HR70-14 . 10030

RELEASE - HISTORICAL COLLECTION DIVISION R70-14 DATE: 07-18-201;

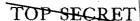
Central Intelligence Agency Directorate of Intelligence

Warsaw Pact Buildup Capabilities: A Review of Work in Progress and Analysis to Date

Office of Strategic Research

October 1972 Copy \_

SR SP 72-3



# Warsaw Pact Buildup Capabilities: A Review of Work in Progress and Analysis to Date

#### Introduction

This report was prepared in accordance with Dr. Kissinger's memorandum of 25 September 1972 on MBFR. It reports on research under way in the Central Intelligence Agency on various aspects of the Warsaw Pact buildup problem. It also summarizes and assesses current estimates on Soviet, Polish, East German, and Czechoslovak planning and procedures for mobilizing and moving men and equipment to the central region of Europe. New information has been used in these assessments where applicable. Finally the report describes an interim methodology by which Warsaw Pact divisions can be ranked comparatively, both before and after mobilization.

## Contents

			=	aye
Status of the CIA Review of Pact Mobilizatio and Reinforcement Capabilities				3
and normone capabilities	•	•	•	
Mobilization Requirement and Capability				
Manpower Requirements				
Soviet Reinforcement Forces		•	•	17 19 20 20
Mobilization Facilities and Procedures	•	•	•	23
Facilities	 •	•. •	•	23 24
Logistic Support for Mobilization	•	•	•	24
Movement and Reassembly of Soviet Reinforcement Forces to the Forward Area .		•		29
Qualitative Comparison of Warsaw Pact Units	•	•	•	31
Evaluation Criteria		÷		34
Determination of Relative Division Mission Capability				36
Significance of Qualitative Differences	•	•	•	41
Map				·
Warsaw Pact Divisions Opposite Central Region of NATO			•	6

## Status of the CIA Review of Pact Mobilization and Reinforcement Capabilities

The importance of the capability of the Warsaw Pact to mobilize and reinforce its forces opposite NATO has been recognized by the intelligence community for many years. The rapidity with which the Pact might be able to accomplish the operation has been the subject of lengthy debate, much of it connected with the preparation of National Intelligence Estimates. Despite this attention there still remain areas of unacceptable uncertainty, caused mostly by a lack of information. New information has been accumulated over the recent past which should help reduce the uncertainties, and analytical methods have been developed to exploit the information. CIA has projects under way using both the new information and methodologies.

Information on plans and procedures for mobilizing the men and material needed to fill out existing Warsaw Pact units or create new ones has been acquired. Although most of this information is on Poland and other East European members of the Pact, we believe it is relevant to the USSR also. Known similarities between the mobilization systems of the USSR and other Pact members greatly outweigh known differences. A report making use of the new information, together with that already in hand, is intended for publication in the next two months.

A growing body of information which can be used to bring the level of knowledge on Warsaw Pact non-divisional combat and service support units nearly up to that on line divisions is being acquired. Further, a good portion of the methodology used to analyze line divisions is applicable to nondivisional units. Analysis of nondivisional units is important to the study of mobilization and reinforcement in several ways. General uncertainties on the number, size, and nature of the combat and service support units in the wartime organization of the Pact at both field army and front levels remain high. Thus,

we are unsure of the size of the force to be moved to the combat zone. Further, the numbers of these units which are maintained in peacetime, as well as the strength of those which do exist, are even less well known. Calculations of mobilization requirements and postmobilization effectiveness suffer from these uncertainties.

CIA projects to improve estimates on the combat and service support elements have been time consuming because of the nature of the material to be worked with. Initially, we expect completion in early 1973 of analysis of the major elements of the Soviet field army as well as analysis of the composition of the Czech ground force. Analysis of Soviet front-level support units and of Polish and East German support units should be completed by the spring of 1973.

Work is under way also on Pact logistic stocks and requirements, frontal (tactical) aviation organization and reinforcement requirements, and the problems associated with redeployment of units already in the forward area during preparation for combat. Completion of these projects cannot be fixed at this time.

In addition, we are aiming for organization of inputs to computer-assisted models to aid in assessing capacities and capabilities of Pact rail, road, and air systems to carry out movement forward of mobilized formations. Improvement in the factors already in use, however, is largely dependent on completion of our work on the numbers and sizes of combat and service support units in field armies and fronts.

As noted above, none of the subjects under research is new to the intelligence community. The fact that renewed effort is required testifies to the difficulty in advancing our state of knowledge. Thus, time is required to do research to uncover evidence previously missed and to develop new lines of analysis; and even then, no guarantee can be given that currently held judgments will undergo discernible change. Some refinement may be the only advancement.

As an interim aid to MBFR work, therefore, we include in the body of this report a review of the currently published material on mobilization and reinforcement. We have taken advantage of ongoing work to include new data on the peacetime posture of the Warsaw Pact forces. Preliminary analysis of information on the speed with which these forces are intended to be mobilized also is presented for the first time. The results of a joint CIA and DIA study of Pact logistics needs and capabilities are also reviewed. Finally, an interim methodology to provide a means of measuring the relative combat capability of Warsaw Pact divisions is included.

## TOP SEGRET

**Warsaw Pact Divisions Opposite Central Region of NATO** Baltic Military District Belorussian Military District Warsaw 1 POLAND Carpathian Y Krakow **①** Military District (7) **(D)** CZECHOSLOVAKIA • Bratislava **①** 

Motorized rifle division
Tank division
Airborne division
Amphibious division
East European Forces
Division strength

Reduced

STATUTE MILES

Combat

Cadre

**(1**)

ALBANIA

YUGOSLAVIA

#### Mobilization Requirement and Capability

The mobilization requirement is that quantity of manpower, equipment, and logistic stocks or external support which a unit, facility, or other element must have to reach full strength. The following is an interim summary and assessment of current estimates of the mobilization capability of Warsaw Pact ground forces located in the western USSR (Baltic, Belorussian, and Carpathian Military Districts), East Germany, Poland, Czechoslovakia, and Hungary, which are located opposite the NATO Central Region. (See map at left.) The following tabulation summarizes the augmentation required to bring manpower and equipment levels to wartime strength.

