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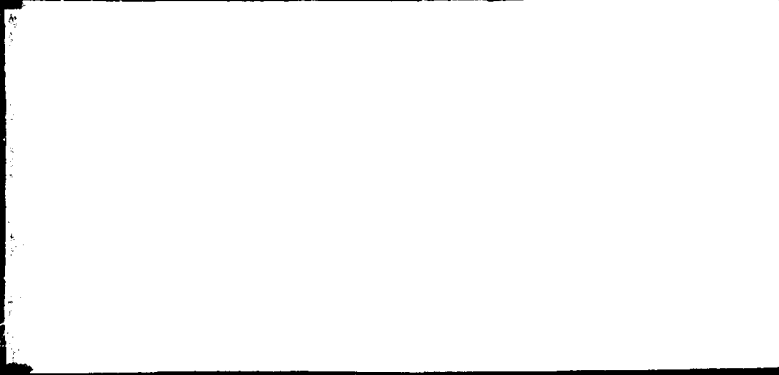
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ARMS CONTROL AND CIVIL DEFENSE

Annex III

64-8

"Civil Defense Programs in the Present World"

by Elisabeth Crawford

HI-216-RR/III

August 20, 1963

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Prepared under Contract ACDA/IR-10 for the U.S. Arms Control and Disarmament Agency.

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Harmon-on-Hudson
New York

FOREWORD

This is one of four annexes to an over-all report submitted by Hudson Institute to the United States Arms Control and Disarmament Agency on a study of the interactions of arms control and civil defense. The complete report consists of an over-all summary and four annexes. The summary report, titled "Arms Control and Civil Defense", is a short survey of those considerations and recommendations developed in the study that should be reported to government officials and to interested citizens. The four annexes treat some topics in greater depth. These are:

- I. "The Question of Crisis Evacuation", by Jeremy J. Stone
- II. "Civil Defense and Arms Control Objectives", by Raymond D. Gastil
- III. "Civil Defense Programs in the Present World", by Elisabeth Crawford
- IV. "The Domestic Political Interactions", by A. J. Wiener

The principal research group that conducted the study consisted of the four writers named above together with Nehemiah Jordan and Felix Kaufmann. Additional contributions were made by W. M. Brown, Sara Dustin, Herman Kehn, Frederick C. Rockett, Max Singer, and other members of the Hudson Institute staff, especially in the form of comments on draft reports. The study was under the general direction of the present writer.

Much of the study was conducted in working seminars, in which preliminary views were aired and draft papers reviewed. The summary and some of the annexes were also reviewed in draft by most of the Hudson Institute research staff and by several reviewers in the government. It follows that even the annexes, which are more individual in character than the summary, reflect some degree of community discussion. Nevertheless, the views and recommendations set forth in the several parts are the basic responsibility of their authors, and do not necessarily represent the views of Hudson Institute, its members, officers, trustees, or contract sponsors.

D. G. Brennan

Harmon-on-Hudson, N. Y.

August 20, 1963

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CIVIL DEFENSE PROGRAMS IN THE PRESENT WORLD

I. INTRODUCTION

In presenting this survey of current civil defense plans and preparations we hope to provide a factual background for our analysis of civil defense and arms control in the 1960's. In focusing our survey on the civil defense programs of the United States, Europe and the Soviet Union we have not only selected the programs most relevant to our analysis but also described a major part of the civil defense preparations in the present world. It should be noted that civil defense preparations are pursued in countries outside the East-West system of alliances, most vigorously in Sweden and Switzerland, both neutral countries.

Though the majority of the countries dealt with on the following pages are showing a growing concern over the protection of their civilian populations against the effects of nuclear warfare, large differences can be noticed in the scope of their civil defense programs, as indicated by the present annual per capita civil defense expenditure within NATO. These figures range from \$3.68 for West Germany to \$0.04 and \$0.77 for France and the United States, respectively. The Soviet civil defense budget is secret but estimates indicate that the per capita civil defense expenditure may be between \$2.30 and \$7.00 per year. (See Table 1, page 18)

Despite differences in size we can, however, notice some common trends in the civil defense planning of major Eastern and Western powers. The effort to assure protection for the civilian population against the hazards of radiation emanating from nuclear fallout plays a major role in most civil defense programs. Though the vulnerability of urban populations has been and still is a major concern, few countries have undertaken the construction of urban shelters providing protection against the blast effect of large nuclear weapons, the cost of such shelter construction having been considered prohibitive. As an alternative to such shelters many civil defense planners have chosen to evacuate their cities. Plans for some kind of evacuation of segments of the urban population are an important component of Soviet, French, British and Scandinavian civil defense programs.

There are also noticeable similarities in the assumptions concerning the warning time of an attack. The notion that an aggression will not take the form of a surprise attack but will be preceded by a severe crisis is given attention in American civil defense discussions and seems to have been adopted by Soviet civil defense planners. Such a "strategic" warning time is believed to permit the execution of protective measures, such as the evacuation of parts of the urban population and the construction of emergency fallout shelters for both evacuees and rural residents, presently planned for in the Soviet Union.

