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NATIONAL INTELLIGENCE ESTIMATE

China's Military Policy and General Purpose Forces

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NIE 13-3-72
20 July 1972

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The Director of Intelligence and Research, Department of State
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CHINA'S MILITARY POLICY AND
GENERAL PURPOSE FORCES

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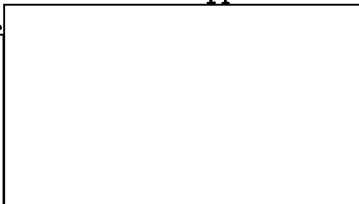
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CHINA'S MILITARY POLICY AND GENERAL PURPOSE FORCES

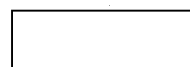
NOTE

This is the first estimate on Chinese theater forces to appear in the enlarged format for military estimates.



Optimism regarding our knowledge of Chinese military affairs, however, is tempered by the fact that the circumstances surrounding the 1971 purge of the top military leadership and many of its implications remain obscure. The purge has obviously altered the prospects for the succession to Mao Tse-tung and it has produced at least a temporary return to the pre-Cultural Revolution norm of the Party "controlling the gun". It may have important consequences for military morale, for military priorities, and for military policy.

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THE PROBLEM

To assess Communist China's general military policy and to estimate the strength and capabilities of the Chinese Communist general purpose and air defense forces through 1977.

CONCLUSIONS

POLICY AND STRATEGY

A. Chinese military policy has been strongly influenced by Peking's aspirations to reclaim a leading role in Asia and to gain recognition as a major world power, and by acute concern to deter attack or invasion by the great powers. Taken together, these considerations have caused China to maintain a substantial military establishment and to bear the heavy costs of modernizing its general purpose forces and of developing an independent strategic nuclear capability. Nonetheless, Mao's insistence on a basic policy of self-reliance and China's limited technical and industrial base have insured that the process of modernizing the People's Liberation Army (PLA) would be a protracted one.

B. Mao's primary concerns have been with the progress of the revolution in China, and the long-term development of modern military forces has taken place within the context of this overriding goal. Mao's willingness to subordinate defense and purely military considerations to the higher priority goals of politics and the continuing revolution—as in the Cultural Revolution—has had an impact on military professionalism, on combat readiness and morale, and even on military production programs. The PLA, in playing a "vanguard role" in the revolution, has been drawn deeply into politics and has been exposed to the inevitable rewards and penalties. The purge of Lin Piao and the top military leadership in 1971 is only the latest, if most dramatic, manifestation of the PLA's continuing involvement in vital issues of national policy.

C. The policy of the People's Republic of China with respect to the use of force has been generally cautious. It has limited the use of combat forces beyond China's borders to circumstances where Peking has seen real and imminent threats to Chinese territory or to vital Chinese interests. In the 1960s, the increasingly hostile nature of Sino-

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Soviet relations radically altered China's strategic problems. Although the Chinese were careful not to show any sign of weakness, they were at pains behind this brave front to control the risks of direct military confrontation with either of the two superpowers, and, as might be expected, their military stance remained essentially defensive.

D. China's strategy for defense against a possible Soviet invasion follows Mao's principles of "luring deep" and "people's war". In the face of the much superior firepower, air support, and mechanized mobility of the Soviet Union, the Chinese have chosen not to position large forces close to the border where they might easily be cut off. The Chinese strategy seems to be to hold back their key main force units until the invading forces are overextended and weakened by the resistance of local defense forces and guerrilla harassment. In contrast to the northern border regions, the coastal areas of China have important concentrations of population and industry, and in these areas the Chinese are prepared for a forward defense employing air and naval forces. If an enemy force landed, it would be met at once by both local defense and main force army units.

E. Another example of Peking's defense-mindedness and awareness of China's vulnerability to attack from the air is the immense effort that has gone into passive defense. The Chinese are building a large portion of their new factories—especially those for military-related industries—in interior regions and have dispersed some of them in out-of-the-way valleys and canyons. Perhaps to a degree unmatched elsewhere in the world, the Chinese are building civil defense facilities, ranging from simple shelter trenches and bunkers to large tunnels with sophisticated life-support equipment in some large cities. Large tunnels now in existence or under construction at 75 or so of China's airfields will be able to shelter most of China's fighter force, and other underground facilities built or under construction will be able to shelter all of the navy's existing submarines and missile boats.

F. While the main focus of China's strategy is defensive, this is not to say that Peking has given no thought to contingencies involving offensive operations. In any case, a military force which has been developed to defend against the superpowers inevitably has a considerable offensive capability against lesser foes. China could, for example, conquer all of Southeast Asia if opposed only by indigenous

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forces. If Peking decided to take Taiwan, a considerable redeployment of its forces would be required, as well as extensive amphibious and airborne training. Once these preparations were made, China could almost certainly take Taiwan in the absence of US military intervention. If the Chinese were to participate in a major attack against South Korea, which we think unlikely, they could effectively commit as many as 35 divisions in the narrow peninsula. In the case of South Asia, the Himalayas and the vast reaches of the Tibetan Plateau would severely limit China's offensive capabilities; long and difficult supply lines would prevent the Chinese from sustaining any offensive into India beyond the Himalayan foothills. But in any of these contingencies, Peking would be constrained by the necessity of providing for defense needs elsewhere, particularly vis-à-vis the Soviet Union, and by the requirements of internal security.

THE FORCES

G. The greatest relative weakness of the Chinese vis-à-vis the US and the USSR is in the field of strategic weapons, and Peking has assigned first priority to ambitious and costly programs aimed at providing China with a credible deterrent against nuclear attack. After strategic programs, air and naval modernization has had the higher claim on resources; modernization of the army seems to have received a somewhat lower priority.

H. Even so, the ground forces remain the dominant element. The size of the force (at 3.0 million men, the Chinese Army is the largest ground force in the world), the toughness and discipline of the Chinese soldier and the quality of small arms with which he is equipped are impressive. The Chinese Army for its size and by US and Soviet standards, however, has relatively little armor, and is only moderately well equipped with artillery. Tactical air support for ground troops is limited, and shortages of vehicles and transport aircraft restrict mobility and logistic support. In a non-nuclear war on its own ground against any invader the Chinese Army would be a most formidable force. In these circumstances it would be able to capitalize upon its vast manpower reserves, its ability to mount a large-scale guerrilla effort, and its ability to use China's terrain and territory to advantage in fighting a prolonged war. In contrast, the Chinese Army would experience

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great difficulty in trying to push very far beyond China's borders against the opposition of a modern force. Here the weakness in transport, logistics, firepower, and air support could become critical.

I. While its inventory of some 4,000 combat aircraft is the third largest in the world, China's equipment is far below the standards of US or Soviet aircraft. Air defense is the primary mission of this force, with 37 of the 53 Chinese air divisions assigned to this role. The air defense system suffers from serious weaknesses because of its reliance on relatively outmoded aircraft, a very modest level of surface-to-air missile (SAM) deployment, limited air surveillance capabilities, and the lack of automatic data-handling equipment.

J. China's ground attack fighter force consists of Mig-15/17 jet fighters and a growing number (currently about 185) of F-9 fighter-bombers (a Chinese-designed aircraft somewhat larger than but resembling the Mig-19). About three-quarters of China's 540 or so bombers are obsolescent Il-28s. The Chinese also have deployed about 43 Tu-16 jet medium bombers, but we believe Peking intends to use the Tu-16s mainly as part of China's force for peripheral nuclear attack.

K. The Chinese have invested heavily in naval programs, and this effort is beginning to pay off. The fleet now includes about 53 attack submarines, 16 destroyer escorts (including 8 that are equipped with cruise missiles), about 55 missile patrol boats, and several hundred motor gunboats and torpedo boats. The coastal patrol type vessels are prepared to play a significant defensive role; the larger ships and submarines further enhance Chinese defensive capabilities but have not yet ventured any extended operations into deep waters. The Chinese Navy has only a limited air defense capability, and its antisubmarine warfare capability is rudimentary. The Chinese have only a limited sealift potential, have no amphibious shipbuilding program and have conducted no large-scale amphibious training.

PROSPECTS

L. Peking's cautious attitude respecting the use of force seems likely to continue for some time, partly because the Chinese see no advantage in risking a military confrontation with the vastly stronger superpowers, and partly because Maoist doctrine continues to hold that

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revolution cannot be sustained by external forces. We do not rule out a shift in this generally defensive and cautious policy on the use of force as China's conventional and strategic power grows and in circumstances in which nationalist sentiments may have gained ground at the expense of Maoism. But there is little in the current situation to suggest that such a shift would be likely in the next few years.

M. We cannot foresee any weakening in the basic drive to develop China as a major military power. As in the past, however, progress in modernization and in developing military professionalism is likely to come into conflict with Maoist political and ideological goals. Moreover, because of China's limited technical base, the modernization of the PLA will necessarily be protracted, and the process will undoubtedly require numerous compromises concerning the balance of effort between strategic and conventional forces, and between near-term results and longer-term progress. While the Chinese could probably step up their efforts at military modernization somewhat, they are much nearer the margin of their capabilities than either the US or USSR.

N. Thus the outlook for the next five years is one of continuing improvement along current lines based on programs now underway. A continuation of this persistent effort to build a formidable military establishment is unlikely to produce any spectacular breakthroughs or developments in the PLA. It will, however, permit Peking gradually to operate in the international arena with somewhat less concern for China's military weaknesses and shortcomings.

O. The Chinese Army is receiving newer and better equipment—including improved light and medium artillery, light amphibious and medium tanks, armored personnel carriers, more modern communications equipment, and increasing numbers of trucks—that will gradually upgrade its firepower and mobility. Training is being conducted on a larger and more elaborate scale, and there may be other changes in process—e.g., more attention to arming and training paramilitary forces—that will enhance the military usefulness of China's virtually unlimited manpower. While these improvements will not be sufficient to enable Peking to project its forces much beyond China's borders against first class opposition, the PLA should be able increasingly to

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contest an invasion more effectively and in somewhat more forward positions than is now the case, especially on the northern and north-western frontiers. In short, the already formidable defensive capabilities of the Chinese Army will increase, and the prospect of engaging this force will become a more and more unattractive proposition for any potential adversary.

P. The outlook for air and air defense forces is one of substantial increases in size with qualitative improvement proceeding at a more modest pace. Peking may decide to phase out production of Mig-19 fighters in favor of Mig-21s. Chinese-produced Mig-21s evidently have not yet entered the force, but we expect this to occur in the near future. The availability of this aircraft would mark the beginning of major improvements in intercept capability, particularly as the Mig-21s would probably be armed with air-to-air missiles and be equipped for all-weather operations. The Hsian-A interceptor, a native-designed follow-on to the Mig-21 currently being tested, may be available for deployment in the mid-1970s.

Q. SAM deployment will probably proceed at a faster rate than in years past, and deployment of the Chinese version of the SA-2 may be supplemented by a low-altitude weapon during the period of this Estimate. Radar coverage will improve and expand, and new communications equipment now becoming available will improve the command and control of China's air defense system. Despite this growth and improvement, however, China will continue to be vulnerable to a large-scale attack by planes employing the latest equipment and technology.

R. The new F-9 fighter-bomber represents a significant improvement in China's ground attack capability and is likely to be deployed in fairly substantial numbers. Peking may soon conclude that the cost of building and deploying the outmoded Il-28 jet light bomber is not warranted and that production should cease. Although the Chinese will probably use the Tu-16 bomber primarily as a strategic weapon carrier, some will probably be assigned to reconnaissance and other non-strategic roles.

S. China's naval programs clearly attest to an ambition to become an important naval power. Production of attack submarines, destroyers,

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destroyer escorts and guided-missile patrol boats is likely to continue to be substantial. The evidence suggests that China now has one nuclear-powered attack submarine; if so, several more will probably enter the fleet during the period of this Estimate. At this point, however, the Chinese Navy's level of operational experience has not kept pace with additions of new units and advances in technology. Given the complexity of learning to operate as a deepwater navy, this situation is likely to persist throughout the period of this Estimate. Although there is a good chance that the Chinese will begin to "show the flag" in foreign waters with some of their newer units, there is little likelihood of their establishing a major naval presence in waters distant from China for some years.

T. China's nuclear program has given first priority to the development of high-yield thermonuclear weapons for strategic attack. But the Chinese have an obvious requirement for tactical nuclear weapons, and Chic-13, which was tested in January 1972, could have been a step in filling this requirement.

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Thus we feel that it is too early to conclude that China has developed a nuclear weapon for delivery by fighter aircraft. Nevertheless, we think it likely that the Chinese will acquire a tactical nuclear capability during the period of this Estimate. A bomb is the best candidate for an early capability. Somewhat later, toward the end of the period of this Estimate, the Chinese will probably be capable of deploying tactical nuclear missiles or rockets.

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DISCUSSION

I. CHINA'S MILITARY POLICY

A. Factors Affecting Policy

China's Perceived Threats and Aspirations

1. Some of the elements affecting Chinese military policy are similar to those operating in the dynastic past. Now as then, the regime seeks to preserve internal security, to secure and pacify border regions inhabited by minority groups, and to defend the borders against the pressures of hostile "barbarians". (Concern with threat of invasion from the north is older than the Great Wall itself; concern over invasion from the sea only dates back a hundred years or so.) And just as in Imperial China, today's leaders are determined that the lesser states on China's periphery should harbor no hostile forces, and should defer to China as the leading cultural and political entity in the region.

