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REVIEW OF THE IMPLEMENTATION OF THE RECOMMENDATIONS AND
DECISIONS ADOPTED BY THE GENERAL ASSEMBLY AT ITS TENTH
SPECIAL SESSION

CLIMATIC EFFECTS OF NUCLEAR WAR, INCLUDING NUCLEAR WINTER

Report of the Secretary-General

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* A/44/150.

I. INTRODUCTION

1. On 7 December 1988, the General Assembly adopted resolution 43/78 D entitled "Climatic effects of nuclear war, including nuclear winter", the operative part of which reads as follows:

"The General Assembly,

"...

"1. Takes note of the Study on the Climatic and Other Global Effects of Nuclear War;

"2. Expresses its appreciation to the Secretary-General and the group of consultant experts that assisted him in the preparation of the Study;

"3. Commends the study and its conclusions to the attention of all Member States;

"4. Invites all Member States to communicate to the Secretary-General their views on the study before 1 September 1989;

"5. Requests the Secretary-General to make the necessary arrangements for the reproduction of the study as a United Nations publication and to give it the widest possible distribution."

2. Pursuant to paragraphs 3 and 4 of the resolution, the Secretary-General, in a note verbale dated 8 February 1989, requested all Member States to submit their views and suggestions on the study. 1/ To date, the Secretary-General has received replies from Bulgaria, Czechoslovakia, Egypt, Finland and Poland. The replies are reproduced in section II of the present report.

II. REPLIES RECEIVED FROM GOVERNMENTS

BULGARIA

[Original: Russian]

[25 August 1989]

1. The Government of Bulgaria regards nuclear war as an ecological disaster whose consequences it is not in mankind's power to rectify. As a result of such a war, serious damage would be caused to man and his environment.

2. The degree of impact of nuclear weapons depends on a number of factors - the capacity of the weapon used, the target of the strike, the meteorological conditions etc. The direct impacts of a nuclear explosion are known to include the blast, flash, and immediate radiation and residual radiation in the form of local

radioactive fallout. Gamma radiation from the locality contaminated with local radioactive fallout is the main long-term consequence of a nuclear explosion. A nuclear explosion on the earth's surface ejects into the air vast quantities of soil, a considerable part of which is vaporized under the impact of the high temperatures and then falls back on the locality in the form of radioactive particles.

3. Bulgaria considers that a surface nuclear explosion will cause considerable disruption of the geosphere, the biosphere and the atmosphere. Authoritative scientific studies of the climatic consequences of nuclear war show that as a result of such a war the atmosphere will become impenetrable to sunlight. Dust and soot in the atmosphere will cause an abrupt darkening over the earth's surface. The intense energy discharge at the centre of the conflagration will raise up vast masses of air, at the same time creating winds of hurricane force at the earth's surface. As a result of the disruption of the radiation balance, the planet's temperature will fall sharply. It is in this sense that scientists use the term "nuclear winter". At the same time, there will be a major increase in the temperature of the upper layers of the atmosphere.

4. These climatic changes will radically disrupt the process of plant photosynthesis, which is the basis of human life support.

5. According to some studies, the disruption of the ozone layer will lead to a marked increase in the sun's ultraviolet radiation reaching the earth. In the view of a number of scientists, the presence of the ozone "shield" is a pre-condition for the development of multicellular organisms on our planet.

6. Bearing in mind these climatic consequences of nuclear war (and many others are possible), the Government of Bulgaria is convinced that the prevention of nuclear war and nuclear disarmament are vital issues in the modern world.

CZECHOSLOVAKIA

[Original: English]

[21 June 1989]

1. In its foreign political activity aimed at the strengthening of international peace and security, at the halting of the arms race and at the adoption of concrete measures to lead to a general and complete disarmament under effective international supervision, the Government of the Czechoslovak Socialist Republic actively advocates the principle that nuclear war is not permissible under any circumstances and calls upon the other States also to undertake everything on their part for the elimination of the material basis of such a war.