II. CIVIL DEFENSE IN THE UNITED STATES

Though the civil defense problem was given both study and thought during the 1950's, it can hardly be said that the U.S. government supported a civil defense program during that time. The majority of the measures that are presently undertaken for the protection of the civilian population in case of war are consequently part of the "new" civil defense program initiated by President Kennedy in 1961.

The events on the international scene, above all the imminent threat of armed conflict over Berlin, that caused the President to pledge "a new start on civil defense" are well-known and need not be recapitulated here. The main features of this new civil defense program, discussed in detail below, were: 1) a reorganization of the civil defense effort on the federal level; 2) the identification and marking of fallout shelters in existing structures; 3) construction of fallout shelters in all new federal buildings; 4) incentives for construction of fallout shelters in state and local government, as well as private buildings; 5) an appeal to individual citizens to undertake private shelter construction and other civil defense efforts. In order to assure an immediate start on these projects the President requested additional civil defense appropriations of 207 million dollars, a sum triple that of the budget request originally made for fiscal year 1962.²

The requested funds were rapidly granted by Congress, thereby permitting the civil defense authorities to start the project number 2) preceding, which was considered most urgent.³

The President's appeal to individual citizens (see number 5) got an unexpectedly broad response and evoked wide-spread interest in private shelter construction.⁴ The civil defense authorities were, however,

¹"The President's Televised Address to the American People," July 25, 1961, New York Times, July 26, 1961.

²"New Civil Defense Program," Ninth Report by the Committee on Government Operations, September 21, 1961. U.S. Government Printing Office, Washington, 1961, pp. 47-53.

³Civil Defense-1962, Hearings before a subcommittee of the Committee on Government Operations, House of Representatives, February, 1962, U.S. Government Printing Office, Washington, 1962. Statement of Hon. Stuart L. Pittman, Assistant Secretary of Defense, pp. 11-12.

⁴Civil Defense-1961, Hearings before a subcommittee of the Committee on Government Operations, House of Representatives, August 1961, U.S. Government Printing Office, Washington, 1962. Statement of Frank B. Ellis, Director OCDM, pp. 68-69.

unprepared and not able to channel this interest into constructive actions, something which may have contributed to the ensuing "shelter controversy."¹

In the budget requests for fiscal year 1963 the Administration demanded a further increase in civil defense appropriations (\$600 million as compared to \$252 million in fiscal year 1962), but without the pressure from an international crisis Congress was not inclined to enlarge civil defense spending. Funds were appropriated for the continuation of the shelter marking and stocking project but neither funds nor authorizing legislation were provided for the federal shelter incentive program or for shelters in federal buildings. The sum appropriated for fiscal year 1963 was 172 million dollars (including the proposed supplemental authority of 61.9 million), less than one third of the funds requested and considerably less than had been appropriated for fiscal year 1962.²

For fiscal year 1964 the Administration has proposed a civilian defense budget totaling 300 million dollars, in which is included funds for the initiation of the two projects mentioned above that were not sanctioned by Congress in 1962.³ Until these projects are approved the shelter survey and marking project will continue to be the main feature of the new civilian defense program.⁴

2.1 The Organization of the U.S. Civil Defense Effort

The present organization of the over-all U.S. civil defense effort is, to a large extent, the result of the organizational changes that accompanied the new civil defense program. The most important of these was the transfer of major civil defense functions from the Office of Civil Defense and Defense Mobilization to the Secretary of Defense. These functions covered the whole range of protective measures, most important among them the shelter program, as well as major civil defense operations, e.g., the development and operation of warning, monitoring and other communication systems. The former Office of Civil Defense was reorganized into the Office of Emergency Planning, which was to assist the President in coordinating and directing the total civil defense effort. At the time

¹The Pamphlet "Fallout Protection" was, for instance, not issued until six months later.

²Statement of Secretary of Defense Robert S. McNamara before the House Armed Services Committee, the Fiscal Year 1964-68 Defense Program and 1964 Defense budget, January 30, 1963, pp. 125, 156.

³ibid., p. 156.

⁴For a history of civil defense appropriations 1951-1963, see Table II, p. 19.

of the reorganization it was repeatedly stressed that the civil defense effort would, though transferred to the DOD, remain essentially civilian in nature.¹ The reorganization has not changed Federal-State relations in the field of civil defense. The responsibility for the implementation of the shelter program, i.e., surveying, marking and stockpiling shelters, lies consequently with state and county organizations, who for this purpose receive federal funds.

An important effort is presently being carried out in order to strengthen the state and county organization in the field of civil defense operations. A number of emergency operations centers have been completed since 1961. The cost of equipping the centers and training their civil defense personnel has been partly covered by federal contributions.²

2.2 The Shelter Program

The 1961 decision to make use of existing structures giving fallout protection was motivated by the necessity, at that time deemed urgent, to rapidly "provide a large number of shelter spaces at least cost per shelter space." The strategic concepts underlying the program were not made clear at this time by its spokesmen. The fact that a large number of the shelter spaces would be located in cities, which seemed to represent likely targets, produced criticism of the program.³ Since then the program has, in statements by Mr. McNamara, been linked to the "city-avoidance" doctrine and presented to the public as an important part of such a strategy.⁴ At the time of the initiation of the program it was estimated that approximately 50 million shelter spaces giving "reasonably adequate" fallout protection could be identified.⁵ As of January 1963 the survey had located 100 million spaces, 70 million of which will be stocked at the end of 1963. This increase over the number of spaces originally thought usable has been achieved by a decision to lower the protection factor originally required. This decision was taken, according to the Secretary of Defense, as a result of studies which showed that better than 90% of the occupants of the shelters

¹Executive Order No. 10952, July 21, 1961, White House Press Release of July 20, 1961, re: Executive Order No. 10952. Both documents reprinted in Civil Defense Hearings 1961, op. cit., pp. 379-382.