Mobilization Requirements for Forces
Opposite the Central Region of NATO

		Manpower	<u>.                                    </u>	,	Equipmen	ıt
	Author- ized	Actual	Mobili- zation required (In Thou	Author- ized usands)	Actual	Mobili- zation required
Stationed Soviet forces	385-495	365-495	20-0	108-132	108-132	0
Indigenous forces	495-635	310-435	185-200	109-134	76-99	33-35
Reinforce- ment forces	380-485	195-270	185-215	115-141	63-82	52-59
Total forces	$\frac{1,260-}{1,615}$	$\frac{870-}{1,200}$	390-415	332-407	247-313	85-94

Note: Soviet forces stationed in Eastern Europe are estimated to be manned and equipped at full strength; no mobilization is required. Some units may, however, be marginally under strength and some augmentation of support elements may be necessary.

#### Manpower Requirements

The Soviet and East European forces which are estimated to constitute the force planned for initial operations in the Central Region of NATO would, at full strength, total some 1.2 million to 1.6 million men. Of these, at least 30 percent (about 400,000 men) would have to be mobilized to bring all units up to wartime strength.

Soviet forces in Eastern Europe and East German forces are at the highest manning levels, while virtually all Soviet forces in the Baltic, Belorussian, and Carpathian Military Districts, as well as all Czechoslovak, Hungarian, and Polish forces, are manned at lesser levels and would require about 50 percent augmentation.

The following discussion of manpower and other mobilization requirements treats the two-front\* reinforcing force in detail because of the speed and efficiency with which the Soviet Union could mobilize this force and move it through Poland and Czechoslovakia and position it to engage the Central Region of NATO.

#### Soviet Reinforcement Forces

The two second echelon or reinforcing fronts which would move from the three western USSR military districts—Baltic, Belorussian, and Carpathian—into Poland, East Germany, and Czechoslovakia consist of support and service elements of the two fronts and their seven component armies, which include 28 divisions (14 tank and 14 motorized rifle divisions). The total wartime strength of this two-front force has been estimated at some 380,000 to 485,000 men. Presently there are some 195,000 to 270,000 men in this force.

<sup>\*</sup> The front is the Warsaw Pact's highest wartime field headquarters for the joint operational control of theater forces.

Analysis of these sources allows the conclusion that all 14 tank divisions in the reinforcing fronts currently have some 50 to 75 percent of their authorized wartime personnel. Tank divisions are generally at a higher level of manning than motorized rifle divisions, which are maintained at 20 to 65 percent of full strength.

There are a number of other units which are estimated to be at a relatively high level of manning because of their mission and their need for readily available and highly trained personnel to maintain and operate complex and highly specialized equipment. These units include combat and combat support units at the army and front levels such as SS-1 Scud tactical missile, surface-to-air missile (SAM), signal, radio relay, radio and radar intercept, and early warning units. Personnel needed to be mobilized for these units requiring specialized skills will probably have a higher average age and have less recent military experience than those required to flesh out combat units.

Rear service units probably are generally at the lowest level of manning and in many instances (particularly at the front level) entire units will have to be mobilized.

Requirements and Resources. The total manpower augmentation requirement for the three military districts amounts to approximately 185,000 to 215,000 men. This requirement is well within the estimate of the number of reserves available. In the Soviet Union, the number of reservists who have completed their military training within the past five years is approximately 2 million. Information is not available on the geographic distribution of these men, but it probably corresponds to the patterns of normal population distribution.

Reservist Training. Although Soviet military regulations prescribe that reservists should receive

## TOP SEGRET

traini						ears,	ac	tual	adhei	cence
apparer	itly is,	<u>less</u>	fre	equent						
	Soviet								reserv	
		· · · · · · · · · · · · · · · · · · ·		tra	in	ed ev	ery	thr	ee to	five
years.										

reservists mobilized for the Czech crisis, ranging in age up to 42, made up about half the strength of one regiment. They had had no military training since their discharge from conscript service—as much as 21 years previously. They were given no special training after mobilization. The motorized rifle battalions of the regiment were reorganized several times, however, in an attempt to incorporate the mobilized reservists most effectively.

Although details concerning the numbers and types of manpower skills available for mobilization are lacking, some transfers from the civilian economy to the military would be facilitated by the similarity (and, in many cases, identity) between the general equipment used in the civilian sector and that used by the military.

ment--trucks, bull dozers, graders, and scrapers-that were called up along with their reservist operators prior to the invasion of Czechoslovakia. The
machines and operators called up reportedly numbered
in the thousands.

Mobilization Procedures. Soviet mobilization policies are established by directives of the Council of Ministers. These directives govern the execution of mobilization by the Minister of Defense and the military offices of appropriate governmental agencies.

The mobilization plan is believed to be comprehensive, continually updated, and designed to provide a wide range of options from a small highly selective callup to a full, countrywide mobilization. It may be designed to be accomplished either covertly or openly, in a single phase or in successive phases.

The Soviet system is organized to permit the rapid expansion of the existing forces. The chain

of command, which extends down from the Ministry of Defense through the military districts, armies, and their subordinate units, and generally follows geographical and political divisions, permits rapid dissemination of orders and instruction for execution of the mobilization plan. The military commissariats which exist at republic, oblast, and rayon administrative levels are the specific instruments for mobilization.

The military commissariats are responsible for the management of the large numbers of trained and untrained reservists, as well as for handling conscription and other matters involving militarycivilian interface. The personnel required are to be drawn from lists of reservists designated to fill specific slots during mobilization. Many of the reservists probably live and work in the area of the unit to which they are assigned. When the mobilization order is issued, these men are alerted immediately and vehicles are dispatched to pick them up from collection points and transport them to the In addition to the records of reservists, the rayon commissariats maintain records of all other physically fit men who are living in the area and are liable for military service.

Classified writings indicate that time allowances for completion of mobilization in understrength divisions and higher echelon
units are established by the Ministry of Defense.\*
These times are intended to correspond with operational plans regarding the order and timing in which
Soviet planners envisage unit movement and use.

\* Analysis of all available information indicates that cadre divisions have around one-fifth of their manpower and are short between 1,100 and 1,800 major equipment items, primarily cargo trucks and armored personnel carriers, but in a few cases shortages probably include tanks and artillery. Reduced-strength divisions have around two-thirds of their manpower and are short between 600 and 1,400 major items of equipment, chiefly general-purpose trucks and armored personnel carriers.