2. In pursuit of these ends, the Chinese Communists have been prepared to employ their general purpose forces in ways consistent with Chinese history, but also with a clear appreciation of their limited resources. Following the victories of 1949, China's leaders pro-

ceeded to extend their authority by military means to the far reaches of Imperial China—Tibet, Yunnan, and Sinkiang; to prepare for action against Taiwan; and to contest the presence of hostile forces in North Korea.

3. Communist Chinese troops have crossed their border in numbers on three other occasions. In 1962, Chinese forces attacked the Indians in the North East Frontier Agency and Ladakh as a response to what Peking described as creeping aggression and Indian refusal to negotiate the disputed border. (Indeed, Chinese troops in that action did not set foot on any territory Peking had not claimed as Chinese.) Chinese construction units and anti-aircraft divisions entered North Vietnam in 1965 as part of an effort to assist the North Vietnamese regime and presumably to warn the US against invading that territory. Finally, since 1968 the Chinese have maintained construction and anti-aircraft troops, and more recently infantry units, in northwestern Laos in support of road building activities. With the exception of Korea, however, where the Chinese clearly felt themselves directly threatened by advancing US forces, the People's Republic of China (PRC) has been cautious in avoiding military confrontations with the major powers.

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4. While the present day leaders of China have not copied their Imperial ancestors to the extent of employing direct military intervention to enforce obedience on the rulers of neighboring states, their support of armed insurrection in Southeast Asia involves somewhat similar aims. Burma and Thailand are perhaps the clearest cases in point. The Chinese have made it quite clear to the leaders of both countries that the price of diminished external support for indigenous guerrilla movements is conduct satisfactory to China on certain issues.

5. Peking's aspirations to reclaim a leading role in Asia involve the potential for a collision with the Japanese. Recognition of this danger and the memories of past Japanese aggression cause the Chinese to regard Japan with suspicion tinged with the fear that the Japanese will move one day to realize their large military potential. While Peking grossly inflates the immediacy of this "threat" for propaganda purposes, there is little doubt that concern over Japan is a factor of some importance in Chinese defense planning.

6. The Chinese Nationalists, without powerful US backing, would not pose any serious danger to the mainland. Southeast Asia appears to Peking as a threat only in the context of US involvement, and this concern has diminished with the continued reduction of the US presence there. Formidable geographic barriers would inhibit invasion from the south and southwest, even if the political and military situation there changed greatly.

7. The threats which most immediately concern the Chinese are those they see in the superior power of the US and USSR. The risk of confrontations with these nations are the product, in part at least, of Chinese aspirations which now extend beyond Asia to the world stage. In particular, the Chinese seek recogni-

tion as a major power and the deference which they consider their due based on China's physical and human resources, its history and its accomplishments. The Chinese also claim ideological leadership in the world revolutionary movement, and they offer their experience as the model in the struggle to escape domination by both the "imperialist" and the Soviet "revisionist" camps. We cannot discern any direct correlation, however, between Chinese military policy and China's encouragement (more often verbal than material) of world revolution. Chinese doctrine continues to hold that revolution cannot be sustained by external forces and that self-reliance is a prerequisite for revolutionary success. Peking has been highly selective in supporting insurgent groups since the Cultural Revolution, and has not hesitated to forego support for insurgencies where such assistance would conflict with a broader Chinese national interest.

8. What happened, however, was that China's aspirations and ideological pretensions provoked the enmity of the USSR and left China in a strategically vulnerable position in the presence of the two great powers. The recent improvement in Sino-US relations has eased Chinese fears of a possible US attack, although a total reversal in their outlook is improbable given Chinese xenophobic tendencies and communist theories about what impels "capitalist imperialist" powers. On the other hand, the PRC has been increasingly worried by the growing Soviet military power on the long Sino-Soviet border and have come to look upon Soviet "social imperialism" as the number one threat to Chinese security.

9. Taken together, the needs of internal security, the deterrence of great power threats and the support of regional and world-wide aspirations have caused China to maintain a substantial military establishment. It has accepted the costs of developing an independent

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strategic nuclear capability and of proceeding with a wide range of developmental and production programs to support the modernization of its general purpose forces.

Ideology and Internal Politics

10. The writings of Mao Tse-tung date primarily from the pre-1949 revolutionary period and reflect the experiences of that era. Much of the writing is concerned in one way or another with two great questions: how to defeat a stronger force—the Kuomintang (KMT) and the Japanese—and how to apply Marxism-Leninism in the social, economic, and political conditions prevailing in China. In the process of dealing with these questions, Mao developed an integrated doctrine, combining military strategy closely with political, psychological, economic, and diplomatic techniques.

11. The key to Mao's thinking lies in the primacy he gives to politics; he is not concerned with military strategy or tactics as an end in itself but as a servant of the revolution. While power may come from the barrel of the gun, politics must command. The People's Liberation Army (PLA) is viewed as a revolutionary vanguard; it must be ideologically pure and motivated and remain close to the masses; the quality of the man is more important than the quality of the weapon. War is a political action; it is likely to be protracted when fighting a superior foe, and the masses must be engaged (as militia forces) in support of the main force units. But the use of force is to be avoided except where the odds are favorable or where vital interests must be protected; war is only one of several instruments of policy available, and diplomatic, psychological, or economic means can be used to bolster an inferior strategic position—i.e., uniting with the weaker (or more distant) enemy to defeat or deter the more imminent threat.

12. From the point of view of the Maoist, much of the corpus of the revolutionary doctrine remains valid today. Mao still sees a protracted struggle ahead for China—especially in terms of the further development of socialism in China, but also in terms of the world revolution. And the Chinese still see themselves in the position of the weaker power, committed to struggle with both the US and the USSR, but obliged by circumstances to deal with the immediate threat from Moscow by maneuvering with the US.

13. But the problems which face the Chinese Communists as rulers of China are markedly different from those they faced in the pre-1949 era with the result that many "contradictions" exist between present day requirements and goals and the doctrine of Mao Tse-tung.

14. The basic and all-pervasive contradiction exists between the drive to promote the modernization of China and the Maoist goals of retaining revolutionary purity, egalitarianism, and mass participation. Mao wants to build a modern state while avoiding the fate of all successful revolutions—the emergence of a "new class" of privileged bureaucrats and experts who lose touch with the masses, fall victim to elitism, and drift away from doctrinal purity to revisionism. This contradiction has provided the source of much of the tension in Chinese politics over the past 20 years. Since the Maoists expect the PLA to play a revolutionary role, it has been at the center of this tension, and military policy has reflected the dynamics of the struggle.

15. The most recent and dramatic symptom of this involvement was the purge of Lin Piao—Mao's designated successor and Minister of Defense—and most of the top echelon of the PLA. But this purge was by no means the first occasion in which leading military

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INCUMBENTS IN THE POSITIONS OF MINISTER OF NATIONAL
DEFENSE AND CHIEF OF THE GENERAL STAFF DEPARTMENT

MINISTER OF NATIONAL DEFENSE

P'eng Te-huai
September 1954-September 1959

Lin Piao
September 1959-September 1971

Yeh Chien-ying (Acting)?
September 1971-Present

CHIEF OF STAFF

Su Yü
November 1954-October 1958

Huang K'o-ch'eng
October 1958-September 1959

Lo Jui-ch'ing
September 1959-November 1965

November 1965-August 1966

Yang Ch'eng-wu (Acting)
August 1966-March 1968

Huang Yung-sheng
March 1968-September 1971

September 1971-Present

figures have fallen from grace in China. To mention only a few examples, P'eng Te-huai, Lin Piao's predecessor as Defense Minister, was purged in 1959, Huang K'o-ch'eng fell from power as Chief of Staff the same year, Huang's successor was purged in 1965, and about half the senior PLA officers at the national and regional level were purged during the years of the Cultural Revolution.

16. The PLA's involvement in politics had its origins in the period of revolutionary struggle against the KMT when the Party and army leaderships were practically identical. The Party was of course supreme: Mao saw to it that "the Party controlled the gun", but political, administrative, and military functions were closely interwoven.

17. As Communist authority spread to all of China, greater specialization was required. The Party and government bureaucracies grew, and the PLA, beginning its transition from a revolutionary army to an organization responsible for defending China, tended to adopt the forms and practices of a conventional military establishment. These three elements of the

power system became more distinctly separate, and officials tended to find their careers in a single branch. This was the period in which China sought economic and military assistance from the USSR and strategic security in the Sino-Soviet alliance. Under this policy substantial progress was made in equipping the PLA with weapons current in World War II and the early 1950s, and the basis for a domestic defense industry began to develop. At the same time, the military establishment gradually withdrew from its revolutionary political role under the guidance of Minister of National Defense P'eng Te-huai and took on more the coloration of a professional force.

18. By 1958, however, Mao was arguing for a return to complete independence from foreign assistance in matters of both military organization and national defense strategy. In his reported words, "We cannot feed on meals cooked for us; otherwise, defeat will be our lot." Mao had arrived at these views for a complex of reasons: disenchantment with Khrushchev's general line; the "revisionist" tendencies which he saw among his own colleagues; and specific fears engendered by So-

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viet terms for military assistance and collaboration. All of these elements combined to produce the Great Leap Forward, the purge of Peng Te-huai in 1959, and the open split with the USSR in 1960.

19. These great events shed important light on Mao's priorities. He refused to compromise on matters of principle with the USSR, and he was determined to push ahead on his own path toward his revolutionary political and social goals in China. To do this, he was prepared to accept a long period of strategic vulnerability while China worked to develop a nuclear deterrent on its own, and he was willing to accept a slowdown in the modernization of the Red Army, meanwhile relying on a "people's war" strategy for the defense of China.¹

¹ As part of this strategy, Mao launched the "Everyone a Soldier" movement aimed at expanding the militia into an all-inclusive mass movement in the countryside. This greatly enlarged militia was to be a permanent feature of society, "a proletarian revolutionary militarization." It would act as the "spearhead" in the commune movement and as a "vital factor" in national defense. It was described as a new development of Mao Tse-tung's strategic thinking.

The "Everyone a Soldier" campaign was to some extent an answer to the problems of defense strategy in an age when China lacked nuclear weapons and "the imperialists were pushing China around." With a militia of several hundred million, there would be formed a sea "that no modern weapon could destroy." But Mao's call for a vastly expanded militia was also symptomatic of the rejection of conventional techniques characteristic of the Great Leap period. And it ran into opposition from PLA elements who were reluctant to arm the masses, who feared the dispersal of effort would interfere with PLA modernization, and who felt that first emphasis should go to the creation of professional and expert military services. While the "Everyone a Soldier" movement died quickly in the collapse of the Great Leap Forward, Maoist interest in the concept survived, and it is possible to discern a continuing debate and struggle over the role, size, and subordination of militia forces down to the present day.

20. The appointment at this time of Lin Piao as Minister of National Defense also signaled the beginning of a period in which politics was once again to receive greater emphasis within the PLA—expressions of loyalty to Chairman Mao and political indoctrination were to take precedence over conventional military routine. This is not to say that efforts to strengthen China militarily were abandoned; as soon as possible after the disruptions of the Great Leap were repaired, work proceeded on military production facilities, and high priority was obviously given to research and development (R&D) in the field of strategic weapons.

21. The contradiction between Maoist political goals and military preparedness emerged again in 1964-1965 when a debate arose over the nature and imminence of the threat to China consequent to the developing US intervention in Vietnam. The issues in this debate remain obscure, but it seems possible that the then Chief of Staff, Lo Jui-ch'ing, differed in some way with Mao as to the interpretation of Mao's call for "war preparations." As in 1958-1959, however, the Maoists were concerned over the general direction of Chinese society and were in the process of doing something about it. Campaigns were already underway aimed at rectifying ideological deviations, at restoring revolutionary élan to the Party and the state machinery, and at finding "revolutionary" successors. The PLA was to serve as an organizational model and it was vital to Mao that the military itself achieve a high degree of ideological purity and political reliability. Lo may have had a narrow interpretation of defense readiness and the Maoists may have feared that his approach would require the disengagement of the PLA from political activity and possibly reduce the PLA's political reliability. Although some defensive moves could be made in South China, other means—po-

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litical and diplomatic—would have to be used to limit the US threat, which was not in Maoist eyes imminent in any event. And in the event of an actual invasion, the time-honored tactics of "luring deep" and guerrilla warfare would suffice.

22. Lo Jui-ch'ing was purged at the end of 1965, and within six months the Cultural Revolution burst upon the scene. There is still room for debate over much that lay behind this extraordinary development, but the overriding factor was that Mao had become convinced that the Chinese Communist Party was losing its taste for continuing the class struggle and that bourgeois revisionism threatened the Maoist revolution. He apparently had come to believe that the top leaders of the Party were not carrying out his policies, were attempting to limit his power and influence, and were not to be trusted.