²Statement of Secretary of Defense Robert S. McNamara, op. cit., p. 131.

³Civil Defense Hearings 1961, Statement of Hon. Robert S. McNamara, op. cit., pp. 6, 17.

⁴"Interview with Secretary of Defense McNamara," Saturday Evening Post, December 7, 1962.

⁵Civil Defense Hearings 1961, Statement of Hon. Robert S. McNamara, op. cit., pp. 6-7.

with the lower protection factor "would have adequate protection against radiation intensities anticipated from attacks considered possible over the next few years."¹

As mentioned earlier, the Secretary of Defense this year once more requested funds for the construction of fallout shelters in federal buildings. It is estimated that such a program could result in 5 million shelter spaces. The goal of the over-all fallout shelter program has been stated as being the development of at least minimum radiation protection for the entire population. The shelters that are needed to make up the balance after the two above-mentioned sources of shelter space have been exhausted will hopefully be provided through private shelter construction with or without federal assistance.²

2.3 Interest in Evacuation

During part of the 1950's, evacuation was given serious consideration by U.S. civil defense planners as a means of protecting the urban population in case of enemy attacks on the cities. Starting in 1954, so-called "survival plans" based on the premise of evacuation were for several years being studied within the Federal Civil Defense Administration. As the range and speed of nuclear delivery vehicles advanced, the warning time--in the early fifties calculated at four to six hours--decreased to the present 15 to 30 minutes and the evacuation plans were gradually abandoned.³

At the time of the launching of the new civil defense program in 1961 the notion prevailed that the warning time was too short to permit an evacuation and evacuation plans were not made part of the program.⁴ The notion that the crisis expected to precede the outbreak of hostilities could provide adequate warning time (strategic warning) and permit the execution of an evacuation has, however, been advanced by several persons studying civil defense, who on basis thereof have advocated the adoption of an evacuation program.⁵ The possibility of a "crisis evacuation" has

¹Statement of Secretary of Defense Robert S. McNamara, op. cit., p. 126.

²Statement of Secretary of Defense McNamara, op. cit., pp. 125-126.

³New Civil Defense Program, op. cit., pp. 42-43.

⁴Civil Defense Hearings 1961, Statement of Hon. Robert S. McNamara, op. cit., p. 19.

⁵Report on a Study of Non-Military Defense, Report R-322-RC, Rand Corp., Santa Monica, California, July 1, 1958, pp. 11-12. Herman Kahn, On Thermonuclear War, Princeton, New Jersey, 1961, pp. 626 ff.

also received attention within the Office of Civil Defense which, in 1961, undertook a study of this problem as part of its research program.¹

2.4 Civil Defense Training

Under the present program federal funds have been allocated for civil defense training given within the framework of state and local civil defense organizations. The program provides for two major types of civil defense training which are both based on voluntary participation: 1) courses for specialized civil defense personnel in, for example, radiation monitoring and shelter management; 2) courses in basic self-protective measures aimed at a larger group.

Weaknesses in the local civil defense organizational structure make it hard to estimate the number of persons who, up to the present date, have received civil defense training. The training program for local civil defense personnel was, however, recently stepped up and the specialized courses were shortened and intensified. The program is expected to continue at this accelerated pace during fiscal year 1964.

The scope and quality of the instruction in basic self-protective measures, often given as adult education courses, is even harder to evaluate. During fiscal year 1963 it is estimated that 700,000 persons will have attended such courses bringing the total number so trained up to 1.1 million.²

¹"Strategic and Tactical Aspects of Civil Defense with Special Emphasis on Crisis Situations," Prepared under Contract No. OCD-OS-62-18, HI-160-RR, Hudson Institute, Harmon-on-Hudson, N.Y., January 7, 1963.

²Statement of Secretary of Defense McNamara, op. cit., pp. 129-130.

III. EUROPEAN CIVIL DEFENSE

3.1 Civil Defense in European NATO Countries

The NATO effort to coordinate and promote civil defense preparations in the member countries has as its main objective the securing of civil defense conditions favorable to the execution of NATO military operations. As civil defense was not made an obligation in the North Atlantic Treaty, the possibilities of the alliance's civil defense planners influencing civil defense measures in the member countries are limited to the issuing of recommendations. Such recommendations have so far consisted of urging the member countries to adopt the so-called "stay put" doctrine. The objective of this doctrine, originated by the Allies during the invasion of Europe in 1944, is to attempt the prevention of a disorderly flight of the civilian population in West Germany and neighboring countries. It is believed that such a flight would seriously interfere with NATO military operations, thus hampering the attempt to halt a Soviet invasion. These recommendations have been followed in the civil defense planning of the countries most likely to be threatened with an invasion (West Germany, the Netherlands, and Belgium).