The information on time limits within which Soviet divisions in the USSR are to complete mobilization indicates that they are to achieve full strength within 24 hours or less. According to one Soviet source, combat alert exercises to prepare a cadre motorized rifle division for combat are required by regulation to be held once every four years. The regulations reportedly stipulate that the division must be ready to move 24 hours from the time the alert is called (M). Several sources have reported that in practice mobilizations cadre divisions have achieved readiness to move in 48 hours (M+48).

48 hours (M+48). a reduced-strength motorized rifle division. participated in the Czech intervention, completed mobilization by M+36 hours. The division did not, however, complete mobilization as rapidly as possible as would be the case under combat alert conditions. normal contingency planning required motorized rifle regimentto achieve full strength and readiness in 10 to 12 hours if mobilization were ordered under alert conditions from the outset. It is possible that entire division under alert conditions would be required to achieve full readiness in the same 10- to 12-hour time period.

There is no specific data on time limits for Soviet army-level units to achieve full strength and readiness. Nevertheless, information on planned availability of Soviet forces from the western USSR indicates that these units are intended to complete mobilization in a short time. the Soviets have indicated that the leading elements of their reinforcements from the Carpathian Military District are to enter Czechoslovakia between M+1 and M+4 days. the movement of two Soviet armies into concentration areas in Czechoslovakia could be completed by M+11 to M+14 days at the latest, the time required to move one entire army being about five days.

If this information is correct, one reinforcing Soviet army could, if required, complete movement forward as early as M+6. Although none of this information indicates the total time actually spent on mobilization, the speed with which the Soviets hope to accomplish reinforcement indicates that the mobilization time is relatively short (as little as one or two days) for all units of the army, including those that are cadre and even those that must be mobilized from scratch.

#### Stationed Soviet Forces

Soviet forces in Eastern Europe are generally estimated to be at or near full strength.

the conclusion that the Soviet divisions in the forward area are probably intended to be manned in peacetime at or near wartime strength. There is some evidence, however, that these forces may have something less than 100 percent of wartime strength. It is doubtful, though, that these shortages are ever of such magnitude as to seriously affect the capability of any line division to carry out its combat mission. These shortages may result in part from personnel attrition in the intervals between conscript callup periods. Other shortages result from personnel being temporarily assigned to schools, and a limited number on home leave and in hospitals. The likely overall manning level for both tank and motorized rifle divisions is between 90 and 95 percent. In any event, there is no evidence, nor is it likely, that the Soviets expect any forward area Soviet divisions to be mobilized prior to commitment.

There is little information on manpower levels in Soviet nondivisional units located in the forward area. Evidence indicates that reservists were brought in from the USSR to augment rear service units during the 1961 Berlin crisis. Pact writings, including Soviet writings, acknowledge that the rear services in general are not maintained at the same readiness levels in peacetime as are divisions. It is therefore possible that Soviet rear services in Eastern Europe may still require some augmentation

of personnel. On the other hand, these rear services are supporting divisions which are positioned as the first line of defense against NATO attack while forces to their rear are mobilizing. Since there is no mobilization base in the forward area from which Soviet manpower shortages could be made up, it is likely that even the rear services are kept at high manning levels in peacetime. It is probable that during a period of increasing international tension efforts would be made to fill shortages in the divisions (if they exist) and in the rear services with reservists and conscripts from the USSR. The total number would probably be relatively small and the necessary personnel could be quickly transferred to Eastern Europe by air or rail.

#### Indigenous Forces

The Eastern European forces, together with stationed Soviet forces, would be organized in time of war into three fronts. The East German, Polish, Czechoslovak, and Hungarian forces consist of support and service elements of the fronts and of 9 to 10 component armies, which include 39 divisions (15 tank, 14 motorized rifle, 8 mechanized, 1 airborne, and 1 assault landing division). The total wartime strength of the East European forces has been estimated at about 495,000 to 635,000 men. Some 310,000 to 435,000 of these personnel are believed to be maintained in the peacetime force.

East Germany. Evidence on manning levels in East German divisions

cated that the six active East German divisions are manned at or near full personnel strength in peacetime. Most combat support units are also believed to be at or near full strength, while rear services may be at a lower level. There is some evidence that the East Germans would mobilize additional combat units, but it is not known whether these units have any active duty personnel in peacetime.

Czechoslovakia. Information on manning levels in Czechoslovak forces

levels in the Czechoslovakian armed forces vary. Of the 10 divisions which exist in peacetime, eight are manned at about 70 percent and the remaining two are manned at about 30 percent. Two and possibly three additional divisions—M day divisions—are to be constituted at the time of mobilization from personnel taken from the active forces, plus reservists. These divisions have no assigned personnel during peacetime. Most army support elements probably are manned at about 50 to 70 percent while others may be manned at even lower levels.

Poland. Official classified documents

Polish reduced-strength divisions are maintained at 50 to 80 percent strength, while cadre divisions are manned as low as 20 percent of full strength. None of the 15 Polish divisions is fully manned in peacetime. Rear services elements are generally manned at lower levels than divisions (probably 50 percent or less) and in many instances entire units must be mobilized.

Hungary. manning levels in the six Hungarian divisions vary from as low as 20 to 30 percent up to about 70 percent of their authorized wartime strength. As is the case with the other Warsaw Pact nations, a majority of the army-level support units are manned at low levels-probably 50 percent or less.

Requirements and Resources. The total manpower augmentation requirement for the East European forces is believed to be around 185,000 to 200,000 men. Official Warsaw Pact writings indicate that because of conscription systems manpower reserves in Eastern Europe probably could supply the ground forces with enough experienced men to bring them up to authorized strength. The level of proficiency in some critical military specialties, however, probably would be low.

Reservist Training. Good evidence concerning manpower reserves in Poland provides some understanding of mobilization resources and procedures in that country. (No significant research effort has yet been directed towards the reserve training programs in the other East European nations.) Polish manpower reserves consist of trained personnel up to 35 years of age (40 years of age if possessing a critical military specialty) and of personnel with civilian specialties useful in the armed forces. As a general rule, personnel are given reserve training in units in which they have mobilization assignments. In addition, efforts are made to satisfy the mobilization requirements with reserve personnel who live within the county where the unit being augmented is stationed. Efforts are also made, where possible, to balance reserve assignments in a unit with men more recently released from active duty (up to 5 years) with older reservists (about 10 years since release). Reservists in this latter group are more likely to be called up for refresher training.