23. For the next several years, politics clearly enjoyed priority, although military programs continued. Military as well as political channels of communication were used to launch and direct the mass movements of the Cultural Revolution. The Red Guards were encouraged to take direct action in deposing conservative Party and government officials. As these actions began to render the machinery of Party and government impotent, the armed forces were left as the only organized and effective nation-wide authority. They were required to referee among the Red Guard factions, restore internal order and to fill the administrative vacuum in the bureaucracies of the government, Party, and economy. Military officers were appointed to run several government ministries and they headed most of the Revolutionary Committees which ran the provinces, cities, and factories. In 1969 the Ninth Party Congress greatly increased the proportion of military men in the Central Committee and the Politburo. This

Congress ratified the new Party constitution which specified that Minister of National Defense Lin Piao, the top military man, was to be Mao's successor.

24. In mid-1968, Chinese leaders for a variety of reasons began to dampen down the fires of the Cultural Revolution. Reacting to the Soviet invasion of Czechoslovakia, the Brezhnev doctrine, and the Soviet buildup on the borders, the Chinese leaders gave defense a high priority. Military proficiency and training again was stressed, and perhaps most significant, defense programs of all types seemed to enjoy an unprecedented priority in the allocation of national resources. Development of strategic weapons was intensified, the production of military equipment for all arms and services far exceeded any previous period and included many new major items. Underground installations and personnel shelters appeared throughout China, and military forces were relocated to strengthen the defenses in the regions bordering the USSR.

25. Even in this instance, however, the Chinese proceeded with caution. There was no rapid movement of troops to the vulnerable border regions similar to that which occurred during the Korean war, and, once again, the Chinese sought by political and diplomatic means to isolate the "principal" enemy while attempting to make it clear through preparations for defense in depth that any invading force would become bogged down in a costly and protracted struggle in China.

Economic and Technical Constraints

26. At this point we cannot be certain that the high priority given military programs in 1968-1971 will continue at the same level. If Peking concludes that the approach to the US has served to lessen the threat of a Soviet attack, it might decide to stretch out some

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military procurement programs and otherwise hold down on military expenditures. A desire not to place an excessive military burden on the economy and a preference for waging the struggle through political and diplomatic means would be entirely consistent with Mao's past experience and practice, and in this approach he would probably find a ready ally in Chou En-lai.

27. In any event, the economic costs of the Chinese military effort over the years, and in the recent past in particular, have certainly placed a considerable burden on the economy. Much investment and production which might have contributed to China's industrial growth has gone instead to military ends. There is insufficient information to support any precise estimates of the absolute levels of China's military expenditures or the percentage of gross national product allocated to national defense.

28. It is clear, however, that military programs account for a large portion of activity in the advanced industrial sector—far larger, for example, than is the case in the US or USSR. The current level of military production is pressing hard upon China's limited technical base. China's scientific manpower and technological capabilities are insufficient to support rapid development in a wide range of endeavors at once. For these reasons the process of modernizing the Chinese armed forces will necessarily be protracted and will require numerous compromises. These compromises will entail decisions concerning the balance of effort between strategic and conventional forces, among the various branches of the conventional forces, and between near-term results and longer-range progress.

The Decision-Making Process

29. In the paragraphs above we have tended to attribute key developments and shifts in

military policy to decisions by Mao Tse-tung. But we do not believe that Mao has made these decisions without regard to the views of his colleagues in the Politburo, the military leadership, or the interests of those responsible for the development of defense industries and the basic civilian economy.

30. [redacted]

We know from revelations during the Cultural Revolution that during the 1958-1959 episode involving P'eng Te-huai there was extensive debate within the Party leadership. On one occasion, an extraordinary meeting of the Military Affairs Commission (MAC) of the Party Central Committee—attended by more than a thousand officers—stayed in session for nearly two months. In this instance, it appears that Mao was using the enlarged meeting as a forum to conduct a struggle against other senior leaders who opposed his growing determination to pursue an independent course vis-à-vis the USSR and to test in the Taiwan Strait US resolve and the reliability of the Soviet alliance. [redacted]

we cannot identify all the players in the game or the critical elements, other than Mao's enormous personal prestige, that allowed him to prevail on the key issues.

31. [redacted]

Mao's own prestige had almost certainly suffered as a result of the failures in the Great Leap and the excesses of the Cultural Revolution. While he had succeeded in purging the powerful mandarins of the party in 1966 and 1967, he had left himself, or so it seemed, with

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new enemies and heavily dependent on the PLA for support.

32. It appeared well into 1971 that the PLA had attained an unprecedented position of power. Lin Piao was both Minister of National Defense and Mao's designated successor. As early as 1965 the Ministry of National Defense (MND) had been given control of the six key ministries responsible for defense production, and during the Cultural Revolution the PLA sent its personnel to fill commanding positions throughout the administrative apparatus, the economy, the schools, and research institutes. And as indicated above, military figures occupied about half of the positions in the Politburo and comprised some 40 percent of the Central Committee. In these circumstances, it seemed that the PLA had attained a dominant role in key sectors of the economy and in the political life of the nation. Speaking through Lin Piao, the MAC, and through its members on the Politburo, the PLA seemed in a position to influence strongly, if not decisively, all national issues.

33. It is too early to reconstruct fully the process or to identify all the issues involved in the fall of Lin Piao. But it seems clear once again that it was the result of a struggle lasting two years or more in which internal issues were of greater moment than any debate on foreign policy. An issue of principle—civilian control of the PLA—clearly emerged after 1968, and apparently Lin and other military leaders, feeling their position threatened, were unresponsive to Mao on this issue. This seems to have been a primary factor causing Mao and Chou to marshal their forces, bring down Lin, and purge Lin's most important supporters.

34. It also seems clear that despite his accretion of power and position during the Cultural Revolution, Lin Piao did not succeed in

melding the PLA into a monolithic organization with unified interests. Mao had to have the cooperation of other PLA leaders in order to remove Lin and his senior colleagues and to prevent any open displays of disaffection after the purge. It also seems likely that Chou En-lai, already at the head of the government bureaucracy and the *de facto* secretary general of the Party, had been extending his authority over the military establishment as well.

B. An Overview of Chinese Military Policy

35. The picture of Chinese Communist military policy which emerges from this brief review is complex. It owes something to traditional Chinese interests and requirements, but the concepts for the use of force and the role of the military in Chinese society owe much to the revolutionary experience of China's aging leaders. The long-term development of modern military forces has taken place within the overriding priority given the achievement of domestic revolutionary goals; at all times there has been tension between political and professional requirements within the PLA. Military research and production indicate a keen interest in developing strong and modern general purpose forces; some aspects of training, organization and indoctrination indicate a continued interest in "people's war" tactics. Work on weapons for strategic use indicate a high appreciation for the political and deterrent value of such forces; yet, even in this field greater emphasis has gone to R&D rather than to hurried programs for deployment. At this stage, at least, the Chinese view deterrence as something to be achieved not by military means alone, but in combination with skillful diplomacy and the creation of mass support in world opinion.

36. Thus Chinese military policy reflects to a great extent internal debate. And this de-

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bate, given the close connection between military policy and other domestic and foreign policy issues, involves many interest groups. In such a situation, compromise solutions may be normal since no single group or faction seems in a position to gain uncontested control over the policy-making process. We can foresee a periodic debate over the allocation of resources in China and the likelihood of shifts from time to time in the priorities granted national defense; we cannot foresee any weakening in the basic drive to develop China as a major military power.

37. After some 12 years of self-reliant efforts, various military programs are now bearing fruit. Strategic missiles capable of reaching deep into the USSR are in advanced stages of development or in the process of deployment, the navy is receiving destroyers and submarines which will give China a deep-water capability, the air defense network is being upgraded through the rapid expansion of equipment inventory and the introduction of qualitative improvements, and the army is now receiving greater quantities of modern and heavier equipment.

38. These programs reflect a general desire to deter any potential attacker and to be in a position to carry on a determined and protracted defense of the mainland should deterrence fail. But they do not clearly reveal, at this stage, the underlying concept which may exist as a guide to the future development of Chinese forces. It can be argued that this goal is the development of a balanced regional capability. Such a goal would be consistent with present Chinese emphasis on medium-range ballistic missiles and intermediate-range ballistic missiles, naval construction, and conventional air defense. But the Chinese are also working on intercontinental ballistic missiles, and probably on a nuclear-powered ballistic missile submarine (SSBN) as well. The on-

going process of compromise by which policy apparently gets resolved suggests that decisions will continue to be subject to revision as power relationships shift. Thus, it is particularly difficult at this relatively early stage in the PRC's military development to fit the various pieces of China's military programs into a neat explanatory framework, or to rationalize today's apparent priorities and resources allocations in terms of this or that grand strategy.

C. Future Issues

39. In the years ahead, as a result of ongoing force developments, new problems of military policy will be added to the old. For example, as the Chinese develop their first capability to deploy naval forces on the high seas since the early days of Ming Dynasty (early 15th century) they will probably consider the exploitation of this capability beyond its purely defensive role to support other foreign policy objectives. Related to this would be the question of how a Chinese naval presence on the high seas in East and Southeast Asia might complicate relations with Japan. And at some point Peking may have to ponder the issue of how to support a naval presence at some distance from China.

40. So far, Peking's military policy seems to limit the use of Chinese ground forces beyond China's borders to circumstances where the Chinese see real and imminent threats to Chinese territory or to vital Chinese interests. This policy seems likely to continue for some time, partly because of the presence of hostile Soviet forces on the northern borders. But we do not rule out a shift in this line as China's conventional and strategic power grows and in circumstances in which nationalist sentiments may have gained ground at the expense of Maoist doctrine. The occasion for possible aggressive action cannot now be foreseen, but

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"border rectification" in the south or intervention to preserve a position of influence for China in peripheral states would be consistent with traditional Chinese practice.

41. In the area of strategic weapons, the Chinese, once having gained a substantial deterrent, will face such issues as whether to pursue the costly effort to achieve some sort of technological and numerical parity with the US and the USSR, whether to give up nuclear testing in the atmosphere, and whether to participate in efforts to limit the further growth of strategic armaments.

42. And as the modernization of the army continues, it will require increased professionalization. Moreover, the Party and government bureaucracies will still be made up of human beings who will tend to consider their own interests first. The inherent contradictions between ideological purity and military preparedness will most likely continue to surface from time to time. The PLA will continue to be at the center of these tensions, and military policy will continue to have to find its way through these contradictions.

43. Finally, time is taking its toll on China's aging leaders. The question of the longevity of Mao and Chou is, of course, paramount. But the passing of lesser figures will also be important. Inevitably, new men with new ideas on how best to arm and defend China will be replacing the old guard of the Long March. How soon and in what ways this transition will affect military policy is inherently unpredictable, but any speculation about China's future must allow for this important element of uncertainty.

II. THE ARMED FORCES

A. National Command Structure

44. How political uncertainty complicates the analysis of virtually any aspect of Chinese

affairs is well demonstrated when attempting to address questions concerning the top echelons of China's military establishment. Formally, the MAC of the Party Central Committee formulates policy and exercises supreme authority over the PLA. Although the MAC still exists officially, the latest leadership upheaval has at least temporarily upset this mechanism. Informal power relationships are probably at this point more important in the formulation of highest policy.

45. Mao himself is chairman of the MAC *ex officio*. In the past the Minister of Defense, as ranking vice-chairman, was the *de facto* chief, but responsible to Mao. When Lin Piao held these posts they provided him with important organizational levers to buttress his position in the military and hence in his role as Mao's appointed successor. Since Lin's fall, Yeh Chienying apparently is acting as the ranking figure after Mao on the MAC and possibly is acting Defense Minister as well. While he is a respected old soldier, Yeh does not have nearly as much power as that once held by Lin. Yeh is believed to be close personally to Chou En-lai. Chou, who as Premier of the State Council and member of the Standing Committee of the Politburo already was influential in military matters, now seems to be in a position to exert even more influence on military policy and the PLA.

