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Reports and documents

Biotechnology, weapons and humanity

Biotechnologie, armes et humanité

Today, the world is on the verge of a revolution in biotechnology. Expected advances have enormous potential to benefit humanity. But these same technologies have great potential for misuse. They could facilitate the use of biological weapons either in armed conflict or as a means to spread terror. Deliberately inflicting disease and changing body chemistry is likely to become easier, deadlier, cheaper and more difficult to detect.

The International Committee of the Red Cross (ICRC) is promoting consideration of the risks, rules and responsibilities related to advances in biotechnology which may lead to their hostile use to cause poisoning and deliberately spread disease. An Appeal was launched by the ICRC on 23-25 September 2002.

The ICRC's initiative is distinct from but is meant to complement ongoing efforts by States within the framework of the Biological and Toxin Weapons Convention (BWC). The Fifth Review Conférence of States Parties to the BWC ended in November 2002 with the adoption of a plan containing modest commitments by States to meet at regular intervals over the next four years.

The ICRC's Biotechnology, Weapons and Humanity initiative has featured to date:

- A meeting of government and independent experts held in Montreux, Switzerland entitled "Biotechnology, Weapons and Humanity: An examination of risks, rules and responsibilities";
- The launch of the Appeal by the ICRC President to governments at the Montreux meeting;
- The public launch of the Appeal at a press briefing in Geneva on 25 September 2002; and
- A proposed high level political Declaration to be adopted by governments in 2003.

The initiative has three key themes:

Risks: Advances in biotechnology carry great potential to benefit humanity. If these same advances are turned to hostile uses, they bring enormous risks for all human beings.

Rules: Ancient norms and modern humanitarian law prohibit poisoning and the deliberate spread of disease as inhumane and treacherous. The rules must be reaffirmed, implemented and reinforced.

Responsibilities: The risks and rules generate responsibilities for governments, the military, the scientific community and industry. The ICRC calls on these parties to ensure that advances in biotechnology are not used for poisoning or deliberately spreading disease.

International Humanitarian law prohibits the use of poison and the deliberate spread of disease in warfare. This norm is now part of customary international law – binding on all parties to all armed conflicts. The challenge is to ensure it is fully respected.

Statement by the President of the ICRC Jakob Kellenberger

The ICRC's preoccupations and call to action are contained in an "Appeal on Biotechnology, Weapons and Humanity" which has been adopted at the highest level of the institution. You will receive the Appeal in its entirety later this morning. It is being sent today to all governments through Permanent Missions in Geneva and New York and will be made public later this week.

Before presenting the essence of the Appeal I would briefly like to explain the concerns which have prompted the ICRC to launch this initiative.

The "age of biotechnology", like the industrial revolution and the "information age", promises great benefits to humanity. Yet if biotechnology is put to hostile uses, including to spread terror, the human species faces great dangers.

Potential benefits of advances in biological sciences and technologies are impressive. These include cures for diseases, new vaccines and increases in food production, including in impoverished regions of the world.

Yet testimonies from states, United Nations agencies and scientific circles warn of a range of existing and emerging capacities for misuse. These include:

- Deliberate spread of existing diseases such as typhoid and anthrax and smallpox to cause death, disease and fear in a population.

- Alteration of existing disease agents to make them more virulent, as already occurred unintentionally in research on the “mousepox” virus.
- Creation of viruses from synthetic materials, as occurred this year using a recipe from the Internet and gene sequences from a mail order supplier.
- Possible future development of ethnically or racially specific biological agents.
- Creation of novel biological warfare agents for use in conjunction with corresponding vaccines for one’s own troops or population. This could increase the attractiveness of biological weapons.
- New methods to covertly spread naturally occurring biological agents to alter physiological or psychological processes of target populations such as consciousness, behaviour and fertility.
- Production of biological agents that could attack agricultural or industrial infrastructure.
- Creation of biological agents that could affect the make-up of human genes, pursuing people through generations and adversely affecting human evolution itself.

The International Committee of the Red Cross considers these examples of possible misuse, which may be elaborated in more detail in the course of our discussions, to be profoundly disturbing. The life processes at the core of human existence must never be manipulated for hostile ends. In the past, scientific advances have all too often been misused. New developments in biotechnology will almost certainly be misused if urgent action is not taken before it is too late.

If the revolution in biotechnology we are witnessing today is harnessed for hostile ends, such acts would undermine one of the most fundamental norms of customary international humanitarian law: the prohibition of poisoning and the deliberate spread of disease as a method of warfare. It would be an affront to the ancient taboo against the use in war of “plague and poison”, passed down for generations in such diverse cultures as ancient India, the Middle East, Greece and Rome. Such acts would run counter to the survival instinct by which humanity protects itself from disease.