Reserve training in Poland is conducted on a year-round basis for periods lasting from three days to a maximum of three months. Training of individuals is not conducted regularly. The previously mentioned balanced reserve assignments is one of the primary causes for this irregularity. The frequency of reserve training is determined by reserve training requirements and guidelines formulated on an annual basis by the Training Inspectorate and the Cadre Department of the Polish Ministry of National Defense and passed down through military district headquarters to the divisions and individual units.

reserve training, while more irrequent and universal, tends to follow the Soviet approach, which restricts the firing of live ammunition, lacks imagination, and often does not provide the reservist with a realistic atmosphere in which to learn and practice his job.

#### Equipment Requirements

The total number of major items of equipment\* estimated for the mobilized multinational five-front force amounts to some 330,000 to 400,000 items. It is estimated that some 245,000 to about 315,000 of these items are maintained in the armed forces during peacetime while the remaining 85,000 to 95,000 must be mobilized from the national economies.

#### Soviet Reinforcement Forces

The two reinforcing fronts from the western USSR, consisting of support and service elements of the fronts, seven armies and 28 divisions, are estimated to have an authorized wartime strength of some 115,000 to 140,000 major equipment items. Around 65,000 to 80,000 of these items are believed to be in the armed forces, and an additional 50,000 to 60,000 would have to be mobilized in time of war.

Requirements and Resources. Analysis of repetitive high-resolution photography, enables us to conclude that the combat units in the western USSR have most of their weapons and combat vehicles on hand. This includes all of their tanks and artillery, except that the artillery in some divisions, especially cadre divisions, may not have increased to the new levels (72 howitzers in a motorized rifle division and 60 in a tank division). Shortages of specific types of combat equipment, which include armored personnel carriers (APCs) and self-propelled antiaircraft guns, probably would not be made up before commitment of the two fronts. We make this judgment because no depot stocks of these weapons are known to exist. Substitution of trucks for APCs would occur in many motorized rifle units.

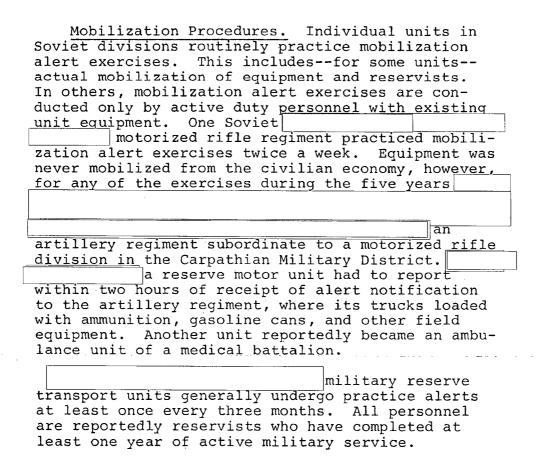
<sup>\*</sup> Major items of equipment are defined as all selfpropelled combat vehicles and large weapons, major transport vehicles, and large engineer equipment.

Of the estimated 50,000 to 60,000 items which the force must mobilize, the greatest equipment shortages are of general purpose trucks, which would be drawn from the civilian economy. The civilian economy has an estimated 4.7 million trucks, of which some 520,000 are in the Belorussian and Carpathian Military Districts, in the Kaliningrad area, and in the Baltic Military District. At least 10 percent, or some 50,000 trucks, are probably designated and maintained to fill military requirements. The estimated numbers are derived from unclassified production, export-import, and utilization data.

The Soviet production capacity for motor vehicles is limited, and thus the motor vehicle resource is carefully and sparingly allocated. The military sector is allocated only those vehicles which are actually needed for peacetime operations and training. Analysis

open source Soviet material indicates, however, that a portion of the total national motor vehicle resource is assigned to the military as a mobilization pool. These vehicles are designated to fill specific unit requirements upon mobilization. Many of them are in military reserve transport units—called avtokolonnas—where vehicles so designated are maintained according to military specifications. Upon mobilization, these vehicles and their drivers are assigned to specified units as an integral part of the units' organic motor transport.

One factor which makes civilian trucks suitable for military use is that truck production in the USSR is, to a large degree, standardized. Civilian and military trucks are made up of identical component parts. The principal difference is that most civilian trucks, particularly in the light and medium class, have a single-axle drive, whereas the preponderance of military trucks have multiple-axle drives. The military trucks, therefore, have a greater capability in mud, snow, and cross-country operations. Moreover, the military trucks usually are fitted with heavy-duty tires with deep treads.



Limited available evidence suggests that mobilization exercises for higher echelon units are not carried out on a scale or with the frequency of the practice alerts noted in divisions.

#### Stationed Soviet Forces

Soviet forces in Eastern Europe are estimated to have most, if not all, of their authorized equipment. Contingency planning would require them to be capable of immediately engaging in combat with forces on hand because of their forward location opposite NATO's Central Region and their isolation from Soviet mobilization resources inside the USSR.

High-resolution satellite photography and lowlevel aerial photography in the Berlin corridors have

allowed confident assessment of equipment levels in most forward area Soviet divisions. These data,

allow the conclusion that the divisions in the Group of Soviet Forces in Germany (GSFG) and the Soviet Central Group of Forces (CGF) in Czechoslovakia are equipped at combat strength. Divisions in the Southern Group of Forces (SGF) in Hungary have 200 to 400 fewer vehicles than Soviet divisions in East Germany--the 15 percent difference being mainly cargo vehicles which would limit division logistic capabilities. photographic analysis of the Soviet Northern Group of Forces (NGF) in Poland has not been undertaken to date.

#### Soviet Higher Echelon Forces

Information on higher echelon Soviet forces is less complete. Presently a study is under way to improve our knowledge of the numbers and types of nondivisional units which constitute a Soviet army or front, and also to improve estimates of their authorized wartime equipment levels. Whether all higher echelon units in the forward area exist in peacetime can be determined when this study is complete, and a better comparison between these units' authorized wartime equipment levels and their actual peacetime equipment holdings can be made. Preliminary assessments of sample nondivisional units in the GSFG indicate higher equipment levels in these formations than are found with corresponding units inside the USSR.