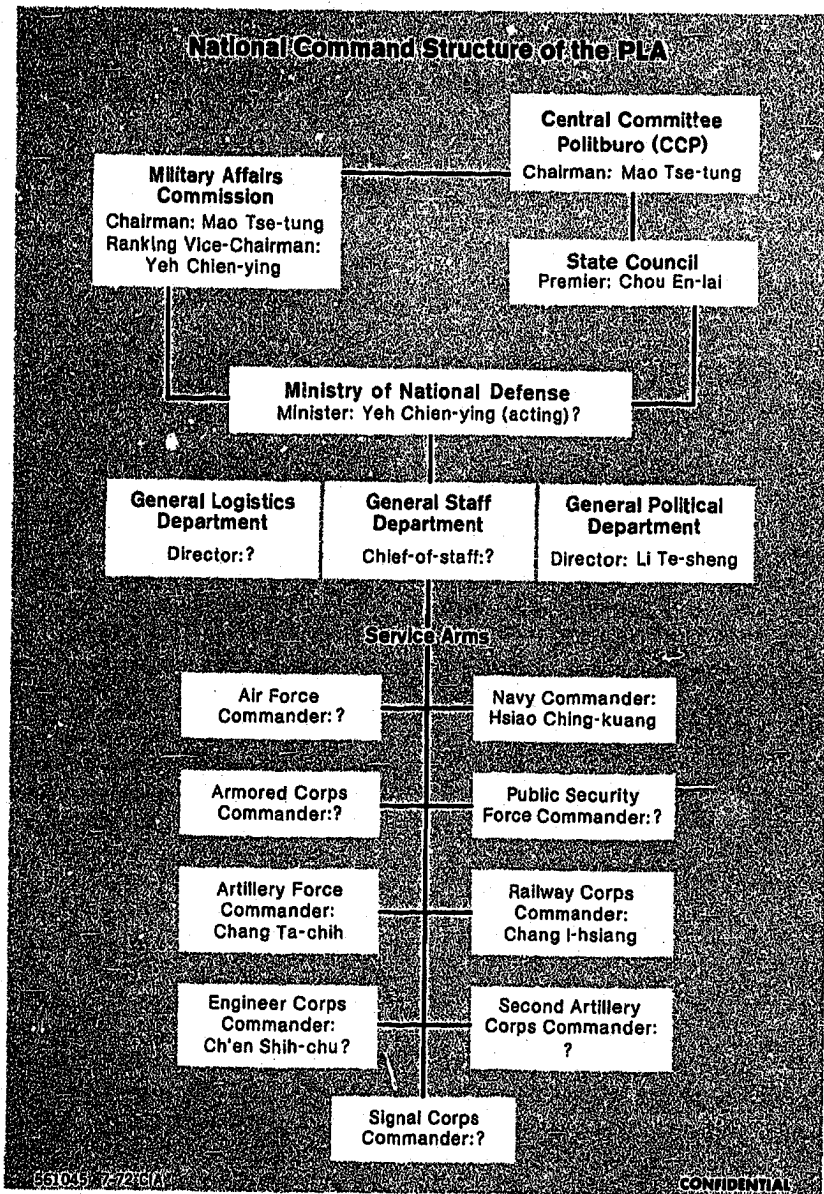
46. There is an apparent ambiguity in the relationship between the Minister of Defense and the Premier. On paper, at least, the Defense Minister is subordinate to the State Council and its Premier, but the ability of the Premier to exert real control would seem to be limited by the direct line running from the Politburo via its MAC to the Minister of Defense. The actual relationship may vary with the strength and influence of the personalities involved; it may also be that the MAC exercises primary responsibility in establishing the

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"general line" on military policy while the State Council and the Premier oversee the operations of the Ministry. But in view of the importance to the national economy of the various national defense production ministries and research institutes which come under the general direction of the Ministry of Defense, the potential for conflict and strain between the State Council's economic planners and the Minister of Defense seems high. Conflicts over priorities in the use of national resources probably are resolved in the Politburo, but this does not rule out bureauractic infighting at lower levels over resources and control of production ministries and their various weapon programs.

47. The MND, which is the top command and administrative apparatus of China's military establishment, is a three-tiered organization. The Minister of Defense, assisted by his deputies, directs the work of the ministry. Below him are three departmental organizations that oversee the major areas of PLA command and administration: the General Staff Department (whose chief and senior deputy chiefs were purged in September 1971 and have not been replaced); the General Political Department (whose director is in good standing); and the General Rear Services Department (whose head was also purged). The various service arms (air force, navy, artillery, etc.) constitute the third level in the ministry.

48. As a reflection of the origin and predominant composition of the PLA, the ground forces have no separate headquarters. Instead, commanders of ground force service arms rank with the heads of the navy and air force, and the functions of a ground force headquarters are performed directly by the General Staff Department.

The Flexible Chain of Command

49. Each of the three services has separate channels of command and communications. Within the services, the chains of command and control extend through geographic area commands which consist of 11 military regions for the army, 10 air defense districts for the air force, and 3 sea fleet areas for the navy. Of the regional organizations of the three service branches, those of the army are senior, and representatives of the air force and, where appropriate, the navy are attached for liaison purposes to the staffs of the military region commands.

50. The geographic area commands of the forces are responsible for administration, training and deployment of those forces within their territorial jurisdiction. In the case of the ground forces, the military region commands maintain primary responsibility for main force units, but generally delegate responsibility for local forces to the subordinate military district (MD) commands.

51. Chinese military organization permits great flexibility in the exercise of command and control. Main force units of the army are subject to redeployment anywhere in China in accordance with the needs of national defense as determined by the MND in Peking. In times of tension, Peking establishes direct channels of command with units as small as border checkposts. In the past, Peking has established special front area commands composed of elements of all three services and has controlled these forces directly from the center. Peking may also delegate control to the commanders of military regions, air defense districts, and fleet areas, or permit commanders of the operating units to exercise tactical control.

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B. Manpower and Recruitment

52. With a population of around 800 million, China has an ample pool of manpower for its armed forces. Each year approximately 10 million males come of age for military service. Because the PLA probably needs less than one million new recruits each year to maintain present force levels, the PLA can be very selective. Proper ideological credentials and excellent health are required of every recruit. Written tests are not administered to determine the intelligence and educational background of prospective recruits, but navy and air force recruiters try to induct better educated youths into their branches. Somewhat under five percent of PLA personnel are women who are assigned to a variety of combat support specialties.

53. Over the years, major changes in China's political and economic conditions have been reflected in PLA conscription policies. A moratorium on conscription in 1962 came at a time when the economy had been devastated by poor harvests and the loss of Soviet aid. Lengthened terms of service in 1965 mirrored a growing professionalism within the army. At that time the terms of military service were set at 4 years for the infantry; at 5 years for all other branches of the ground force, the air force and the naval forces ashore; and at 6 years for naval forces afloat. During the height of the Cultural Revolution there was a one year moratorium on conscription and release from military service. When conscription resumed in early 1968, mainland sources reported that the terms of military service had been reduced, possibly by two years.

54. Reports on terms of service since 1968 have been contradictory, probably because mainland residents have themselves been confused by frequent changes in the military service terms. It appears, however, that in 1969 the terms of service for each branch

once again were lengthened. Recent briefings of Western newsmen in China gave the terms of service as 3 years for the army, 4 years for the air force, and 5 years for the navy.

55. Regardless of whether a change did occur in 1969, the present terms of military service are shorter than they were in 1965. These shorter terms support Mao's policy of making "everyone a soldier" by providing military service to more of China's youths than would have been possible under the terms adopted in 1965. During the most recent conscription season, which was to have begun soon after the fall of Lin Piao and his associates, actual induction and end-of-service discharge were apparently postponed. This probably reflected an initial indecision and uncertainty among those now responsible for managing military affairs in China.

56. Toward the end of the Cultural Revolution and for two or three years thereafter, large numbers of PLA officers and experienced noncoms were ordered to assume management and Party propaganda duties within schools and in local Party, government and production organizations. In some cases, PLA leaders were able to put on two hats. Often, however, they were drawn off from their assigned units to carry out their new responsibilities. This activity, in addition to increased training levels, force expansion programs, and the introduction of sizable quantities of newer weapons into the force inventories, put a severe strain on PLA leadership, and led to a shortage of seasoned military cadres with the forces. As a result, Peking employed what for China were unusual measures to reduce the shortage of officers and noncoms. These measures included rapid promotions, the direct commissioning of civilians, and the recall of retired personnel. All of this had a greater impact on the ground forces than on either the navy or air force.

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57. Another important—though intangible—factor in assessing the current status of the PLA is the question of morale and discipline. Although we believe that the PLA would respond readily to an external threat, shakeups such as those that occurred at the highest levels of command and authority during the Cultural Revolution and in September 1971 must, at least temporarily, have undercut morale and political confidence on down through the ranks.

58. Since the fall of Lin Biao in 1971 there has been a marked reduction of the role of the military personnel in non-military activities. This has been most evident in economic administration, where there has been a large disengagement—many cadres have returned full time to their units and others have surrendered their military status and stayed on at their civilian jobs. There has been much less disengagement from political roles, which probably reflects the unsettled balance of forces in the national leadership. Officers in the top echelons are probably still uncertain of their futures. But at middle and lower echelons the situation has largely returned to normal, training has increased, and more and improved equipment is flowing to the forces.

C. Ground Forces

A detailed study of the Chinese Army [redacted] is scheduled for completion in late 1972. It is hoped that the results of this effort [redacted] will permit establishment of baseline estimates with respect to the numbers of major army units and their locations, equipment levels, and the extent of training activity. Pending completion of this study, it seems appropriate to avoid overprecise statements concerning the Chinese Army. Nonetheless, we can with the data currently available support a useful, if more generalized, discussion of the military posture of the Chinese ground forces.

59. Despite the rapid and impressive growth of the naval and air force components of the PLA, the ground forces remain the dominant element. In the organizational structure the other services rank as supporting arms of the ground forces, and nearly five-sixths of all Chinese military personnel are assigned to the ground forces. The estimated personnel strength of about 3 million men makes the Chinese Army the largest ground force in the world. (Despite this, the proportion of the Chinese population in the armed forces is low—about one-fourth that of the US and USSR.)

60. In reviewing the current assets and liabilities of the Chinese ground forces, we are impressed by their size, by the toughness and discipline of the Chinese soldiers, and by the quality of small arms with which they have been equipped. Communist Chinese infantry has a record of many remarkably swift marches through difficult terrain, sometimes at night. Other factors, however, are less impressive. The Chinese Army for its size and by US and Soviet standards has relatively little armor, has only been moderately well equipped with light and medium artillery, and has no heavy artillery. Tactical air support for ground troops is limited, and shortages of vehicles restrict mobility and logistic support. In those substantial areas of China where terrain and other factors do not favor conventional mechanized warfare involving heavy artillery and tanks, some of these apparent weaknesses would be less significant. It is also true, of course, that equipment deficiencies will be gradually reduced as current modernization and procurement programs proceed.

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PROFILE OF THE CHINESE GROUND FORCES

Number of Personnel	About 3 Million	
Regional Commands	11 ^a	
Estimated Inventory of Units		
	Armies ^b	36
	Independent Divisions	
	Combat ^c	76
	Combat Support ^d	29
	Service Support ^e	15
		<hr/> 120
	Independent Regiments	
	Combat ^f	139
	Combat Support ^g	74
	Service Support ^h	51
		<hr/> 264
Paramilitary Forces ⁱ		
Armed Militia	Approximately 5 Million	
Production and Construction Corps (Armed)	Approximately 1 Million	

^a Except for Tsinan and Sinkiang regions, each military region consists of two or three provinces.

^b A major fighting organization normally consisting of some 43,000 men organized under a headquarters with some support elements, 3 infantry divisions, 1 artillery and 1 anti-aircraft artillery (AAA) regiment. Two, and possibly 3, additional armies may exist.

^c Includes infantry, armored, border defense and internal security, and cavalry units; also includes three airborne divisions assigned to the air force.

^d Includes field artillery, antitank, and AAA units.

^e Railway engineers.

^f Same as footnote ^c less airborne units.

^g Same as footnote ^d plus signal, engineer, rocket launcher and antichemical warfare units.

^h Same as footnote ^e plus motor transport regiments.

ⁱ Should be considered as lightly armed, partially trained ground force reserves and home-defense guerrillas.

61. The combat capability of the Chinese ground force would vary considerably with the place and nature of fighting. In a non-nuclear war on its own ground against any invader, the Chinese Army would be a most formidable force. Under these conditions its transport and logistic weaknesses and even its relatively low firepower would not pre-

clude a determined and effective resistance. The Chinese Army would be able to capitalize upon its vast manpower reserves, its ability to muster a large-scale guerrilla effort with the support of the populace, and its ability to use China's terrain and territory to advantage while fighting a prolonged war.

62. In contrast, the Chinese Army would experience great difficulty in trying to push very far beyond China's borders against the opposition of a modern force. Here the weaknesses in transport, logistics, firepower and air support could become critical.

63. Any attempt at a large-scale invasion of the south Asian subcontinent would be inhibited by the implacable geography of Tibet and the Himalayas. In Southeast Asia, the weakness of local forces (in the absence of large outside assistance) is such that Chinese forces could surmount the geographic difficulties for extended penetrations.

Organization, Equipment and Deployment

64. The Chinese, when referring to regular elements of the ground forces, have always distinguished between "main forces" and "local defense forces." The distinction between these two categories appears to be that main force units are intended to serve as the more heavily equipped and mobile portions of the army. These units would presumably be available for deployment anywhere in China. In contrast, the local force units would have more specialized missions in the defense of particular areas, and their equipment might be correspondingly lighter and less modern.

65. Distinctions between main force and local defense units are derived from Mao's theory of "people's war" which envisages three levels of fighting units: guerrilla forces (militia); local defense units; and main force

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units. Under this concept the various types of forces are intended to cooperate closely in local operations and, when occasion demands, militia units could be upgraded to local defense force status. In turn, local defense units could be redesignated and reassigned as main force units.

66. Some upgrading of the command structure of China's local defense forces has occurred over the past few years. Traditionally armies, which constitute the major fighting units of the ground forces, have been main force units with a command structure separate from that of border defense and other local defense forces within a military region. Recently, however, some army headquarters, particularly in southern and eastern military regions, appear to have assumed control of the local defense mission that previously was under military district headquarters. These armies now exercise authority over all local defense forces within their assigned zones of defense. This arrangement strengthens the command and control of local defense forces in the areas where it has been implemented, but we are uncertain at this time as to the implication for the main force role of these particular armies.

67. Although we are reasonably confident that we know of the existence and locations of most of China's main force units, we are not so confident about the local defense forces. The frequent dispersal of local troops into encampments of battalion size or smaller makes a complete identification of these units impossible.