The ICRC deeply regrets that lengthy negotiations to strengthen the Biological Weapons Convention through a compliance-monitoring regime did not come to fruition as expected in November 2001. When this diplomatic impasse is seen in light of the potential for misuse inherent in the “biotech revolution”, the case for a renewed commitment by all States to existing norms and to the effective control of biological agents is compelling.

And now I come to the essential elements of the Appeal.

In keeping with its mandate to protect and assist victims of conflict and to promote and uphold international humanitarian law, the ICRC appeals firstly to all political and military authorities:

- To resume with determination efforts to ensure universalisation and faithful implementation of the 1925 Geneva Protocol and 1972 Biological Weapons Convention and to develop appropriate mechanisms to maintain their relevance in the face of scientific developments,
- To adopt stringent national legislation for implementation of these instruments and to enact effective controls on biological agents with potential for abuse,
- To ensure that any person who commits acts prohibited by the above instruments is prosecuted,
- To undertake actions to ensure that the legal norms prohibiting biological warfare are known and respected by members of armed forces,
- To encourage the development of effective codes of conduct by scientific and medical associations and by industry to govern activities and biological agents with potential for abuse, and
- To enhance international cooperation, including through the development of greater international capacity to monitor and respond to outbreaks of infectious disease.

However, the responsibility to prevent hostile uses of biotechnology extends well beyond governments. It belongs, in particular, to scientists and industry.

Secondly, then, the ICRC appeals to the scientific and medical communities and to the biotechnology and pharmaceutical industries:

- To scrutinize all research with potentially dangerous consequences and to ensure it is submitted to rigorous and independent peer review,
- To adopt professional and industrial codes of conduct aimed at preventing the abuse of biological agents,
- To ensure effective regulation of research programmes, facilities and biological agents which may lend themselves to misuse, and supervision of individuals with access to sensitive technologies, and
- To support enhanced national and international programmes to prevent and respond to the spread of infectious disease.

The ICRC calls on all persons to assume their responsibilities as members of a species whose future may be gravely threatened by abuse of biological knowledge. We urge you to consider the threshold at which we all stand and to remember our common humanity.

And finally, as part of a renewed effort to address the risks and assume the responsibilities arising from the current situation, the ICRC urges States to adopt at a high political level an international Declaration on “Biotechnology, Weapons and Humanity” containing a renewed commitment to existing norms and specific commitments to future preventive action.

Appeal of the International Committee of the Red Cross on “Biotechnology, Weapons and Humanity”

Alarmed by the potential hostile uses of biotechnology, the International Committee of the Red Cross (ICRC) appeals to:

- all political and military authorities to strengthen their commitment to the international humanitarian law norms which prohibit the hostile uses of biological agents, and to work together to subject potentially dangerous biotechnology to effective controls;
- the scientific and medical communities, industry and civil society in general to ensure that potentially dangerous biological knowledge and agents be subject to effective controls.

The ICRC appeals in particular:

To all political and military authorities

- To become parties to the 1925 Geneva Protocol and the 1972 Biological Weapons Convention, if they have not already done so, to encourage States which are not parties to become parties, and to lift reservations on use to the 1925 Geneva Protocol,
- To resume with determination efforts to ensure faithful implementation of these treaties and develop appropriate mechanisms to maintain their relevance in the face of scientific developments,
- To adopt stringent national legislation, where it does not yet exist, for implementation of the 1925 Geneva Protocol and the 1972 Biological

Weapons Convention, and to enact effective controls on biological agents with potential for abuse,

- To ensure that any person who commits acts prohibited by the above instruments is prosecuted,
- To undertake actions to ensure that the legal norms prohibiting biological warfare are known and respected by members of armed forces,
- To encourage the development of effective codes of conduct by scientific and medical associations and by industry to govern activities and biological agents with potential for abuse,
- To enhance international cooperation, including through the development of greater international capacity to monitor and respond to outbreaks of infectious disease.

To the scientific and medical communities and to the biotechnology and pharmaceutical industries

- To scrutinize all research with potentially dangerous consequences and to ensure it is submitted to rigorous and independent peer review,
- To adopt professional and industrial codes of conduct aimed at preventing the abuse of biological agents,
- To ensure effective regulation of research programmes, facilities and biological agents which may lend themselves to misuse, and supervision of individuals with access to sensitive technologies,
- To support enhanced national and international programmes to prevent and respond to the spread of infectious disease.