#### Indigenous Forces

The Eastern European forces, consisting of portions of the support and service elements of three fronts and 9 to 10 component armies (which include 39 divisions) are estimated to have an authorized wartime strength of some 110,000 to 135,000 major equipment items. Some 75,000 to 100,000 of these are maintained in the ground forces during peacetime while the remaining 35,000 or so items must be mobilized.

East Germany. analysis of high-resolution photography lead to the

conclusion that the six East German divisions maintain in peacetime about 95 percent of their authorized equipment.

higher echelon combat and combat support units

probably have all

of their equipment. Some shortages probably exist
in some engineer, motor transport, and chemical
units, which will be expanded into larger organizations upon mobilization. The greatest shortages

Czechoslovakia.

probably exist in rear service units.

the 10 active Czechoslovak divisions are equipped at combat strength in peacetime while army and front combat and service support units require mobilization—primarily cargo trucks. Preliminary photographic analysis of the Czech divisions suggests that they may also require some augmentation of cargo vehicles. In addition, the Czechs maintain sufficient combat equipment for two additional M day divisions intended for mobilization in wartime, but which are not active units in peacetime.

Poland. The majority of the 15 Polish divisions are maintained at reduced strength levels in peacetime but are intended to be made ready for deployment within about 12 hours. These divisions are smaller than their Soviet counterparts and, although they would be immediately deployed, some would lack APCs.

The Polish cadre divisions are short most of their trucks and some major combat equipment. Nevertheless, these divisions are intended to be mobilized within 24 hours.

Hungary.

three of the six divisions

70 percent or more of their authorized wartime equipment strength, two others maintain 50 percent or more of their equipment, while one division has less than 50 percent of its equipment.

Equipment Resources.

vehicles are to be mobilized for the East European armed forces as they are for the Soviet armed forces.

This evidence also shows that these vehicles are periodically inspected and tested to determine their condition and ensure their usability for military purposes.

One of the best descriptions of the mobilization procedure for vehicles

Basically, it involves the designation of civilian motor transport units in areas less than approximately 60 miles from the military unit to be augmented. These motor transport units usually do not exceed 200 trucks each. They are subjected to periodic inspections and tests.

Problems in the mobilization process arise because of the unequal distribution of motor transport resources in relation to the mobilization requirement. Military units are not always garrisoned within 60 miles of their assigned vehicles. Moreover, certain industries have such a large and rapid turnover in personnel and equipment that it is virtually impossible to maintain a permanent mobilization stock.

Estimates of the civilian truck inventory as of 1 January 1971 are as follows. They are derived from unclassified production, export-import, and utilization data.

	Number of trucks
Poland	260,000
East Germany	220,000
Czechoslovakia	210,000

Transportation Requirements. Transportation required to execute mobilization would consist mainly of general purpose trucks and buses to pick up reservists and carry them to their units or to designated assembly areas. Transport of most reservists probably is mainly the responsiblity of the military commissariat at the rayon administrative level. Vehicles probably are dispatched from elements of automotive trusts, particularly those from the military reserve transport units.

As in the USSR, vehicles from the civilian economy in East European countries are used to transport reservists. These are, in most cases, not the vehicles being mobilized for military use.

#### East European Higher Echelon Forces

Little research has been done to date on East European higher echelon units. There are no established tables of equipment for these units available and no precise comparison between actual and authorized wartime equipment holdings can be made. Official Warsaw Pact writings

generally acknowledge that the higher echelon formations are not maintained at as high levels of strength and readiness as are divisions. Excluding some combat and combat support units which must be maintained at high readiness levels because of their mission and complex training requirements (Scud, SAM units, etc.), most nondivisional units are probably maintained at reduced equipment strength levels. In many instances entire units will have to be mobilized.

#### Mobilization Facilities and Procedures

#### Facilities

The facilities required for mobilization ap-
parently vary in type and location in relation to
the units they serve.
that reservists of one motorized rifle divi-
sion reported to the division to receive their uni-
forms and personal arms, while motor-
ized rifle regiment of a tank division
reservists were assembled and outfitted at an
installation near the townnot at the installation
where regiment was located. The men later
joined the regiment at its assembly area some 10
to 12 miles away from the regiment's installation.
In Eastern Europe procedures also vary, not only
from country to country, but also within the various
divisions.

#### Assembly Procedures

The procedures for Warsaw Pact mobilization will vary depending on political events and the military situation. In a period of gradually increasing tension, some Warsaw Pact forces may be brought up to full strength in or near the garrisons. Others may be ordered to move from their permanent garrisons to alert, assembly, or mobilization areas. Such areas are normally within 15 miles of the garrison. During a period of immediate threat, a combat alert will be ordered and the forces are to move from their permanent garrison areas as quickly as possible to their alert areas and mobilize.

Although alert assembly and mobilization areas need not contain elaborate facilities or equipment, there is evidence that they must assure the availability of such things as: suitable conditions for dispersing units and supplies, communications circuits, unrestricted departure to the planned operations zone, and water supplies. Subelements may move from the garrison area to the alert area as soon as they are ready rather than waiting for the entire unit to form up. For understrength contingents the alert area may also serve as the reserve area for mobilization.

#### Logistic Support for Mobilization

An intensive analysis of stocks located in East Germany indicates that there are enough supplies in that country to support the ground forces of the GSFG, East German army, and any reinforcing units in high intensity conventional combat for a limited period. Therefore, the Soviets do not face the necessity of transporting supplies to the forward area in the early stages of mobilization and reinforcement.

The classes of supply which will have the most direct bearing on the combat capabilities and

effectiveness of Warsaw Pact forces are ammunition and POL. A study of Pact logistics capabilities in East Germany determined that there are some 280,000 to 340,000 metric tons of conventional ammunition subordinate to the GSFG and about 86,000 to 111,000 metric tons subordinate to the East German army. Additionally, there are about 15,000 metric tons of small-arms ammunition and explosives subordinate to the various East German security forces. Military POL is estimated to be about 365,000 metric tons for the GSFG and 50,000 metric tons for the East German army. Further supplies of ground forces POL could be mobilized from the East German civilian economy.