68. The bulk of the ground forces has always been found in eastern and east-central

China, generally coinciding with the main areas of population. For the defense of China's frontiers, approximately 1.2 million soldiers are deployed in military regions bordering Mongolia and the USSR, and about 1.8 million soldiers are deployed in military regions bordering the seacoasts.² Compared to these regions, the southern and western frontiers are lightly defended. In fact, to the west of the Peking Military Region, China's northern border is also lightly defended.

69. Growing tensions between China and the Soviet Union and a continuing buildup of Soviet forces along the border have led to some repositioning of Chinese ground forces. The principal change began to take shape at the end of 1969 and in early 1970 when Peking shifted the center of gravity for Chinese ground forces slightly to the north. This was accomplished by moving five armies from eastern and southern China to positions along rail lines in north-central China where they might be available to reinforce either the northern or eastern periphery. Additionally, some of those forces already stationed in the Peking, Lanchou, and Shenyang Military Regions were repositioned a little closer to the borders. More recent evidence also shows that Peking is organizing ground force elements to form a new army in the Peking Region and possibly two others in the Sinkiang and Lanchou Regions as well. However, most of China's ground forces in the northern Regions remain well back from the border.

70. While the Chinese have been improving ground force defense capabilities in the north, they have not neglected the defense of their southern and eastern perimeters. New armies were established to replace armies which moved north from Kunming and Fuchou Re-

² The .9 million ground troops in the Peking and Shenyang Military Regions are included in both figures on the assumption that these forces could be shifted to defend the northern frontiers or the coast.

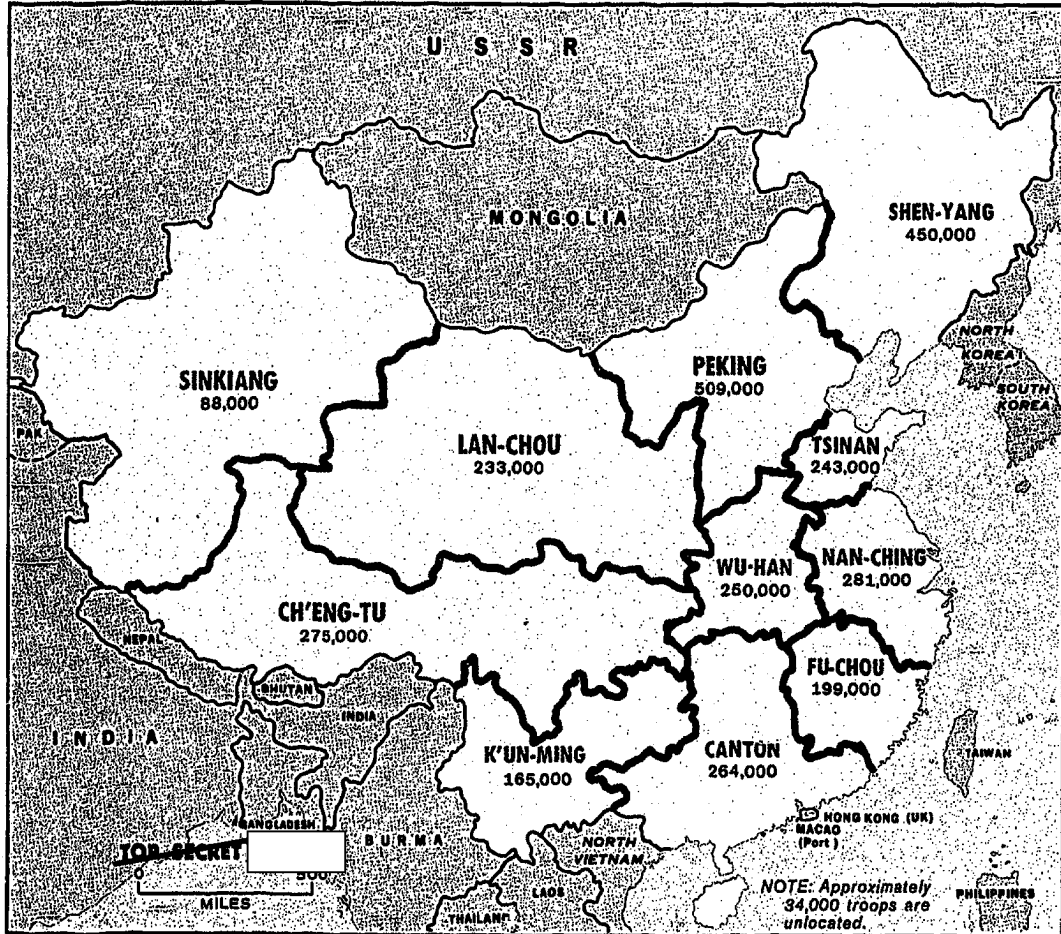
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Estimated Number of Ground Force Personnel in China's Military Regions



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gions. Recent information also suggests that forces in Canton Military Region may be augmented. In any event the army is still deployed in a way to provide heavy defense for coastal areas, and the Chinese have continued to build and improve an extensive system of artillery positions along the coast. The strategic implications of the deployment patterns for China's ground forces are discussed in Section III, pages 47-51.

Modernization

71. During the past few years, Peking has continued its efforts to modernize the ground forces with a wide variety of weapons produced within China. Thus far, however, the Chinese ground force has approached parity with other modern armies only in small arms. For example, the Chinese have been producing an improved 7.62 mm carbine at a rate of 450,000 to 500,000 units per year. A Chinese-produced 82 mm recoilless gun and a Chinese version of the Soviet RPG-7 are also now in the hands of the troops.

72. Production of heavier weapons has proceeded at a slower pace. A new 152 mm gun-howitzer, a new more maneuverable version of the 122 mm field gun, and an 130 mm field gun have also been introduced into ground force units.

73. A new light amphibious tank, which the Chinese may be calling the Type-63, is probably being deployed with forces in the Canton Military Region. This tank represents a significant improvement over the Soviet PT-76; it is reportedly much faster than the Soviet amphibious tank and has heavier armor plus a larger gun. The Chinese tank has been in Vietnam for the past three years, and it may have been developed to improve China's defensive capability in the south. The Chinese have also produced another light tank—the

Type-62—in limited numbers; it is basically a scaled-down version of the Chinese Type-59 medium tank. An armored personnel carrier (APC) was placed in series production probably in 1969. The Chinese may also be developing a new main battle tank and an armor recovery vehicle.

74. Over the years, as new production has expanded China's inventory of artillery and armor, the Chinese have created new units, have raised the standard levels of equipment for their forces, and have retired out-dated artillery and small arms from the inventories of regular forces. Those weapons retired by regular forces are probably allocated to units of the militia and the Production and Construction Corps.

75. Although there are no firm indications that the Chinese are developing a tactical nuclear missile they probably have the capability to do so. The development of a capability to make nuclear warheads for tactical bombs² and missiles is inherent in an active nuclear testing program such as China's. We believe, therefore, that in the event of a Chinese decision to develop a tactical nuclear system, there would be no technological or industrial constraints to prevent the development and deployment of such a system.

76. In their modernization efforts, the Chinese are also expanding and improving the communications and transportation capability of the ground forces. The speed and capacity of mainline networks linking the MND with the major military commands have been improved by the introduction of a modern radio-printer system. The newest tactical radio equipment in the Chinese Army is of native design and production. This includes fully transistorized high frequency (HF) radio sets,

² This is discussed further on page 35 regarding the air force.

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HF single-sideband transceivers, partially transistorized FM transmitters operating in very high frequency (VHF) ranges, and possibly VHF multichannel sets for line-of-sight and troposcatter communications. The variety of equipment shows a sophisticated capability in design and production.

77. Due primarily to a rise in the domestic production rate, the total number of trucks in China has more than doubled since 1965. We believe that the mobility and logistic support of the ground forces will gradually improve as more trucks become available. We cannot tell what proportion of the national truck production goes to the army, but there is evidence that the military establishment has high priority and is benefitting from the increased production. In addition, it is likely that many of the new trucks allocated to civil motor transport units would be incorporated into the PLA upon mobilization for a national emergency.

78. Although the Chinese have always hailed the army as the mainstay of military strength, the modernization program for the Chinese ground forces does not seem to have enjoyed the same priority as the extensive and costly programs underway for the air and naval forces. This situation probably results from a mixture of economic and doctrinal considerations. To provide Chinese ground forces with mobility and firepower comparable to that of US and Soviet forces would take years and would add heavily to the economic burden unless there were a diversion of resources from strategic weapons, navy, and air force programs now underway. In Mao's strategy of "people's war," which evolved in the context of land warfare, weapons, although important, are not the decisive factor in warfare. Instead, the Chinese believe that an indomitable fighting spirit is the prime ingredient for success, and in waging "people's war," they expect to take advantage of the constant attrition to

enemy strength as more and more men are required to maintain and protect the logistic lines of an advancing force. Thus, the Chinese have been willing to make only modest progress in providing the army with modern weapons and equipment.

79. In sum, we expect that procurement costs for ground forces armament will only increase gradually, if at all, over the next few years. During this period, the relative proportion of funds allocated for ground force procurement will probably continue to fall as procurement spending for the air force and navy continues to rise.

Passive Defenses

80. In accordance with the national policy to develop and improve the capability of the PLA to withstand attacks by an invading force, the army in recent years has launched a number of programs to provide passive defense for men and equipment. These measures include building more revetments for the dispersal and safe storage of vehicles. Some tunneling for personnel shelters has also been noted especially at ground force headquarters rather than at combat installations.

81. The most spectacular development in ground force defenses, however, has been the construction of hardened fortifications in the shape of large earthmounded structures. Work on all of the 18 known facilities of this type began between early 1966 and mid-1969, and some are still under construction. The expense and labor involved in digging, tunneling, hardening and backfilling these structures has been considerable.

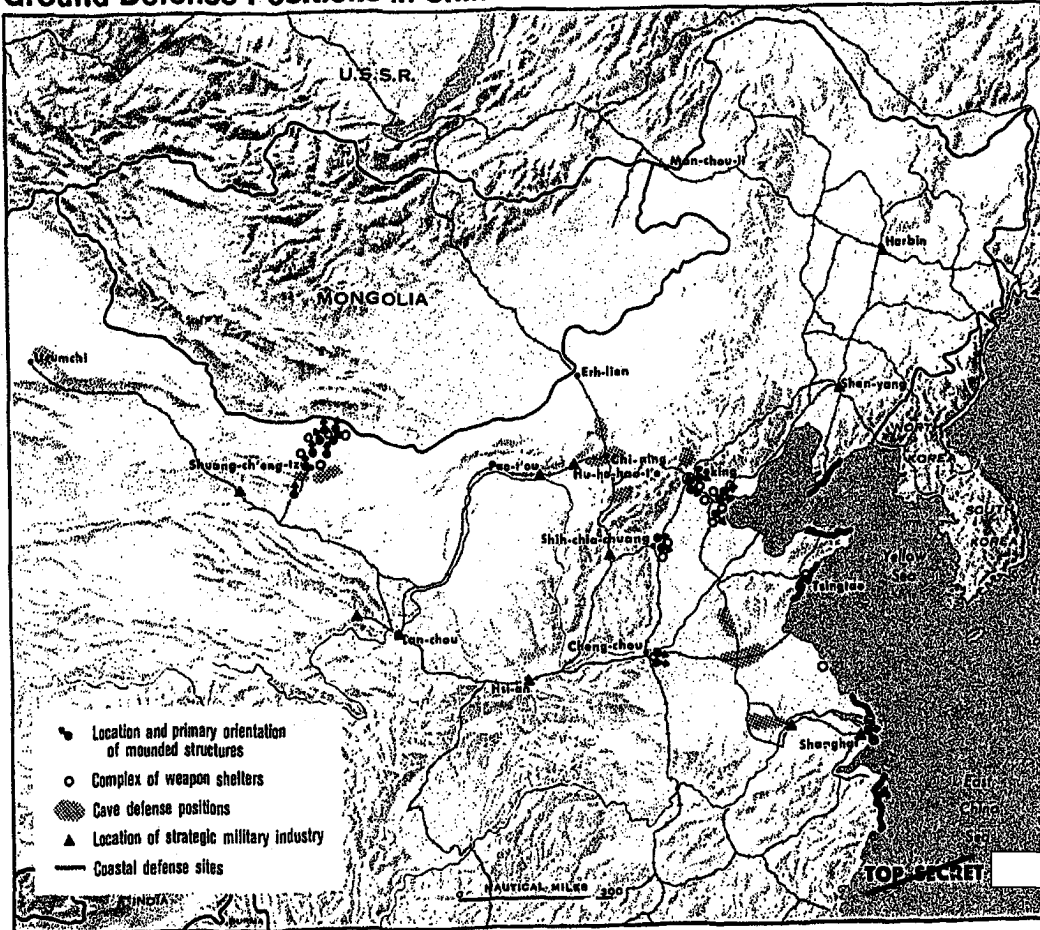
82. Nearly half of these large structures are in the Ochina River Valley corridor leading from Mongolia towards the Shuang-ch'eng-tzu Missile Test Range and the Lanchou-Sinkiang rail line. Others are on the outskirts of Pe-

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Ground Defense Positions in China



