonomously, expand its functions and capabilities in a degree exceeding human expectations.

12. Autonomous weapons systems with all of the five characteristics clearly have anti-human characteristics and significant humanitarian risks, and the international community

could consider following the example of the Protocol on Blinding Laser Weapons and work to reach a legal instrument to prohibit such weapons systems. In view of the developing nature of relevant technologies, more specific evaluation criteria on autonomy and evolution are encouraged.

13. Acceptable Autonomous Weapons Systems could have a high degree of autonomy, but are always under human control. It means they can be used in a secure, credible, reliable and manageable manner, can be suspended by human beings at any time and comply with basic principles of international humanitarian law in military operations, such as distinction, proportionality and precaution.

14. For such weapons systems, China supports countries to take necessary risk mitigation measures and implement a tiered and categorized regulation in particular. Countries should fully take into account the inherent characteristics of autonomous weapons systems, the confrontation on the modern battlefields, the complex and open environment and other factors. Countries should decide on their own specific measures and implementation mechanism based on their own national situation. China supports all parties to conduct exchanges and cooperation on risk mitigation measures through case studies, scenario workshop, practice exchanges, etc.

15. Countries need to enhance self-restraint on research and development activities, implement necessary human-machine interaction throughout the life cycle of such weapons systems, based on comprehensive consideration of the operational environment and weapons characteristics. Personnel who develop and use such weapons systems must receive comprehensive and systematic training, and observe ethics and relevant laws. At the same time, considering the rapid development of relevant technologies, the international community could consider formulating ethical norms as a priority, put people's well-being at the center and follow the principle of AI for good. Such norms will guide countries to follow the common values of humanity such as peace, development, fairness, justice, democracy and freedom, and observe national or regional ethical norms in the development, deployment and use of relevant weapons systems.