The number of days of combat that this amount of ammunition and POL will support depends on the size of the force to be supported and the scenario used. To illustrate the magnitude of the demands which might be placed on the Warsaw Pact logistic system in wartime, two scenarios were developed to provide a reasonable means of testing the capacity of the system. They provide situations within which to evaluate established facts and accepted estimates of Warsaw Pact logistic resources, requirements, doctrine, and practice. They do not encompass the entire range of ways in which a Warsaw Pact - NATO battle might develop, but they span the more likely range of conventional war possibilities.

The first scenario--scenario A--depicts a situation in which the Pact launches a three-front assault against NATO. After 10 days of combat of moderate intensity, Pact forces reach the Rhine having covered an average distance of 200 miles. Scenario B also depicts a three-front Pact assault against NATO. After 10 days of high-intensity combat, however, Pact forces advanced only about 100 miles.

The scenarios, using the results of the logistic study on East Germany, provide a means of testing the major component of Pact forces in the central front--the Group of Soviet Forces in Germany.

The results obtained from the scenarios show that the GSFG would require, under the situation posed by scenario A, some 144,000 metric tons of ammunition and about 23,000 metric tons of POL. In scenario B, the GSFG would require about 199,000 metric tons of ammunition and 17,000 metric tons of POL.

It appears, then, that ammunition and ground forces POL need not be transported into the forward area during the early stages of mobilization and reinforcement. There are sufficient supplies to enable the Pact to launch and initially sustain an attack against NATO. The major logistic problem for the GSFG under the scenarios was that its 7,300 army-and front-level vehicles were inadequate to provide the timely delivery of supplies in sufficient quantities to satisfy the logistic requirements generated by the two scenarios.

To meet these requirements the GSFG would need an additional 3,000 to 6,000 vehicles. According to the terms of the scenarios, these vehicles are needed in the early stages of combat, and therefore may be introduced before hostilities commence.

A conventional conflict in Europe that was prolonged beyond Pact expectations of early success would clearly require mobilization of the civilian economy and the expansion and development of Warsaw Pact logistic systems. Until such expansion took

place, combat operations beyond the initial phase would be hampered by logistic inadequacies.

In the event that a conventional compaign escalated into nuclear war, additional logistic requirements would be generated. Conventional ammunition requirements would be reduced to the extent that nuclear weapons were used to destroy targets that would otherwise have been attacked conventionally. On the other hand, the increased destruction of depots and stocks, forces, and lines of communication that would probably take place in a nuclear exchange would cause massive requirements for replacement supplies and burdens on the transportation to bring them forward. One Pact logistician, for example, estimated that up to 50 percent more supplies would be required in a nuclear war than in a conventional one.

In the western military districts, where forces have been studied to a greater extent than in other areas of the USSR, logistical support capabilities appear to rely heavily upon mobilization. This dependence varies with the ready status of each unit. Although all divisions have a large proportion of their firepower on hand, motor transport and other logistic support are often under strength. At the army and front levels, logistic support organizations appear to exist mostly in cadre status. Equipment needed for both the military and the economy is being used to satisfy civilian needs.

A study is now under way to determine the structure and strength of Soviet armies. When this study is completed it will be possible to extend calculations of Soviet mobilization requirements for logistics support.

Additional logistical organizations and stocks in the USSR would also have to be mobilized to provide the management and personnel to support the mobilization of second echelon forces. These logistical resources would be required to assemble the transportation and other services essential to the operational deployment of the forces, and to establish or augment

the lines of communication, supply, and maintenance and repair necessary to maintain these forces, plus forces already in the forward area, after the existing forward logistic resources were depleted. The complexities of a modern logistics system designed to support a large military force are so great that it probably will not be possible to determine accurately the entire Soviet logistics mobilization requirement. Soviet discussions of mobilization indicate that such additional mobilization is planned and refer to the problems which mobilization would precipitate.

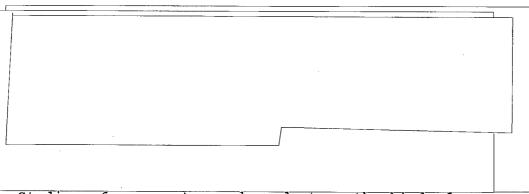
In general, the mobilization of logistical resources (staffs, organizations, facilities, and supplies) would be more difficult than that of other military formations. The peacetime logistical establishment is small, whether measured in absolute terms or in relation to the force to be supported; thus, in wartime the force must be expanded substantially.

In East Germany, Czechoslovakia, Poland, and Hungary several thousand civilian vehicles are scheduled to be called into service with military transportation units in the event of mobilization. In Czechoslovakia, other civilian vehicles will be used to fill out understrength divisions and to carry out civil defense tasks.

The peacetime status of the logistic services in these countries is probably similar to that inside the USSR. Their logistical organizations would, in the main, need to be mobilized, as would substantial quantities of military end items.

TOP SECRET		

## Movement and Reassembly of Soviet Reinforcement Forces to the Forward Area



Studies of movement are dependent on the kind of conflict scenarios used as their background. For example, a scenario would indicate whether hostilities began before or after the reinforcements were moved forward, and it would also specify whether the reinforcements were intially concentrated in central Europe or farther to the east.

Analysis to date suggests that some 98 Pact divisions probably could be positioned within 250 nm of the West German border within 21 days. This estimate is based on a number of critical assumptions, including:

- -- the completion of mobilization and reinforcement prior to the initiation of hostilities
- -- mobilization and reinforcement planned at maximum speed, and with maximum reasonable utilization of capacity of facilities
- -- no efforts toward concealment attempted
- -- use of the most appropriate means and route of movement
- -- route capacity not limited by nonmilitary traffic or outages

-- ideal operating conditions with no interference by NATO forces.

Where the forces would be deployed once they were brought forward is unknown, as is the time required to complete the organization of the armies and fronts in the forward area and to prepare for coordinated offensive operations.