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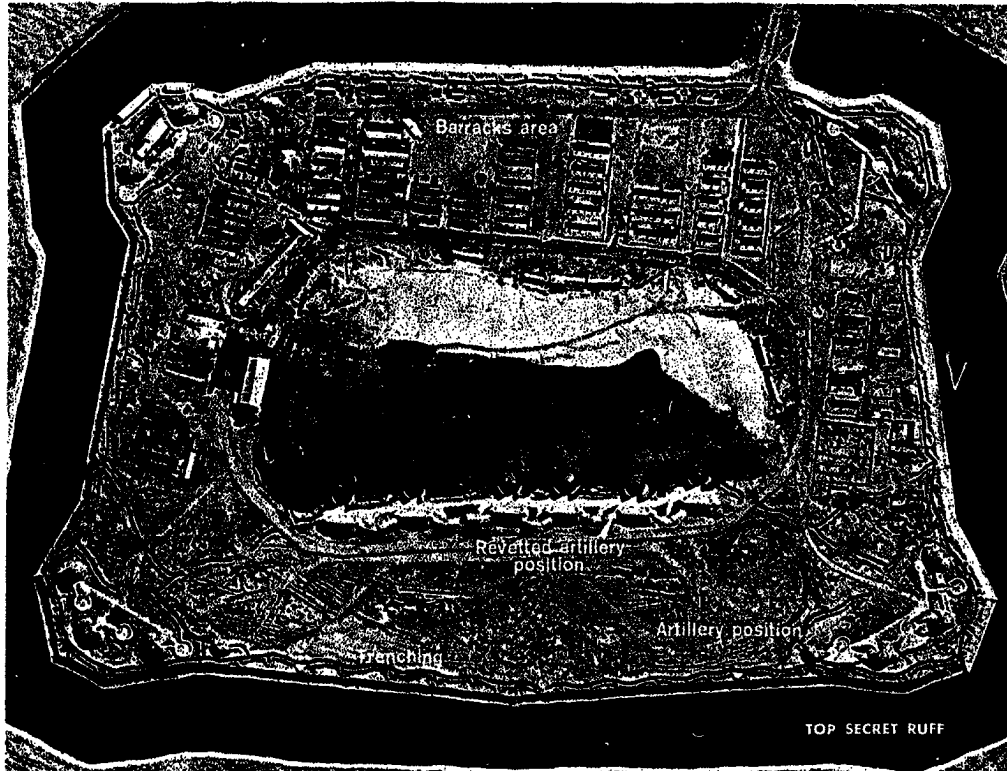
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Chinese Mounded Defensive Position



This is the most elaborately developed of the defensive positions located north of the missile range at Shuang-ch'eng-tzu. The mounds of the North China Plain have a similar design but are less heavily fortified.

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king, Tientsin, and Shanghai and at important rail junctions near Shih-chia-chuang and Cheng-chou in north China. All of these latter structures are on natural lines of movement for forces pushing inland from the sea. Associated with most of the large mounded structures are scores of smaller concrete fortifications, similarly oriented against a potential line of invasion and capable of accommodating light artillery and automatic weapons. Several hundred of the smaller concrete structures have been identified.

83. As for the purpose of these facilities, there are many differing opinions. Because we have seen gun barrels in some of the weapon shelters at the tunneled entrances of these mounded structures, it is certain that some of them will function, at least in part, as artillery positions. Beyond that, the presence of the many smaller structures in association with the large mounds suggests that both large and small structures are being built as part of a common plan for defense.

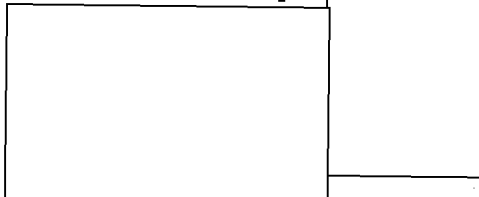
84. Nevertheless, because these mounded structures lie in open terrain, their tactical utility against a modern mobile enemy invader is open to question, and we are not yet confident that we understand the reasoning which lies behind their construction. Such uncertainty has given rise to the suggestion that these installations were built to house command and communications centers and that the concrete pads on the Shanghai mound portend the installation of a small, possible cruise, missile.

85. In other likely areas for invasion, such as along the north-south rail line into Inner Mongolia, the Chinese have built artillery positions in caves and tunnels, taking advantage of the natural terrain. Other notable concentrations of cave defenses are found in the areas around Peking, near the missile test

center at Shuang-ch'eng-tzu, near Urumchi, the capital of Sinkiang Province, and along the Tientsin-Nanking railroad corridor.

Training

86. After the hiatus caused by the Cultural Revolution, the tempo of military training for the ground forces began to pick up in 1968. So far, most of the known field training activity has occurred at regimental level and below, and the average Chinese foot soldier is probably well trained in the fundamentals of combat tactics and techniques.



87. Beyond this we have difficulty in evaluating the quality and level of training in the ground forces.



Despite this uncertainty and despite the fact that many field exercises involve varying degrees of propaganda work among the rural population, there is enough information to establish that the ground forces have increased the level, complexity and frequency of military training. The focus of ground force training remains defensive; there is little evidence to indicate that China's ground forces are being prepared for out-of-country operations.

Paramilitary Forces

88. The militia and the Production and Construction Corps constitute a *de facto* organized manpower reserve for the PLA. In the case of each organization, there are at least 3 cate-

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gories of military readiness and training, and as many as 6 million members of these organizations (5 million militiamen and 1 million production corps members) could be mobilized quickly to support the PLA by aiding in logistics or engaging in guerrilla warfare.

89. Militia units are found throughout China, but are concentrated in central and eastern China where most of the Chinese people reside. The largest concentrations of the Production and Construction Corps, however, are found in the border areas. As fighting units, elite elements of both the militia and the Corps could probably operate against small lightly armed infantry forces, but they are primarily suited for guerrilla actions. More training and equipment would be needed before units of the Corps or militia could be upgraded to regular PLA status.

**D. Tactical Air and Air Defense Forces
Size and Equipment**

90. With an inventory of more than 4,000 combat aircraft—nearly all jets—and a personnel strength of nearly 400,000, China's air and naval air forces constitute the third largest air force in the world. The Chinese also have available for air defense purposes a force of some 50 surface-to-air missile (SAM) battalions and 31 AAA divisions. All of these forces are growing rapidly and are being supplied with domestically produced equipment. Thus, if for no other reason than their size, the tactical air and air defense forces of China constitute formidable fighting organizations.

91. Many of the weaknesses of the Chinese tactical air and air defense forces become apparent when compared with US or Soviet force standards. In the first place, most of China's inventory of combat planes consists of relatively outmoded jet aircraft. Half of China's combat aircraft are old Mig-15/17s,

and most of the rest were built from Soviet designs of the early 1950s. The Chinese are also seriously short of transport aircraft. These facts mean that the Chinese air and naval air forces are relatively limited in range, performance, and all-weather operating capabilities. China's air defense organizations also need better electronic and communication systems.

**PROFILE OF CHINESE AIR AND NAVAL
AIR FORCES**

	AIR FORCE	NAVAL AIR FORCE	TOTAL
Number of Personnel ...	365,000	31,000	396,000
Regional Commands	10 Air	3 Sea	...
	Defense Districts	Fleet Areas	

Anti-Aircraft
AAA Divisions * 21
SAM Battalions 50

**Estimated Numbers of Operational Aircraft
Mid-1972**

	CCAF	CCNAF	TOTALS
Fighters			
Mig-15/17	1,800	250	2,050
Mig-19	1,200	200	1,400
Mig-21	28	...	28
F-9	185	...	185
Il-10	60-70	...	60-70
Bombers			
Il-28	250	140-150	390-400
Tu-16	40-50	...	40-50
Tu-4	12	...	12
Tu-2	72	20	92
Transport			
Medium	27 ^b	...	27
Light	375	40	415
Reconnaissance			
BE-6/Madge ..	...	6	6
AN-2V Colt ..	...	3-5	3-5
Helicopters ...	230	25	255
TOTALS * ..	4,280-4,300	685-695	4,965-4,995

* In addition, there are about 10 ground force anti-aircraft divisions.

^b Includes five jets.

* Rounded.

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92. Because of limitations imposed by equipment, China's tactical air and air defense forces are generally confined to a defensive role. They are suited for operation within friendly territory with short supply lines. Although the equipment of these forces does not match that of the US and USSR, their strength greatly exceeds that of other Asian nations.

Disposition

93. As in the past, most aircraft are deployed in the six air districts adjacent to the eastern periphery from the USSR to North Vietnam. Far western China remains only thinly defended by combat aircraft.

Air Defense

94. Air defense is the primary mission of the air and naval air forces, with 37 of the 53 Chinese air divisions being assigned to this role. The major shortcomings of China's air defense system are the lack of high speed data-handling facilities and the notable shortage of Mach 2 and all-weather interceptors.

95. In recent years the Chinese have improved their air surveillance capabilities, particularly along the northern borders. New radars and improved versions of old ones now permit the Chinese to occasionally detect very high flying aircraft at distances in excess of 350 nautical miles (nm). New Chinese radars also have improved the still limited capability to pick up aircraft flying at altitudes below 5,000 feet.

96. The Chinese rely on some 1,850 Mig-15/17s, 1,400 Mig-19s, and about 28 Soviet-produced Mig-21s as their primary weapons for air defense. The Mig-19s have become the

backbone of this interceptor force.⁴ They can intercept maneuvering subsonic and transonic targets at altitudes up to about 50,000 feet and have limited effectiveness against non-maneuvering targets up to 65,000 feet. Only the few Mig-21s can effectively engage targets flying above low supersonic speeds. These can intercept subsonic targets up to about 65,000 feet and supersonic targets up to about 60,000 feet. The old Mig-15/17s have little capability against modern high performance aircraft but can engage subsonic targets at low and medium altitudes.

97. Some of the Mig-17s and a few of the Mig-19s which were supplied by the Soviets have an all-weather combat capability.

[redacted] Thus the Chinese Communist Air Force interceptor force would be only marginally effective against attacks occurring at night or in bad weather.

98. Although most Chinese fighters are armed only with cannon, recent evidence indicates an increased interest in air-to-air missiles (AAMs).

⁴Recent evidence suggests that more than a third of those Mig-19s produced within the past year or so have been modified. This modification appears to involve a changed wing planform to improve maneuverability and possibly to increase fuel capacity.

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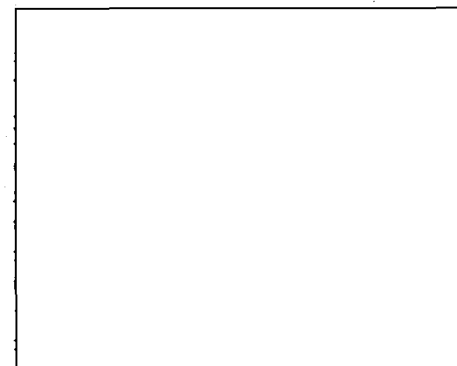
99. Within the limitations of its equipment, the interceptor force appears to be in a fair-to-good state of training and readiness. The general air standdown from September to November 1971 produced only a temporary lapse in training and efficiency. There is limited evidence which suggests that Chinese interceptor pilots receive less flight training than their Soviet and US counterparts, and many Chinese pilots by comparison probably are less experienced.

100. On the ground, we have identified 21 air force and 10 army AAA divisions. These units have been variously equipped with 37, 57, 85 and 100 mm weapons and with fire-control radars. Air force AAA units have traditionally been the first to acquire larger guns and new fire-control radars, but army units have been receiving improved equipment during the past two years. The air force AAA units are deployed in fixed positions around major cities, at important military and industrial installations, and along coasts and borders where aerial incursions would be likely. Most army AAA appears designed primarily to provide mobile defense for troop formations. During recent years AAA has increased notably in northern China, presumably in response to Sino-Soviet tensions.

101. China's AAA divisions have gained valuable combat experience in North Vietnam and to a lesser degree in Laos as they have rotated in and out of those countries in support of Chinese logistic forces. There are two or three AAA divisions in Laos at the present time.

102. The Chinese have also deployed about 50 SAM battalions. These are located around a few key cities and advanced weapons complexes. As yet there does not seem to be a pattern of co-locating the available SAMs with

concentrations of AAA. Although these units can provide only a thin defense, their rate of deployment has increased from about four per year in 1966-1968 to a current rate of about 20 per year. The system used in these deployments is the CSA-1, a Chinese version of the Soviet SA-2.



104. To coordinate air defense against a large-scale attack over a wide area—possibly involving hundreds of attacking aircraft penetrating at low altitudes—would be much more difficult and is beyond present Chinese capabilities. This would be particularly true if such an attack occurred at night or in poor weather and was accompanied by extensive electronic countermeasures (ECM). Under such circumstances China would need automatic data-processing equipment to provide accurate, continuing evaluation of the movements of large numbers of aircraft. The Chinese would also need communications of very high capacity to transmit information quickly to controllers directing the air defense weapons. Because the Chinese still lack most of this necessary equipment, we believe that they could achieve effective control of interceptors, SAMs, and AAA only against limited attacks if the weather were reasonably good and if ECM were not employed.

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Bombing and Ground Attack

105. Two independent regiments and 10 of the 43 divisions in the air force have been assigned a bombing or ground attack role. Five of the 10 divisions are equipped with light bombers and the others with fighters and fighter-bombers. One of the 2 independent regiments is equipped with light bombers and is tasked with providing reconnaissance and ECM as well as bombing. The other independent regiment is equipped with Tu-16 and Tu-4 medium bombers. The naval air force is equipped with an additional 4 divisions of light bombers.