When it comes to levels of civil defense preparedness and components of national civil defense programs, however, NATO has not been able to exert a significant influence on its members. There is no set pattern to which each country subscribes and civil defense preparations tend often to be more closely related to the country's individual military policies and strategies than to the goals of the alliance as a whole. This has brought about a situation where the levels of civil defense achievements vary greatly from one NATO country to another.² Three levels of civil defense accomplishments are in fact clearly distinguishable within NATO.

The highest degree of NATO civil defense preparedness can undoubtedly be found in the Scandinavian NATO countries who since the middle of the 1950's have pursued broad civil defense programs and are actively attempting to keep up with nuclear reality. The present civil defense situation in West Germany is much less impressive if we look for actual achievements. The German program was not started until late in the 1950's and has not until recently left the planning stage. If the present plans are carried out Germany will be provided with considerable civil defense capabilities.

¹Sir John Hodsoll, *Civil Defense in NATO*, 1962, pp. 1, 6-7. Articles to be published in OEP-OCD Source Book on Civil Defense (prepared by the Hudson Institute; to be completed during 1963).

²Discussed by Bernard K. Gordon, "NATO's Missing Shield," in *Bulletin of the Atomic Scientists*, June 1959, p. 230.

The civil defense programs in the great majority of the NATO countries, however, have either remained on the level attained in the Second World War or are simply nonexistent. France, Great Britain and the Benelux countries belong to the former category; Italy, Turkey and Greece to the latter.

The Scandinavian NATO countries. Since the start of their civil defense programs in 1950 and 1953 respectively, Denmark and Norway have appropriated increasingly large sums to their civil defense efforts. In Denmark, an amount equal to as much as 11% of the military budget has in some years been spent on civil defense. The per capita civil defense expenditures for 1962-1963, \$2.00 in Denmark and \$1.33 in Norway, are surpassed among NATO countries only by West Germany.¹ Great similarities can be observed in the programs of both countries. Both countries have adopted a system of combining evacuation measures with urban shelter construction.

The plans for evacuation are in both countries flexible and include both a crash evacuation involving the majority of the urban residents and a partial evacuation aimed at reducing the population density of the larger cities by gradually removing certain groups.²

The risks involved in a gradual evacuation of the cities, e.g., an attack on the cities while the evacuation is carried out, are somewhat reduced by the existence of urban shelters. These shelters, which in Denmark or Norway are constructed either at the government's expense or by the owners of new apartment and office buildings as a statutory obligation, have presently only a low blast resistance and are consequently of limited value, but efforts are being made to provide for blast protection by the construction of rock shelters. The construction of fallout shelters in rural areas where evacuees will be housed has been undertaken by both countries.³

Both countries are, finally, engaged in the constant training of specialized civil defense personnel, recruited among draftees who choose civil defense as an alternative to military service.⁴

¹"Orientering fra Civilforsvarsstyrelsen" No. 1, Copenhagen, January 9, 1962, p. 4; Norsk Sivilforsvarsblad, No. 2, April 1962, "Hva koster Sivilforsvaret?", p. 80.

²"Introduction to Danish Civil Defense," Danish National Civil Defense Directorate, Copenhagen, 1961, p. 21; "Civil Defense in Norway," Central Civil Defense Administration, November 1962, p. 10.

³"Introduction to Danish Civil Defense," op. cit., p. 8; "Civil Defense in Norway," op. cit., pp. 3-5.

⁴"Introduction to Danish Civil Defense," op. cit., p. 14; "Civil Defense in Norway," op. cit., p. 8.

West Germany. As mentioned earlier, the significance of the German civil defense program lies more in its far reaching planning than in actual achievements. The program has, however, since its start in 1957, undergone a marked expansion in terms of civil defense expenditure which has led to a present annual per capita civil defense expenditure of \$3.68 which is the highest in NATO.¹ The present German civil defense effort is based on the belief that if a war in Western Europe is fought with conventional arms or tactical nuclear weapons civil defense will significantly limit the casualties. It is realized that German civil defense in the immediate future can offer little or no protection in case of a strategic nuclear attack on the major cities. German civil defense officials do, however, believe that over a longer period of time, Germany can purchase such a capacity by constructing blast shelters in the major cities.² The expansion of German civil defense expenditures can not be explained simply by changes in military doctrine. The main impetus for these far reaching plans is the threat of war as it was universally felt in Germany at the time of the Berlin crisis in the fall of 1961. As long as a latent conflict over Berlin is present, German civil defense preparations will undoubtedly be pursued at the level indicated by present plans.