2. In the interest of the attainment of this goal Czechoslovakia is in favour of the implementation of the far-reaching programme of elimination of nuclear and other types of weapons of mass destruction by the end of this century put forward by the Soviet Union on 15 January 1986. It has welcomed sincerely the historic

Soviet-United States agreement on the elimination of their intermediate-range and shorter-range missiles in the implementation of which it has a share, too. It expresses the hope that an agreement will be signed soon on a 50 per cent reduction of strategic offensive weapons on the condition of compliance with the Treaty on the Limitation of Anti-Ballistic Missile Systems of 1972. It works consequently for a consolidation of the régime of non-proliferation of nuclear weapons on the basis of the Treaty on Non-Proliferation of Nuclear Weapons of 1968 and for a widening of the application of the IAEA safeguards system in the utilisation of nuclear energy for peaceful purposes. It strictly observes the status of the existing nuclear-weapon-free zones throughout the world and urges the establishment of new such zones, particularly in Central Europe, as it proposed, jointly with the German Democratic Republic, in 1987 in the form of a nuclear-weapon-free corridor. It supports the working out and conclusion of an international treaty on the general and complete prohibition of nuclear-weapon tests. Jointly with its allies, it suggests that direct negotiations be opened between the Warsaw Treaty and the NATO States on the elimination of tactical nuclear weapons from Europe. In this context, it has received with full understanding the Soviet readiness to withdraw from the territory of Warsaw Treaty States in 1989-1991 the entire nuclear ammunition on the condition of an analogous step on the part of the United States, as well as the Soviet decision to withdraw in 1989 500 nuclear payloads of tactical nuclear weapons. It appreciates the halting by the Soviet Union of the production of highly enriched uranium for military purposes as an important and very concrete step on the way to the use of the energy of the atomic nucleus solely for peaceful purposes.

3. During the fortieth and forty-first sessions of the General Assembly in 1985 and 1986, Czechoslovakia supported the requests of the General Assembly to the Secretary-General to carry out, with the assistance of a Group of Consultant Experts, a study on the climatic and potential physical effects of nuclear war, including a nuclear winter. In this context, it received with satisfaction the substantive report of the Secretary-General entitled Study on the Climatic and Other Global Effects of Nuclear War (A/43/351), in which States are encouraged to a further radical reduction of nuclear weapons and, in the final consequence, to a complete elimination of such weapons. Thus, the report has reaffirmed the objective premise that there can be no winners in a nuclear war.

4. Czechoslovakia is fully aware that the environment is being ever more devastated by the arms race. This practice runs counter to efforts aimed at environmental protection. It becomes a major obstacle to the high aim of generating a harmonious balance on the Earth between society, technology and nature. The already existing huge stockpiles of nuclear and chemical weapons constantly threaten civilization on Earth. Once put to use, these weapons will not respect any State or geographical boundaries, or distinguish between allies and adversaries. In spite of all this, their production and accumulation continue. Weapons tests, especially nuclear but also others, give an impulse to the creation of new, far more dangerous systems.

5. The planet on which we live finds itself in a condition of fragile equilibrium today. Mankind must take within a short period of time during one generation such steps as will basically influence in a positive manner the environment on both a regional and global scale.

6. Czechoslovakia is actively engaged in this sphere. On the basis of its initiative, at the session of the Political Consultative Council held on 15 and 16 July 1988, the Warsaw Treaty member countries adopted a significant document: "The consequences of the arms race for the environment and the other aspects of environmental security", which analyses a whole complex of military factors with perilous effects on the environment. It confirms that the prevention of nuclear war was and remains the main direction in the struggle for the preservation of the environment.

7. The urgent inevitability of solutions of the critical environmental problems at a regional level, i.e., in Central Europe, is addressed by another Czechoslovak initiative of December 1988, which envisages the convening as soon as possible of a meeting of Prime Ministers of the countries neighbouring on Czechoslovakia.

8. Czechoslovakia welcomes sincerely the positive tendencies taking shape in international relations at present. It is convinced that the halting of the arms race and the adoption of effective disarmament measures will contribute to the strengthening of peace and stability as the decisive factor in the development of broad international co-operation, including in the sphere of environmental protection.

EGYPT

[Original: Arabic]

[10 May 1989]

1. The Government of Egypt welcomes the study on the climatic and other global effects of nuclear war prepared by the Secretary-General of the United Nations, with the assistance with a Group of Consultant Experts (A/43/351). Egypt commends the comprehensive survey that the study provides of the scientific research carried out on the subject in various parts of the world. It appreciates the objectivity of the analysis contained in the study and the conclusions reached by it, which represent a summation of the information and results obtained by scientific research institutions in this field. In this connection, Egypt further welcomes the near unanimity of views on the matter of the climatic and other global effects of nuclear war that is revealed by the study.

2. The conclusions of the study reaffirm the grave and unprecedented hazards represented by the possibility of nuclear war, which should refresh international awareness of the need for the greatest efforts to be made to ensure the avoidance of nuclear war by striving for the complete elimination of nuclear weapons. Egypt is of the view that the publication of the study and its wide distribution, by bringing its conclusions to the attention of world public opinion and of decision makers in all parts of the world, will inevitably help to strengthen and support calls for peace and disarmament.