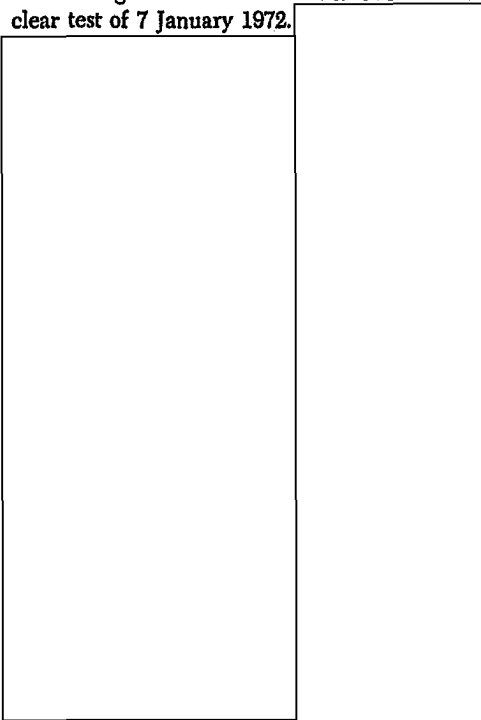
106. Nearly 75 percent of China's 540-odd bombers are subsonic Il-28s. These jet light bombers are generally deployed well back from the borders or in important coastal areas suggesting a primary mission of defense against an invading force. In any event, extensive forward deployments would be necessary before these aircraft could be used at any significant distance beyond China's borders.

107. The Chinese also have deployed about 43 Tu-16 jet medium bombers. Although these aircraft are suitable for conventional bombing, their deterrent value as a force for peripheral nuclear attack probably will motivate Peking to limit the Tu-16 to a nuclear attack role until China builds larger numbers of these planes.

108. The newest model in the Chinese inventory of ground-attack aircraft is the F-9 fighter-bomber—a Chinese-designed aircraft resembling the Mig-19. About 185 of these new aircraft are now operational within the air force. The introduction of the F-9 with its increased firepower, versatility, and range represents the greatest improvement in the ground attack force since the conversion to jet fighters in the mid-1950s.

109. Although the operational F-9s are currently deployed in ground attack units, indica-

tions of a new role for these aircraft recently came to light in connection with China's nuclear test of 7 January 1972.



111. Although the Chinese could use jet light bombers to deliver nuclear weapons, we do not know whether they intend to do so. The subsonic Il-28 has a maximum combat radius of only about 550 nm which would severely limit its usefulness in a strategic strike role. The Chinese may regard these aircraft as more suitable for tactical delivery of nuclear weapons. As far as we can tell, however, training of Il-28 crews has emphasized only conventional tactics in exercises involving ground support or attacks against naval units.

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112. Chinese tactics for employing light bombers, [REDACTED]

[REDACTED] call for strike aircraft to use high-low-high attack profiles. On such missions, the aircraft fly toward the target, at altitudes of 20,000 to 30,000 feet, descend to a lower altitude before attacking the target and ascend once again for the return flight to base. The lower operating altitude near the target reduces the likelihood of radar tracking and thus lowers the vulnerability of the attacking force, but it also reduces the operating range of the Il-28s. The indications we have of bombing effectiveness indicate that Chinese crews are reasonably proficient in visual and radar bombing techniques.

113. In addition to its F-9s, the ground attack fighter force consists of some 200 Mig-15/17 jet fighters and 60-70 Il-10 propeller-driven fighter-bombers. Training in ground attack techniques includes frequent strafing and bombing practice at target ranges. Some additional ground attack practice of this type also has been included in the training of a few interceptor units during the past two years. Ground attack exercises rarely seem to occur in close coordination with the training of ground forces, however, and ground attack units therefore may lack tactical flexibility under realistic combat conditions.

Naval Aviation

114. Chinese naval aviation has a primary mission of coastal air defense but also is charged with providing tactical air and reconnaissance support for surface units. This force consists of about 700 aircraft organized into 10 divisions, several independent regiments, and a few smaller units. Approximately 600 of the aircraft are jet fighters and light bombers assigned to combat units. The re-

mainder are light transports, helicopters, and aircraft used for training.

115. Naval jet fighters are concentrated at bases near the Liaotung and Shantung Peninsulas in the North Sea Fleet area, near Shanghai in the East Sea Fleet area, and on Hainan Island in the South Sea Fleet area. Naval bombers are deployed mainly near the Liaotung and Shantung Peninsulas in the north. The primary responsibility to defend the coastal areas around Fuchou and Canton in the southeast is left to the air force, although elements of one naval fighter division could operate in the northern Fuchou coastal area.

116. The six fighter divisions of the naval air force are equipped with Mig-15/17s and Mig-19s. The four bomber divisions are equipped with Il-28s. China's most modern combat aircraft—the Mig-21, the Tu-16, and the F-9—have not yet been assigned to the naval air force. Expansion and modernization of the naval air force will probably be gradual over the next five years, and the acquisition of the newer types of aircraft will improve the range and firepower of the force.

Military Airlift and Transport

117. The airlift and transport capability of China's naval air and air forces is minuscule when measured by US or Soviet standards. Half of the force is assigned to 2 transport divisions and 4 independent regiments equipped with some 27 medium and 215 light transports and 130 helicopters. The remaining transports and helicopters are dispersed throughout the air and naval air forces. Only 5 of the military transport aircraft are jets.

118. Because of the limited capabilities of China's regular transport units and the ab-

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sence of training for major airlift or airdrop operations, we believe that the Chinese would probably limit their airlift activities to small-scale special purpose operations that would seldom, if ever, involve units larger than regiments (c. 3,000 men).

Production and Modernization

119. Production for the Chinese air and naval air forces has grown steadily over the years, and the goal seems to be the development of a large air force based on domestic production of available aircraft designs. The arrival of the F-9 in the air force inventory further indicates that the Chinese can design and produce new aircraft. During 1971, China produced a record high of over 800 fighters and bombers. This total exceeded all other countries except the USSR which produced some 850. China's production, however, was confined primarily to older model Soviet designed fighters and bombers. Furthermore, Mig-19 production accounted for nearly 75 percent of the total. This rapid and large-scale production of old model aircraft seems to indicate a high degree of Chinese concern for the possibility of enemy attack.

120. Most of the Chinese effort in aircraft production has gone toward building fighters, although the amount spent for bombers has increased in recent years. In 1971 China is estimated to have spent the equivalent of well over \$1 billion on aircraft procurement. About two-thirds of this went toward the production of fighter aircraft. Bomber production accounted for 20 to 25 percent of the procurement budget, and helicopters accounted for most of the remainder. During the years to come, we believe that Chinese expenditures for military aircraft will continue at a high level to help modernize and expand the com-

bat forces and to at least partially fill a pressing need for transports.

121. As steps to modernize their air fleet, the Chinese currently have under development the Hsian-A—a Mach 2 fighter of native design—a small transport and a turbine-powered helicopter. Although the Chinese could soon begin to produce the new Nan-A small transport and will continue to build the MI-4 helicopter or a follow-on version thereof, the air transport force will remain underdeveloped during the next few years.

Aircraft Backlog

122. There are many uncertainties concerning the future size and complexion of the air and naval air forces of China. During 1971, for example, the Chinese suspended steady delivery of newly produced Mig-19 and F-9 aircraft to operational units. (Deliveries may have been limited also for other aircraft, but the relatively small numbers involved make this difficult to determine.) Instead, they allowed most of these planes to accumulate at production facilities or at nearby airfields. At year end the number of backlogged aircraft—some 800—was about half as large as the operational inventory of those aircraft.

123. The backlog of Mig-19s began to be reduced as deliveries increased in December 1971, and now there are signs of an outflow of F-9s from the production plant. Many hypotheses have been offered to explain why deliveries were reduced last year. They include delays caused by modifications on the aircraft, or by shortages of parts, support facilities, or pilots. It has also been proposed that political difficulties between the Peking leadership and the air force may have led to a cutback of deliveries. There are difficulties with each of these explanations, however, and none can

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be offered with confidence. In any event, it may take a year or so to eliminate the backlog.

Airfields and Underground Facilities

124. Since 1964, the Chinese have been carrying out an extensive program of airfield construction. More than 100 facilities have been built or improved during the past 7 years, and China will soon have nearly 200 airfields suitable for operations by combat aircraft. Some 50 of these airfields appear suitable for sustained Tu-16 operations. From these airfields the range of the jet medium bombers, carrying a normal bomb load of 6,600 pounds, could bring within reach most important areas of the eastern portion of the USSR as well as Japan, Southeast Asia, and northern India.

125. The rapid growth of underground storage facilities near the airfields is another important feature of the Chinese program to build air installations. At the present time, about 75 airfields, concentrated in the east near the coast and behind the northern and southern borders, have underground facilities capable of housing most of China's 3,500 fighters. Except for several underground facilities where light bombers might be housed and one where medium bombers might be accommodated, dimensions of the entrances to these shelters show that aircraft larger than fighters could not be protected.

126. Although they would afford protection against a conventional attack, these underground shelters also have notable disadvantages. The Chinese would be obliged to concentrate their fighters at fewer fields in order to use all of the underground storage to capacity, and aircraft using these shelters would have to enter and leave one at a time. The time requirements and difficulties involved in

scrambling aircraft from these shelters would impede their response to a large-scale air attack. These facts may explain why the Chinese usually park at least some of their aircraft in the open rather than use underground storage facilities to capacity.

E. The Navy

127. The Chinese Navy is not only growing quickly but is also beginning a major transformation from a force capable only of coastal defense to one that will have the range and firepower to extend Chinese influence into the peripheral seas and beyond. This transformation is being accomplished primarily by a large production program for submarines and for missile-equipped destroyers and destroyer escorts. A submarine-launched ballistic missile program is also under way.

128. With its force of 54 submarines, China already has the world's third largest underwater fleet. China's 16 destroyers and destroyer escorts form the nucleus for a deepwater surface force. Numbers alone, however, do not make an effective ocean-going force. Most of the Chinese submarines and major surface combatants are based on technology current in the 1950s. These ships have only a limited air defense capability, and their anti-submarine warfare (ASW) capability is rudimentary. The navy has an extensive minelaying potential but only a limited minesweeping capability. The Chinese, however, have begun to equip major surface units with surface-to-surface missiles. Still greater improvement in China's deepwater capability will occur as new units of more modern design are completed, as various types of seagoing support ships are added to the fleet, and as the Chinese gain access to overseas port facilities. But the projection of Chinese naval strength far beyond coastal waters will be a gradual process,

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Chinese Military Airfields*



due in part to the need to gain experience in longer-range operations. It is nevertheless possible that the Chinese will, in the next few years, send a naval vessel or two into the Indian Ocean or elsewhere to "show the flag."

PROFILE OF THE CHINESE NAVY

Number of Personnel: About 275,000*

Regional Commands: 3 Sea Fleet Areas—North, East and South

Estimated Inventory of Ships:

Destroyers and Destroyer Escorts	16 ^b
Submarines	54 ^c
Patrol Boats	
Patrol Escorts (Old UK and Japanese PFs)	15
Submarine Chasers (PC/PCE)	33
Missile Boats ^d	55
Motor Gunboats	400
Torpedo Boats (Including 115 Hydrofoils)	260

TOTAL

Minesweepers

Amphibious Ships and Craft

Landing Ships^e

Landing Ships Tank (LST)	15
Landing Ships Medium (LSM)	14
Landing Ships, Large Infantry (LSIL)	6
Landing Craft ^f	475

Total Amphibious Ships and Craft

Auxiliaries

Yard and Service Craft

* Does not include personnel assigned to the naval air force.

^b Includes 8 that are equipped with missile launchers and 3 that probably will be. Two or 3 of the missile ships may not be completely combat ready at this time.

^c Includes one that is probably nuclear-powered and one G-class SSB.

^d Equipped with 25 nm cruise missiles.

^e Except for one LSM built in China, all are US built.

^f These 60-90 foot boats are normally used for base supply. In combat operations, they would be carried to assault areas by large ships of the amphibious force, but each landing craft could carry 1-2 tanks or a maximum of 150 troops to a distance of about 100 miles.

Size, Equipment and Deployment

129. In numbers of ships and craft, the Chinese Navy ranks second only to that of the Soviet Union. Most of China's navy, however, consists of small units whose combined tonnage would put China well behind major maritime powers. Thus, whether judged by ship types, deployment patterns or training exercises, China's navy is like a very large, well-armed coast guard with only the beginning of a force designed for deepwater operations.

130. The North Sea Fleet has the largest and most modern ships in the Chinese naval inventory. The East Sea Fleet has the largest number of assigned units and is second only to the North Sea Fleet in strength.

131. During the past six years the Chinese have been taking steps to achieve a balance among the three fleets in support facilities and in major combatants, submarines and missile boats. This has meant a particular effort to build up the South Sea Fleet which, in the past two years, has constructed and deployed submarines for the first time and has received a number of torpedo boats and a few guided-missile boats, many of which were built in other areas of China. The North Sea Fleet has the first operational guided-missile destroyers in the Chinese Navy. Others are being built in all three fleet areas, and one unit will soon be operational in south China. Guided-missile destroyer escorts are attached only to the East Sea Fleet and include one unit of the Kiang-tung-class.