The ICRC calls on all those addressed here to assume their responsibilities as members of a species whose future may be gravely threatened by abuse of biological knowledge. The ICRC appeals to you to make your contribution to the age-old effort to protect humanity from disease. We urge you to consider the threshold at which we all stand and to remember our common humanity.

The ICRC urges States to adopt at a high political level an international Declaration on “Biotechnology, Weapons and Humanity” containing a renewed commitment to existing norms and specific commitments to future preventive action.

Geneva, September 2002

Appel du Comité international de la Croix-Rouge sur “la biotechnologie, les armes et l’humanité”

Alarmé par le risque d’une utilisation de la biotechnologie à des fins hostiles, le Comité international de la Croix-Rouge (CICR) lance un appel :

- à toutes les autorités politiques et militaires, leur demandant de renforcer leur engagement vis-à-vis des normes du droit international humanitaire prohibant l’emploi d’agents biologiques à des fins hostiles et d’œuvrer ensemble en vue de soumettre à des contrôles efficaces toute biotechnologie potentiellement dangereuse ;
- aux communautés scientifique et médicale, aux milieux de l’industrie et à la société civile dans son ensemble, leur demandant d’exercer un contrôle efficace sur les connaissances et les agents biologiques potentiellement dangereux.

L’appel du CICR s’adresse en particulier :

à toutes les autorités politiques et militaires, à qui il est demandé

- de devenir parties au Protocole de Genève de 1925 et à la Convention sur les armes biologiques de 1972, si elles ne l’ont pas encore fait, d’encourager les États non encore liés par ces traités à y adhérer et, enfin, de retirer les réserves éventuelles au Protocole de Genève de 1925 ;
- de relancer avec détermination l’action visant à assurer l’application fidèle de ces traités et d’élaborer les mécanismes appropriés pour permettre à ces instruments de conserver leur pertinence en dépit des avancées scientifiques ;
- d’adopter, s’il n’en existe pas encore, une législation nationale rigoureuse en vue de la mise en œuvre du Protocole de Genève de 1925 et de la Convention sur les armes biologiques de 1972, et de soumettre à des contrôles efficaces les agents biologiques présentant un risque d’utilisation abusive ;
- de veiller à ce que des poursuites soient engagées contre toute personne qui commet des actes prohibés par les instruments ci-dessus ;
- de prendre les mesures nécessaires pour que les normes juridiques interdisant la guerre biologique soient connues et respectées par les membres des forces armées,

- d'encourager les associations scientifiques et médicales, ainsi que les représentants de l'industrie, à élaborer des codes de conduite efficaces destinés à régir leurs activités et à exercer un contrôle sur les agents biologiques présentant un risque d'utilisation abusive,
- de renforcer la coopération internationale, y compris à travers le développement d'une capacité internationale plus importante afin d'assurer la surveillance et d'intervenir en cas de flambées de maladies infectieuses.

Aux communautés scientifique et médicale, ainsi qu'aux industries pharmaceutiques et biotechnologiques, à qui il est demandé

- De suivre attentivement tous les travaux de recherche risquant d'avoir des conséquences dangereuses, et de veiller à ce qu'ils fassent l'objet d'un examen rigoureux et indépendant par des spécialistes;
- D'adopter, dans leurs domaines respectifs, des codes de conduite destinés à empêcher l'emploi abusif d'agents biologiques;
- de veiller à un contrôle rigoureux des programmes de recherche, des installations et des agents biologiques pouvant se prêter à une utilisation abusive, et à la supervision des individus ayant accès aux technologies «sensibles»,
- d'apporter leur appui à des programmes renforcés, sur le plan national et international, afin de prévenir et d'enrayer la propagation des maladies infectieuses.

Le CICR demande à tous les destinataires du présent appel d'assumer leurs responsabilités en tant que membres d'une espèce dont l'avenir pourrait être gravement compromis par un usage abusif des connaissances dans le domaine de la biologie. Le CICR vous exhorte à contribuer à cet effort, engagé de longue date, qui vise à protéger l'humanité contre la maladie. Nous vous prions instamment de considérer le seuil auquel nous nous trouvons tous aujourd'hui, et de vous souvenir de notre humanité commune.

Le CICR exhorte les États à adopter, à un niveau politique élevé, une Déclaration internationale sur "la biotechnologie, les armes et l'humanité" dans laquelle ils réaffirmeront leur engagement à respecter les normes en vigueur et prendront des engagements spécifiques vis-à-vis de futures actions préventives.