#### Qualitative Comparison of Warsaw Pact Units

The foregoing discussion of the mobilization and movement of Soviet units from the western USSR into the forward area assesses primarily the quantitative aspects of the problem. Analysis of the impact of a successful reinforcement, however, also requires assessment of the quality of the forces. This section describes and applies a method for qualitative comparison of mobilized units, as well as those Warsaw Pact units already at full strength.

It is possible, however, to evaluate the potential capability of Soviet and East European divisions relative to their own standard using the data available and to classify these divisions as follows:

Fully ready. Division meets full performance standards for a unit of its type.

Substantially ready. Division substantially meets required performance standards, but has deficiencies which reduce its effectiveness and endurance and limit its employment as compared with a fully ready division.

Marginally ready. Division has deficiencies of such magnitude as to limit its performance severely as compared with a fully ready division. It is estimated to be capable, nonetheless, of conducting limited operations for a limited period.

 $\underline{\mbox{Not ready.}}$  Division has low performance standards and cannot be employed as a division.

#### Evaluation Criteria

The detailed information vital for definitive comparisons is not available on Soviet and East European units, either those at full strength or those to be mobilized. The missing data include, but are not limited to:

- -- numbers and specialties of regulars and reservists available for active duty, both before and after mobilization
- -- the precise status of equipment, both in terms of percentage of TE and state of maintenance. Major items can be counted but important small items cannot--radios, spare parts, medical supplies, etc. Nothing is known of maintenance and the state of unit stocks
- -- the precise state of training of the cadre, or regular, members of a unit being mobilized
- -- the precise state of training of the reservists who will be mobilized.

Despite the absence of the above details, however, general unit data and information are available which permit the application of criteria to provide a rough comparative rating of the mission capability of Warsaw Pact units, both before and after mobilization. The major factors in this comparison are trained manpower levels, unit major equipment levels, and estimated levels of unit training.

#### Trained Manpower Levels

Information is insufficient to permit a precise determination of the level of trained manpower in reduced-strength Soviet or East European divisions. It is known, however, that should the Pact plan to mobilize for a major contingency in the least possible time, considerations such as individual proficiency levels and age are secondary to the rapid acquisition of men. There would apparently be few numerical shortages caused by men failing to arrive at mobilization points in sufficient time to bring divisions and other units up to full strength within a day or so. The proficiency of the individual reservist is, however, a factor in the measurement of unit proficiency and would depend on his military specialty, his data of discharge, and his training subsequent to discharge.

The experience of the 322nd Motorized Rifle Regiment of the 31st Tank Division, which was mobilized for the invasion of Czechoslovakia, gives evidence that among reservists called up for mobilization, age and skill will vary and some reservists would be low-quality soldiers. Evidence on Soviet and Polish programs for the training of reservists indicates that, in general, reserve training programs are unimaginative, often unrealistic, and conducted either infrequently or irregularly. A mobilizing Warsaw Pact division needing a substantial augmentation of reservists (30 percent or more) will have substantially less effectively trained personnel than a full-strength or near-full-strength division in which personnel are trained constantly in peacetime.

A precise determination of the peacetime manning of Soviet and East European divisions is not possible, but methodologies have been developed which permit workable estimates of the manning levels of divisions in the forward areas and in the western USSR. By combining estimates of manning with our knowledge of reserve and active duty training practices it is possible to assign a numerical value to the level of trained manpower in Pact divisions. Our scale of values for trained manpower is as follows:

Trained manpower (percent of TO)	Capability value
(percent of To)	
90-100%	1
66	2
50	3
33 or less	4

Note: The estimated percentage of fully trained men in a division is the product of several factors including premobilization manning totals, the level of training for active duty personnel, and the quality and frequency of reservist training.

#### Major Equipment Levels

Counts of unit equipment levels, particularly in divisions, can be made with more confidence and precision than calculations of manning levels

Our

scale of values based on these equipment counts is as follows:

Equipment level	Capability value
(percent of TE)	
90-100%	1
75	2
50	3
. 30-50	4

Note: Unit shortages are primarily in service equipment. Where shortages include both combat and service equipment, the next lower capability level is assigned.

#### Levels of Unit Training

The training of Soviet and East German units in the forward areas is subject to monitoring by various sources. Little information is available, however, on the training status of reduced-strength Soviet divisions in the USSR and other East European divisions. There is no evidence that, as part of a regular training cycle, reduced-strength divisions

in the USSR are filled with reserves, trained, and then reconverted back to their previous status, although it does occur sporadically.

More importantly, a unit mobilized but untrained as a unit cannot, in any event, have the combat proficiency of an identical unit which has trained as a unit for a year or more. This would be true even if the personnel of the active unit included as many as 50 percent new inductees when it began its yearly training cycle.

Because, by normal military standards, successful unit training is vital to the attainment of maximum combat proficiency, training has been included as a factor in the qualitative evaluation of mobilized Soviet divisions. This is not a precise evaluation, particularly since the size, state of training, or unit proficiency of the nucleus or cadre elements of units to be mobilized cannot be precisely determined. However, the scale of values given below permits a rough measurement of this factor. This scale is applied only to those mobilized units where no firm evidence is available on the state of unit training. Where evidence indicates that any unit, regardless of manning or equipment level, has conducted normal progressive unit training for at least one annual cycle, then that unit is given a capability value of 1.

Unit training lev	rel	Capability value
Division or equivalent	4 weeks	1
Regiment or brigade	2 weeks	1
Battalion	4 weeks	1
Division or equivalent	3 weeks	2
Regiment or brigade	1 week	2
Battalion	3 weeks	2
Division	2 weeks	3
Battalion	2 weeks	3
All units with training lower than above	levels	4

This scale assumes that training proceeds in progressive stages—that is, battalions must be trained individually before the parent regiment may train as a regiment, and regiments must be trained before the full division may train as a division. It also assumes that individual training and small—unit training—platoon and company level—is conducted concurrently with that of the parent battalion. Under these assumptions, a division would require 10 weeks, for example, to move from an untrained status to a capability value of 1.

A division whose component regiments have trained sufficiently to attain a capability value of 1, but which has not trained as a division, is rated at capability value 2. If the division's battalions are trained to capability value 1 but the regiments have not trained as regiments, then the division is rated at capability value 3, while its regiments are individually rated at value 2. A similar interpolation is applied at other levels where warranted by evidence.