The main stress in German civil defense planning is put on providing protection for the civilian population by the construction of shelters rather than by evacuation. This is explained by the adoption of the NATO "stay put" doctrine, which in the case of Germany, whose territory can be assumed to become a battleground in a European ground war, is most relevant. The first phase in the German shelter program, as outlined by civil defense officials, is the installation of fallout shelters in all old and new buildings. A law making the installation of fallout shelters obligatory for the landlord is under consideration by the German Bundestag.³ This program is expected to be completed in six years at a total cost of \$4.2 billion, i.e., \$700 million per year. Long-term German plans in the field of shelter construction call for the installation of blast shelters in cities of more than 50,000 inhabitants. This program is not expected to start until the program providing for basic fallout protection (so-called "Grundschutz") has been completed. The construction of blast shelters has been calculated at a total cost of \$9 billion during a construction period of 10 to 20 years.⁴

¹Ziviler Bevölkerungsschutz. Zahlen aus dem Bundeshaushalt.

²Erich Hampe, "Wo bleibt die Zivile Verteidigung?" in Wehrkunde, Oktober 1962, pp. 517-522.

³"Die Notstandsgesetzgebung vor dem Bundestag" in Neue Züricher Zeitung, January 26, 1963, p. 4.

⁴"Luftschutz mit drei Fragezeichen" in Süddeutsche Zeitung, April 4, 1962, p. 8.

The efforts to increase the German civil defense preparedness also call for an increased number of civil defense personnel in the Civil Defense Corps to which the task of rescue and fire-fighting service is assigned. The personnel of this Corps has hitherto been formed of volunteers (presently approximately 30,000). A law recently introduced in the German Bundestag would, however, make it possible for the German government to recruit civil defense workers on an obligatory basis, thus making it possible to increase the number of members in the Civil Defense Corps. 300,000 members have been mentioned as the goal.¹

The German civil defense program is in the rather unique position of receiving support, expressed in liberal appropriations, from both the majority and the opposition parties. So far civil defense has encountered little public opposition, something which might, however, be changed if the program should call for larger public involvement.

France and Great Britain. Though the annual per capita civil defense expenditure of Great Britain is comparatively high (\$1.10), this country has not purchased a civil defense capability adapted to thermo-nuclear war conditions. This is also true of France, whose annual per capita expenditure (\$0.04) ranks lowest among the major NATO powers.²

The British civil defense effort has been hampered by a widespread feeling that the majority of civilians, in densely populated areas, has little or no chance of surviving a nuclear attack. Statements by the Government that financial means for the construction of basic fallout protection can not be supplied and Government advocacy of a "do it yourself" shelter construction program has not changed this situation.³

The primary civil defense measure planned by the governments in both countries is the evacuation of a large part of the urban population. In Great Britain this evacuation has so far been planned only on paper whereas France during the late 1950's has been engaged in the forming of an organization of "evacuation delegates" charged with supervising the evacuation both in the cities and in the reception areas.⁴ The

¹"Die Notstandsgesetzgebung vor dem Bundestag," op. cit., p. 4.

²Information concerning French civil defense budget communicated from the French Information Service; "Civil Defense in Britain," Home Office, 1962, p. 2.

³New York Times, April 22, May 11, 1962.

⁴"Civil Defense: Dispersal: Circular No. 58/62, Ministry of Housing and Local Government, H. M. Stationery Office, London 1962; "La Protection Civile en France" in Documentation Française, December 9, 1960, pp. 24-32.

French evacuation may have better chances of success than the British one, due to the existence of sparsely populated areas, but the need for basic fallout protection still exists. France has not yet undertaken any program of fallout shelter construction.

3.2 Civil Defense in European Warsaw Pact Nations

Though an accurate and detailed description of the civil defense activities in Eastern Europe is hindered by the inadequacy of the available information, there is little doubt about the existence of such activities. In his most recent description of Soviet civil defense, Mr. Leon Gouré indicated that the civil defense systems of the Eastern European satellites closely parallel those of the Soviet Union.¹

The information available concerning Eastern European civil defense indicates that protection not only against thermonuclear but also against chemical and bacteriological warfare has, during the last decade, been considered an important part of these countries' military preparedness. As in the Soviet Union, the main stress is placed on the training of the populations in protective measures. For example, it has been estimated that approximately 2 million of Poland's 30 million citizens have received basic civil defense training.²

The orientation of shelter construction programs in the Eastern European countries is believed to be closely related to that of the Soviet Union. Since 1945 permanent Soviet shelters have been built only in the cities. Reports from Eastern Germany indicate that bunker shelters used in the Second World War have been restored.³ The main stress, however, is placed on the construction of emergency fallout shelters. With strategic warning large segments of the population would be engaged in the construction of shelters which would consist of covered trenches, dugouts and hill-side tunnels giving adequate protection against fallout.

Though hard to evaluate, it seems that Eastern Europe is better off with respect to fallout protection than many Western European countries where such protection exists only in the form of basement shelters. But the lack of food surpluses would present a serious obstacle to plans for Eastern European postattack recovery in the absence of Soviet commitments.

¹Leon Gouré, *Soviet Civil Defense*, P--2554, RAND Corp., Santa Monica, California, March 1962, p. 20.

²Warnkonig, Gerd, *Luftschutzausbildung in Polen*, Zivilschutz Heft 6, June 1961, p. 210.

³"La Protection Civile a l'étranger" in *La Documentation Française*, May 6, 1959, p. 17.