3. It might be appropriate if the Secretary-General was to be requested to follow up the progress made in scientific studies dealing with this subject and to inform the General Assembly of any new results obtained.

FINLAND

[Original: English]

[31 August 1989]

1. As suggested in the preface of the study, the term "nuclear winter" is partly misleading. Therefore, the use of this theoretical concept should be carefully considered. It would be preferable to analyse and specify the complex consequences of nuclear war by simply referring to the climatic and other global effects of nuclear war, as in practice has been done in the present study.
2. The negative effects of nuclear war are divided into three categories: atmospheric and climatic consequences, effects on natural ecosystems and agriculture and, finally, effects on health and socio-economic conditions. All these potential consequences are matters of great concern and strongly interconnected.
3. It should be noted that the research done in this field remains in many respects on uncertain grounds. There are different scenarios, some more realistic than others. But a valid scientific prediction as to the global effects of nuclear war seems impossible to make. Therefore, the most pessimistic estimations concerning the disastrousness of nuclear war lack a solid scientific ground. Such a worst-case scenario is presented especially in the chapter dealing with ecosystems and agriculture of the study. However, it is evident that grave climatic and other global effects are probable. This, of course, is enough to give reason for concern no matter how cautiously the present scenarios are appreciated. The study contributes to strengthening the argument that nuclear war would, among other undesirable things, bring serious climatic consequences.
4. It is obvious that the fear of nuclear war has become tangible, partly due to the well-publicized concept of "nuclear winter". The spreading of pessimistic attitudes has had its negative consequences, especially among young people. On the other hand, there is reason to believe that the discussion on the global effects of nuclear war has had a positive influence on the negotiations aiming at nuclear arms reduction. The validity of nuclear arms as a rational means of warfare is being questioned.
5. A nuclear war might cause serious damage not only within the territories of the States at war but also within the territories of non-belligerent States. Thus, the prevention of nuclear war - as well as the prevention of an environmental catastrophe - is a common concern of all nations. The present United Nations study contributes to an understanding of the acuteness of this task by exposing the international community to possible global consequences of nuclear war.

POLAND

[Original: English]

[31 August 1989]

1. The Government of Poland holds a high opinion of the Secretary-General's report entitled Study on the Climatic and Other Global Effects of Nuclear War. In accordance with General Assembly resolutions 40/152 G and 41/86 H, it has been prepared by a representative group of outstanding experts representing a broad range of scientific fields. The study offers a follow-up on a series of authoritative papers on various aspects of arms control, prepared under the auspices of the United Nations. The educational and information role in United Nations activities is an important instrument in fostering solid knowledge of international security and disarmament and mobilizing public support in favour of constructive disarmament efforts.
2. The study deserves to be appreciated for the role it can play in helping the international community to realize the scale of potential threats to mankind and its natural environment in the event of either a global or a limited nuclear conflict. It has contributed valuably to encouraging present efforts undertaken by countries and by societies to reduce and, if possible, totally eliminate nuclear weapons.
3. In the context of international endeavours concerning non-proliferation of nuclear arms, Poland wishes to recall the significant role of the pioneer study by the Secretary-General in the 1960s on the effects of possible use of nuclear weapons and the implications for national security and economy of States resulting from their acquisition and development of nuclear arms.
4. One particularly positive feature of the study is the fact that the group of experts has interpreted the mandate in its broad sense and included broadly conceived effects of nuclear war in their studies. With such a thoroughly documented interpretation it becomes possible to assess potential socio-economic consequences of the nuclear conflict in pursuance of the aforementioned General Assembly resolutions.
5. Some of the conclusions presented by the experts are particularly frightening. They indicate, for example, that the climatic and ecological effects of a nuclear conflict (especially food shortages) would equally jeopardize every nation on the Earth. While the immediate impact of nuclear war would kill millions of lives, the indirect, long-term effects could cost billions of human deaths (particularly because of the operation of ultraviolet radiation).
6. In the light of the findings it seems most appropriate to agree with the authors' call to continue international research in order to identify more precisely the threats already recognized and to investigate those not yet fully understood (such as the problem of the destruction of the ozone layer).

7. Full support should be given to the final conclusion of the study pointing to the need to help the politicians and leaders of all countries to realize that even in the event of a nuclear conflict restricted to a small part of the northern hemisphere no State would escape the projected negative consequences.

8. The Government of Poland wishes to express its appreciation to the Secretary-General and to the experts assisting him with their expertise for the study that was prepared and submitted by them.

Notes

1/ United Nations publication, Sales No. E.89.IX.1.