## Determination of Relative Division Mission Capability

When a Warsaw Pact division has been rated in the three basic factors—trained manpower level, equipment level, and unit training level—the three values are added. The sum of these three values divided by three provides the relative mission capability rating of the division. Should this process result in a figure between two mission capability numbers, for example 2.7, then the unit is rated at the next lower rating. The values assigned to the Warsaw Pact divisions are tabulated on the following pages. The definitions of unit mission capability are appended to the tabulation.

# Relative Mission Capability Ratings of Warsaw Pact Divisions

	Mission capab	oility rating
	Before	After
<u>Division</u>	<u>mobilization</u>	mobilization
Group of Soviet Forces in	Germany	
6th Guards Motorized Rif	le l	1
6th Guards Tank	1	1
7th Guards Tank	ī	ĩ
9th Guards Tank	1	ī
9th Tank	. 1	1
10th Guards Tank	1	ĺ
llth Guards Tank	1	1
12th Guards Tank	1	1
14th Guards Motorized Ri		1
20th Guards Tank	1	1
20th Guards Motorized Ri		1
21st Motorized Rifle	1	1
25th Tank	1	1
27th Guards Motorized Ri		1
35th Motorized Rifle	1	1
39th Guards Motorized Ri		1
47th Guards Tank	1	1
57th Guards Motorized Ri		1
94th Guards Motorized Ri		1
207th Motorized Rifle	1	1
East German		
lst Motorized Rifle	1 .	1
4th Motorized Rifle	1	ī
7th Tank	1	1
8th Motorized Rifle	1	1
9th Tank	1	1
11th Motorized Rifle	1	1
Soviet Northern Group of	Forces	
20th Tank	1	1
38th Guards Tank	ī	ī

Division	Mission capab Before mobilization	After
Polish		
1st Mechanized 2nd Mechanized 3rd Mechanized 4th Mechanized 5th Tank 6th Airborne 7th Assault Landing 8th Mechanized 9th Mechanized 10th Tank 11th Tank 12th Mechanized 15th Mechanized 16th Tank 20th Tank	3 3 4 2 2 2 2 2 4 2 2 2 2 2 2 2 2 2 2 2	2 2 3 2 1 1 2 3 2 1 1 2 1
Soviet Central Group of  10th Tank 30th Motorized Rifle 31st Tank 48th Motorized Rifle U/I Motorized Rifle (Tu  Czechoslovakian	1 1 1	1 1 1 1
lst Tank 2nd Motorized Rifle 3rd Motorized Rifle 4th Tank 9th Tank 13th Tank 14th Tank 15th Motorized Rifle 19th Motorized Rifle 20th Motorized Rifle U/I division (M day*) U/I division (M day*)	2 2 2 2 2 4 4 2 2 2 2 4	2 2 2 2 2 3 3 2 2 2 2 3 3

<sup>\*</sup> No assigned personnel in peacetime.

	Mission capal	oility rating
Division	Before	After mobilization
DIVISION	MODITIZACION	MODITIZACION
Soviet Southern Group of	Forces	
2nd Guards Tank	1	1 .
35th Guards Motorized Ri		1
U/I Guards Tank (Vesprem		1
U/I Guards Motorized Rif (Szekesfehervar)	1 1e	. 1
(Szekestenetvat)	<b>.</b> 	· <b>T</b>
Hungarian	•	·
5th Tank	2	2 `
8th Motorized Rifle	4	3
9th Motorized Rifle	2	3 2 3 2
12th Tank	2 3 2 3	3
17th Motorized Rifle	2	2
27th Motorized Rifle	3	3
Soviet Divisions in the V	Western USSR	
lst Tank	3	2
1st Guards Motorized Ris	fle 3	
3rd Tank	Ele 3 3 3 3 3	2 2
8th Guards Tank	3	2
8th Tank	3	2
10th Tank		2 3
15th Guards Motorized R		3
17th Motorized Rifle	4	3 2 2
22nd Tank	3 3	2
23rd Tank 24th Motorized Rifle	3	2
26th Guards Motorized R		2 3
27th Tank	3	2
29th Tank	3	
47th Guards Tank	3	2 2 3
50th Guards Motorized R		3
66th Guards Motorized R	ifle 4	3 3
70th Guards Motorized R		3
97th Guards Motorized R		3
120th Guards Motorized		1
128th Guards Motorized		2
161st Motorized Rifle	4	3

Division		Mission capak Before mobilization	After mobilization
Soviet Division (continued)	s in the	Western USSR	
U/I Tank (Dobele) U/I Tank (Sovetsk) U/I Guards Tank (Berdic U/I Guards Tank (Novogr Volynskiy) U/I Motorized Rifle (Vilnius) U/I Motorized Rifle (Klaipeda)	tsk) k (Berdic		2 2 2
	_	3	2
	4	3	
Rating		Definition	
1	Fully ready. Division meets full performance standards for a unit of its		
	type.		
2	Substantially ready. Division substantially meets required performance standards, but has deficiencies which reduce its effectiveness and endurance and limit its employment as compared with a fully ready division.		
3	ciencies its perfo with a fu estimated	y ready. Divisor of such magniture severely lly ready divisor to be capable, ting limited of period.	ide as to limit as compared sion. It is nonetheless,
4	Not ready mance sta as a divi		s low perfor- not be employed

#### Significance of Qualitative Differences

The primary significance of the preceding qualitative comparison is its impact on the assessment of the potential effectiveness of the Warsaw Pact force. It is clear that all Pact divisions both before and immediately after mobilization are not equally ready for combat. For this reason Pact divisions are not equal elements either for purposes of computing equal force reductions or for estimating the potential effectiveness of the postreduction force.



#### CENTRAL INTELLIGENCE AGENCY

WASHINGTON, D.C. 20505

6 November 1972

MEMORANDUM FOR: Mr. Philip A. Odeen

Director, Programs Analysis National Security Council

SUBJECT

Transmittal of Report on Warsaw Pact Buildup Capabilities: A Review of Work in Progress and

Analysis to Date

1. The attached report is submitted in response to the White House Memorandum dated 25 September 1972.

2. This report contains information derived from sources. Please limit the dissemination of the report to those who require it in connection with MBFR analysis. Director Strategic Research Attachment: Сору