3.3 Civil Defense in Two Neutral Countries--Sweden and Switzerland

During a major part of the postwar period both Sweden and Switzerland have been engaged in an active civil defense effort aimed at assuring the protection of civilians against both the blast and radiation effects of nuclear weapons. The size of their civil defense programs is illustrated by high annual per capita civil defense expenditures, in Sweden \$2.80 for fiscal year 1962-63, and in Switzerland an estimated \$2.27 during the same period.

The scope of Swedish and Swiss civil defense planning may seem surprising when one considers that both countries have stayed out of war during the last 150 years and are presently maintaining positions of neutrality. In the military thinking of both countries, a large civil defense program is, however, an integral part of a neutral country's defense posture, which is to preserve neutrality by making aggression "too expensive" for the enemy.

The main rationale behind Swedish and Swiss shelter construction programs is the belief that a country with a protected population will be in a better position to resist the threats of attack against the cities and their residents by which an aggressor may attempt to bring about an immediate surrender. In Sweden, the shelter program is combined with evacuation plans which aim at moving the civilian population away from likely combat areas thereby facilitating the attempt of the military forces to resist an invasion.²

Both countries maintain large organizations of civil defense workers, recruited on an obligatory basis. Civil defense training has, in fact, in both countries come to be considered as an important part of preparations for "total defense," i.e., the attempt to engage large segments of the population in the nation's defense effort. In the case of Switzerland the civil defense training is expected to create a force of 800,000 civil defense workers (15% of the total population) which in the case of war could engage in various civil defense operations.³

¹Civilforsvaret...att skydda och radda liv, Kungl. Civilforsvarsstyrelsen, Uppsala 1962, p. 3; "Civil Defense in Western Europe and Soviet Union," Fifth Report by the Committee on Government Operations, U.S. Government Printing Office, Washington 1959, pp. 37-38.

²Civilforsvaret...att skydda och radda liv, op. cit., pp. 27-34.

³Civilforsvaret...att skydda och radda liv, op. cit., p. 57, "Civil Defense in Western Europe and Soviet Union," op. cit., p. 37.

IV. CIVIL DEFENSE IN THE SOVIET UNION

Until a few years ago little was publicly known in the United States about civil defense preparations in the Soviet Union. During the debate that followed President Kennedy's 1961 civil defense proposals, several descriptions of Soviet civil defense appeared in the U.S. and, to a certain extent, the scope of the Soviet civil defense program was made an issue in the debate.

Considering the secrecy that surrounds the Soviet civil defense effort, it is not surprising that the program has been subject to different evaluations. The difficulties involved in ascertaining the scope of Soviet civil defense preparations were recently discussed by Mr. Leon Gouré of the RAND Corporation, whose writings for the past few years have been the main source of information about Soviet civil defense. Mr. Gouré pointed out that "because of the Soviet secrecy there is uncertainty about the size of the Soviet civil defense organization, the number of citizens trained, the total shelter capacity and the precise civil defense budget..." In spite of these difficulties, he feels that it is possible "to make some reasonable guesses about its scope and cumulative capability."¹

Other experts on Soviet affairs have, however, expressed their doubts about Gouré's evaluation of the Soviet program. After having outlined some of the main components of the Soviet civil defense program as described by Gouré, therefore, we shall discuss some of the objections made to his assessments.

4.1 The Present Soviet Civil Defense Program

In contrast to the situation in the United States the Soviet civil defense program is one of long standing, and has, in fact, been in constant operation since its initiation in the early 1930's. During the Second World War the Soviet civil defense program was probably larger, in terms of public participation, than any of the programs launched by other belligerents, and a considerable civil defense experience was acquired. In the immediate postwar period, interest in civil defense declined and the adaptation of the Soviet program to thermonuclear war conditions did not start until 1954. This has been explained by Stalin's unwillingness to acknowledge the significance of the emergence of nuclear weapons.² Since then the Soviet Union has been engaged in the steady improvement, at a rather modest annual rate, of its civil defense capability.

The main rationale behind the present Soviet civil defense effort

¹Leon Gouré, "The Soviet Civil Defense Program" op. cit., p. 6.

²Gouré, Civil Defense in the Soviet Union, University of California Press, Berkeley and Los Angeles, 1962, p. 8.

is the belief, often stated by Soviet military and political leaders, that the danger of war will persist as long as the imperialistic threat exists, and that neither side in such a war will be constrained, by moral considerations, from using nuclear as well as chemical and bacteriological weapons. From this has followed the belief that civil defense should be regarded as an integral part of the Soviet defense capability.

Soviet civil defense planning is closely linked to the current Soviet strategic doctrine, which in turn rests upon rigid assumptions concerning the ways in which a future war will be fought. Based on these notions, the following civil defense requirements have emerged: (1) civil defense must protect the Soviet population and economy against all types of weapons that may be used in a future war, i.e., nuclear as well as chemical and bacteriological; (2) civil defense must protect the population in administrative, economic and transportation centers, which are believed to be the main targets in an attack; (3) the population must be trained in civil defense in order to reduce the casualties and facilitate rapid economic and social recuperation in the country following an attack.

Soviet civil defense organization and training. The Soviet civil defense organization is centrally controlled and operates on all levels from a federal administration² down to regions, cities, villages, factories, schools, and apartment buildings. These local units or groups are composed of part-time civil defense personnel organized into teams specializing in various tasks such as shelter control, fire-fighting, medical aid, etc. The only existing information concerning the size of this organization has come from Khrushchev himself, who has told foreign visitors that it comprised 22 million fully trained persons (10% of the population). The accuracy of this figure has been doubted, and it is believed that many of the civil defense units exist only on paper.³ It is important to note, however, that the obligatory character of Soviet civil defense training would make it feasible for Soviet authorities to achieve such numbers.

In addition to the training given the specialized personnel of the civil defense units, large segments of the Soviet population have received basic instruction in individual and collective means of protection against nuclear, chemical, and bacteriological weapons. Though the law which in 1955 instituted such training made it compulsory for all adults, it has not been extended to the entire population and appears to be lagging in rural areas. According to Goure's estimates, the training course,

¹Goure, "The Soviet Civil Defense Program," op. cit., pp. 7-9.

²Formerly a part of the Ministry of Internal Affairs but, in 1961, transferred to the Ministry of Defense, something which has been interpreted as an indication of the growing significance of civil defense in the Soviet Union. It is interesting to note that the Soviet Union transfer took place at approximately the time that the main responsibility for U.S. civil defense was shifted to DOD

³Civil Defense Hearings 1961. Statement of Leon Goure, pp. 265-267.

totaling 64 hours, has been attended by some 50 million Soviet citizens; but he also cautions against unquestioning acceptance of the "extravagant claims" made by Soviet local authorities about the number of persons trained.¹ The quality of the training given is believed to be uneven but efforts are constantly being made to improve it. It presently includes instruction in the use of civil defense material such as dosimeters, gas masks and protective clothing.

Soviet shelter construction. Owing to the secrecy that surrounds the Soviet shelter construction program, it is not possible even to estimate the number of ready shelter spaces. Nevertheless, Soviet authorities have repeatedly stressed the need for shelters as the only effective means of defense against nuclear weapons, and designs for various types of shelters can be found in the Soviet civil defense literature. The shelters provided for in the Soviet program are basically of two types: (1) permanent shelters built in peace-time only in the cities, with priority given to industrial, governmental and Party facilities; (2) emergency fallout shelters which will be constructed in rural areas when the government has strategic warning of a possible attack.²

The permanent shelters are various types ranging from deep underground blast shelters, which are believed to have been constructed for select governmental, military, and Party personnel, to subways and basement shelters with considerably lower blast resistance. It is, however, not believed that these shelter spaces are sufficient for the protection of the entire urban population.³ The new stress on evacuation of the urban population, which has been noticed in Soviet civil defense planning during the past few years, has made the construction of emergency fallout shelters an important feature of the Soviet shelter program. These fallout shelters, which, according to Soviet authorities, can be built in one day, will consist of covered trenches, dugouts and hillside tunnels, all of which will provide protection against fallout.⁴

Although the permanent shelters are equipped with ventilation, light, heating, and water, they are not stocked with food, and the population is instructed to bring their own supplies. As it is unlikely that the population will be able to bring enough food for a long stay in the shelters, the shelter occupancy time both in permanent and emergency shelters will necessarily be limited. The Soviet authorities, by instructing the population to leave the shelters temporarily to go out and seek additional

¹Goure, "The Soviet Civil Defense Program," op. cit., pp. 10-12.

²Goure, "The Soviet Civil Defense Program," op. cit., p. 15.

³Civil Defense Hearings, 1961, op. cit., pp. 274-283.

⁴Goure, "The Soviet Civil Defense Program," op. cit., pp. 16-18.

food when the level of radiation has declined, seem to be aware of the fact that the food problem might seriously hamper the effectiveness of the shelter program.¹

Soviet plans for evacuation. The Soviet plans for evacuation, included in the civil defense program since 1958, are based on the aforementioned assumption that an attack on the Soviet Union will be preceded by strategic warning. The evacuation called for by Soviet plans, however, cannot be called strategic in the sense of providing for the evacuation of the majority of the urban population. According to the civil defense manuals, any evacuation will in fact be limited in scope, including mainly the nonproductive elements of the urban population. Usually the evacuees will first be moved to "intermediate" evacuation centers situated 10 to 15 miles outside the cities, and only later will they be sent to final reception areas. The reason for this arrangement is presumably that it will speed up the initial evacuation and also allow for a speedy return of the population to their homes if the danger should pass.²

The present plans for only a partial evacuation are probably necessitated by the limited number of vehicles available for the transportation of evacuees (a large portion of the Soviet vehicle park will be used exclusively for military purposes), the poor condition of most Soviet roads, and limitations in food supplies available in the reception areas (the evacuees are instructed to bring food sufficient for several days). These factors can also be expected, during the major part of the 1960's, to constitute serious obstacles to Soviet plans for a more extensive evacuation than the one presently called for.

An evaluation of the over-all Soviet civil defense program. Though its exact scope cannot be ascertained, it seems clear that the Soviet authorities are engaged in an active (but not "crash") effort to strengthen the country's civil defense capability. There are, however, significant doubts as to whether this effort should be labeled a "strategic" civil defense program, i.e., one that might directly influence the procurement or employment of strategic nuclear forces. The functioning of the civil defense system seems, to a large extent, to be dependent upon the assumption that an attack will be preceded by considerable advance warning. Goure has in fact suggested that it would be "many hours, or even days" before a high level of effectiveness could be reached.³

There are also doubts, suggested by the above-mentioned problem of

¹Civil Defense Hearings, op. cit., p. 286.

²Goure, Civil Defense in the Soviet Union, op. cit., pp. 112-114.

³Ibid., p. 151.

food supplies, as to how efficiently the program would perform even under the favorable conditions for which it seems designed. The main significance of the program may simply be, as suggested by Goure, that "despite the growing destructiveness of weapons and the necessarily limited effectiveness of any civil defense system, the Soviet leaders believe the program to be worth further efforts and continued investments."¹

4.2 Some Dissenting Views on Soviet Civil Defense

The validity of Goure's evaluation of Soviet civil defense had on several occasions been questioned by other experts on the Soviet Union. The two main issues of debate have been: (1) the lack of observable signs of shelters or shelter construction in the Soviet Union, as reported by travelers and foreign correspondents; (2) denials by various Soviet personalities, e.g., Mrs. Khrushchev, and Mr. Menshikov, former Soviet ambassador to the United States, as to the existence of a civil defense program in the Soviet Union. Without attempting to settle this controversy we shall briefly describe these statements and Goure's replies. On several occasions, foreign correspondents in Moscow, notably Harrison Salisbury and Osgood Caruthers of the New York Times, have stated that they have observed neither visible signs of an extensive Soviet shelter program nor any awareness among Soviet citizens that an active Soviet civil defense effort was being carried out.² Goure has offered several explanations on this point: no signs mark the existence of shelters, no information is published on the total amount of ready shelter spaces, and civil defense instruction is given not via mass media but within small groups either at the place of work or at home.³ It should also be noticed that the increasing Soviet stress on constructing fallout shelters in emergencies makes large-scale peacetime shelter construction less likely and its absence less significant.

The aforementioned denials by Soviet personalities of the existence of any civil defense program in the Soviet Union have mainly been aimed, according to Goure, at a foreign audience, and have not had a counterpart in the Soviet Union.⁴ As indicated above by the conflict among the authorities, and even among certain of the statements of Goure, the entire area of Soviet civil defense is one of considerable uncertainty, and the only thing one can state with certainty is that dogmatic conclusions are likely to be both inaccurate and misleading.

¹Ibid.

²New York Times; July 16, August 26, December 24, 1961.

³Goure, "The Soviet Civil Defense Program," op. cit., p. 4.

⁴Ibid., pp. 1-2.

TABLE I
 CIVIL DEFENSE BUDGETS AND PER CAPITA CIVIL DEFENSE EXPENDITURES
 IN SELECTED COUNTRIES 1962-1963

| | <u>Civil Defense Budget</u> (million dollars) | <u>Per Capita Expenditure</u> (dollars) |
|---------------|--------------------------------------------------|--------------------------------------------|
| United States | 128.0 ¹ | 0.71 ¹ |
| Great Britain | 58.0 | 1.10 |
| France | 2.0 | 0.04 |
| West Germany | 204.3 | 3.68 |
| Netherlands | 12.32 | 1.08 |
| Belgium | 5.0* | 0.54* |
| Denmark | 9.2 | 2.00 |
| Norway | 4.8 | 1.33 |
| Greece | 0.016 | 0.002 |
| Sweden | 20.0 | 2.80 |
| Switzerland | 12.0* | 2.27* |
| Soviet Union | 500 - 1,500* | 2.33 - 7.00* |
| Canada | 8.9 | 0.45 |
| Australia | 0.75 | 0.07 |

* Estimated

¹ Includes 1963 supplemental appropriation of 15 million.

TABLE II
U.S. CIVIL DEFENSE APPROPRIATIONS
1951-1963

(in million dollars)

Appropriations 1951-1961: OCDM
Appropriations 1962-1963: OCD

| <u>Fiscal Year</u> | | |
|--------------------|------------------|--------------------|
| 1951 | ..... | 0.1 |
| 1952 | ..... | 34.3 |
| 1953 | ..... | 52.1 |
| 1954 | ..... | 61.5 |
| 1955 | ..... | 43.8 |
| 1956 | ..... | 58.0 |
| 1957 | ..... | 65.4 |
| 1958 | ..... | 66.0 |
| 1959 | ..... | 45.7 |
| 1960 | ..... | 45.7 |
| 1961 | ..... | 58.6 |
| 1962 | ..... | 252.3 |
| 1963 | ..... | 172.7 ¹ |
| 1964 | (requested)..... | 300.0 |

Source: Civil Defense Hearings 1961, page 397.
Statement by Secretary of Defense Robert S. McNamara,
January 30, 1963, page 156.

¹ Includes proposed supplemental appropriation of \$61.9 million.