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COMPARATIVE FLEET STRENGTH IN THE CHINESE NAVY

	NORTH SEA FLEET	EAST SEA FLEET	SOUTH SEA FLEET	TOTAL
Destroyers and Destroyer Escorts	6	6	4	16
Submarines	24	20	10	54
Patrol Ships and Craft	218	315	230	763
Mine Warfare Ships	34	34	22	90
Amphibious Ships and Craft	125	215	170	510
Auxiliaries	50	85	115	250
Yard and Service Craft	200	300	200	700

Production: Capabilities, Goals, and Achievements

132. Before the communists came to power in 1949, Shanghai was China's only major center for shipbuilding. In recent years the Chinese have expanded and modernized many of their existing shipyards and have built several large new facilities. The 3 fleet areas now have a total of 10 major facilities for naval construction. Most of these facilities tend to specialize: 4 yards are turning out submarines; 3 are producing guided-missile boats; and 3 are building destroyers. In addition to these building yards, there are 4 major facilities which are engaged principally in naval repair.

133. Current production programs indicate that the Chinese intend to make submarines and missile-equipped surface units the backbone of their navy.

Submarines

134. The development of China's submarine production capabilities has been impressive. Construction times have been shortened to as little as one year, and two new major shipyards have become operational and have launched submarines since early 1970. The capabilities are growing at such a rate that the Chinese could triple the size of their submarine fleet within the next five years if they built only

the relatively simple R-class submarines which now constitute the majority of the fleet. We believe, however, that the Chinese will produce more modern classes of submarines, which will take longer to build. We therefore expect the Chinese to produce at the rate of about 10 submarines a year, but even this could double the fleet by 1977.

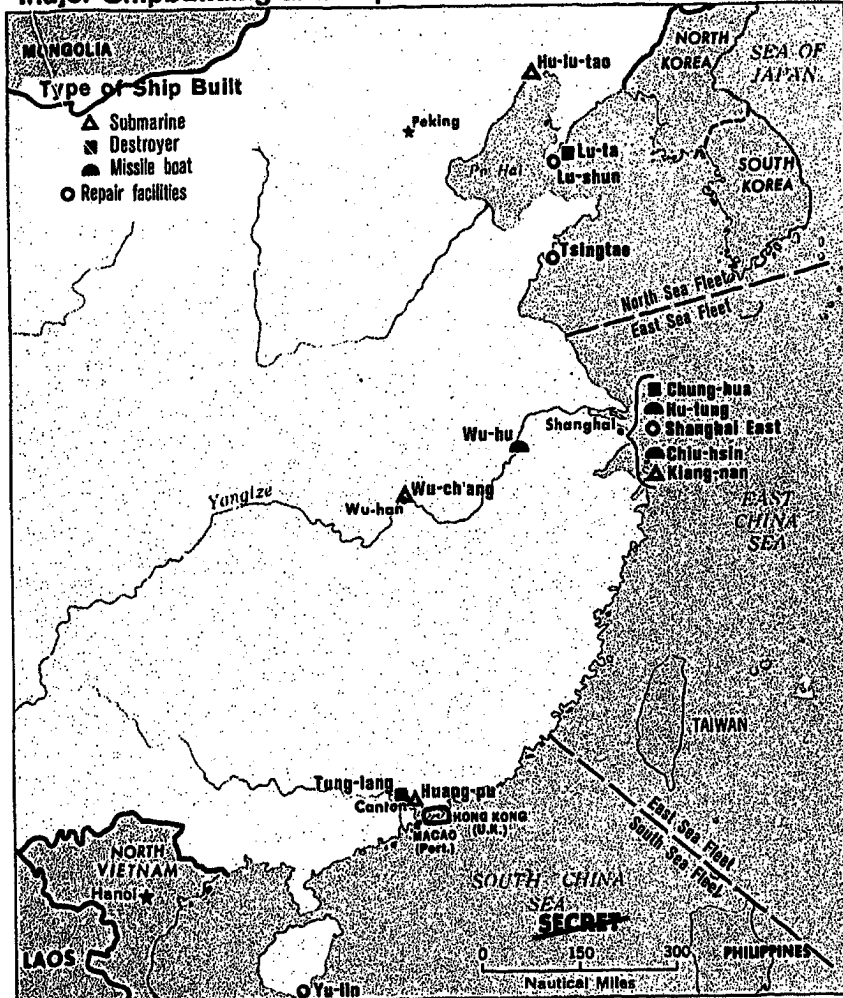
135. The principal submarine heretofore produced by the Chinese has been the R-class, a medium-range submarine of Soviet design. In mid-1971, however, the Chinese launched a new submarine that appears to be an improvement on the R-class design. One unit is now operational, and it is likely that this new submarine—designated [redacted] as the Ming-class—will, in time, replace the R-class in production.

136. During 1971, another native-designed attack submarine—termed the Han-class—appeared at the big new Hu-lu-tao yard in the northern Pohai Gulf. The one Han-class submarine seen to date is believed to be designed for nuclear propulsion, largely because of its configuration and the large diameter of its hull. But it is not yet certain that its present power plant is actually nuclear. The appearance of frames and curved portions of large diameter hull sections outside the construction sheds at Hu-lu-tao over the past year or so suggests that more Han-class units are being

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Major Shipbuilding and Repair Facilities in China



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built. The Han-class could also be built on at least three of the four long building ways in the construction hall at the Huang-pu yard in south China, although a new launching dock would be required.

137. If the Han-class submarine is indeed nuclear powered, it represents an outstanding achievement for naval research, design, and production in China. Even if it is not nuclear powered, the Han-class submarine has a hull which is of an advanced design, capable of high performance under water and compatible with nuclear propulsion. At a minimum, this submarine class should provide the Chinese Navy with a long-range underwater attack capability and could prepare the way for the production of SSBNs, the first of which could be completed by 1976.

Surface Fleet

138. The fact that 6 of China's 10 major naval shipyards are concentrating on the production of missile-equipped ships and boats indicates the importance of missile units in Chinese naval planning and strategy. During 1971, the Chinese produced 20 to 30 Osa- and Hoku-class missile patrol boats, bringing their total inventory of such boats up to about 50. Current production continues at about the same rate. Effective coverage of China's long coastline by missile boats would probably require at least 150 units. We believe that the Chinese can meet this production requirement within the next five years, and subsequent improvements in the force of missile boats will probably be qualitative.

139. The Luta-class guided-missile destroyer is China's largest combatant, and it is the first indigenously designed combatant employing steam turbine propulsion. The Luta-class destroyers will not only increase the missile power of the fleet, but with their size and

4,500 nm range, they will also improve the ocean-going capabilities of the Chinese Navy. Armament for this ship consists of four 130 mm guns and six launchers for Styx-type cruise missiles with a range of at least 25 nm. One unit has been completed and at least six more are under construction. During the next two years, the Chinese will probably produce Luta-class destroyers at about the rate of three per year.

140. To modernize their surface fleet, the Chinese are also equipping their existing destroyers and some of their destroyer escorts with missiles. Three of four Gordyy-class destroyers and two of four Riga-class destroyer escorts have been converted to missile-armed ships. Thus, by means of new production and by conversion of older ships, the Chinese will have by mid-1973 a force of about 16 missile-equipped destroyers and destroyer escorts.

141. About 1 October 1971, the first destroyer escort of the diesel-powered Kiang-tung-class was launched at Shanghai. It was observed operating on several occasions during June 1972. No other ships of this class have been observed under construction, and additional construction may be delayed until trials and tests of the prototype unit are completed. A special problem could exist in the testing of this unit because it appears to have a new missile system which would be China's first shipboard SAM unit. The presence of a new missile system is suggested by the size and location of circular holes observed in the deck during construction, by the size and shape of the twin arm launchers, and by the fact that security screens were set up around the ship while it was being fitted out. While the evidence points to a SAM installation, an anti-submarine or antiship missile system cannot yet be ruled out.

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142. The Chinese have produced only a few of the auxiliaries needed to support combat units in operations away from the immediate area of the home port. Although it is difficult to identify ships intended solely for submarine support, we have identified at least one submarine tender, and the Chinese have equipped two auxiliaries with submarine rescue equipment. Several other auxiliaries are frequently associated with submarines. The Chinese, however, have not been producing long-range oilers or cargo auxiliaries, and the navy has no underway replenishment capability.

143. Production of amphibious ships has been limited, and the Chinese have so far done little to augment or replace their inheritance of World War II LST, LSM, and LSIL fleet units. They have built nearly 500 landing craft, but these have been used to a large extent as supply boats along rivers and coastal areas where their ability to unload directly on the beach is useful.

144. Annual expenditures for naval ship construction have been rising rapidly. We calculate outlays were nearly \$600 million in 1971, and they may more than double by 1977. The higher costs reflect both an increase in tonnages produced and the greater complexity of the ships and their equipment. These expenditures do not include costs for the enlarged shipbuilding facilities.

Training

145. In the past, the training most frequently observed throughout the Chinese Navy has been that which is conducted by units of the naval coastal defense force. Most of the participating units have been gunboats engaged in intercepting target ships approaching the coast within the assigned sector of the exercise. Interception of real targets (Nationalist raiding parties) has also provided valu-

able experience over the years. These same coastal forces occasionally conduct anti-aircraft gunnery exercises, firing at sleeves towed by units of the naval air force.

146. There is much less training activity involving China's submarines and major surface ships. Submarines are occasionally detected in training operations involving interception and attack against surface ships; they also participate as targets in ASW training operations conducted by elements of the main surface forces. Main surface forces also conduct limited anti-aircraft gunnery practice and carry out patrols in strategic areas along the coast (such as the Hainan and Pohai Straits area and the Shanghai coast). To date, main force units have conducted little out-of-area training or patrolling.

147. It is still too early to tell what tactics the Chinese have devised for their newly developed missile forces. We consider it likely, however, that the missile fleet, particularly those units of the main surface force, will be used to enlarge the areas of naval patrol. A missile capability will improve both the striking power of the Chinese Navy and its ability to threaten major surface ships of an enemy.

148. We see, however, no evidence that the Chinese Navy is being prepared to attack any of the areas peripheral to China—Taiwan, South Korea, or Southeast Asia. Because the Chinese have a limited sealift potential, and because they have no amphibious shipbuilding program and conduct no large-scale amphibious training activities, we believe that China is not contemplating major amphibious assault operations in the near future.

Underground Naval Facilities

149. For the past 10 years the Chinese have been engaged in an ambitious and costly program to build naval bases with extensive un-

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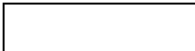
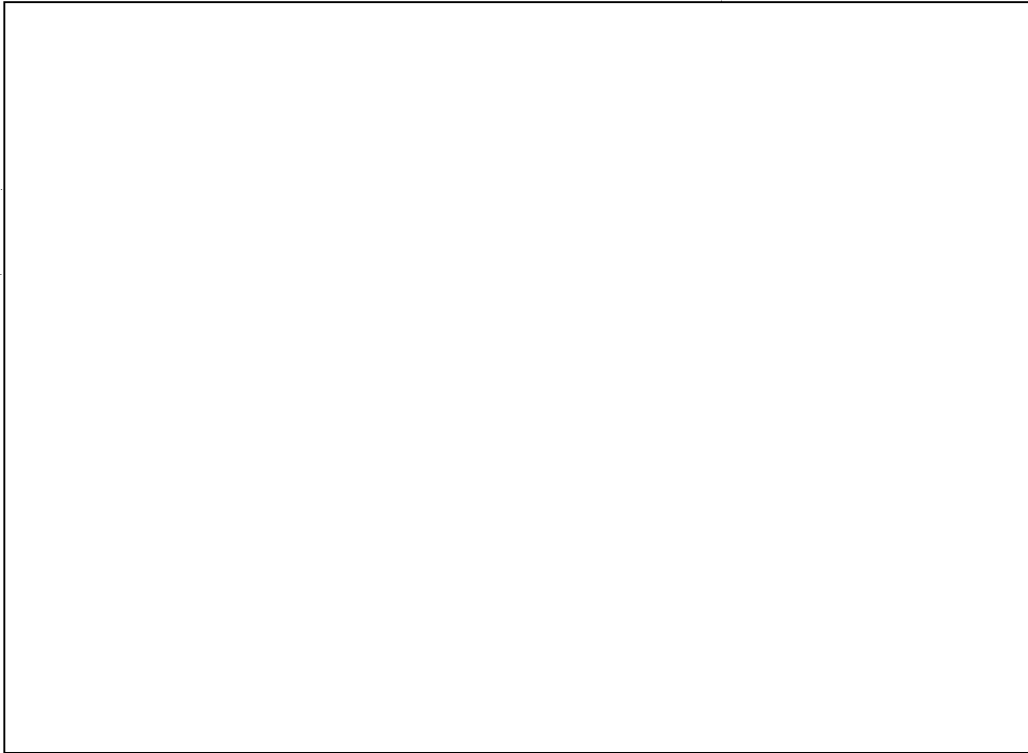


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derground facilities. [redacted]

[redacted] When these facilities are completed, they should be able to accommodate all of China's existing submarines and missile boats.

150. The underground facilities are of three basic designs: A drive-in tunnel at water level, and two types of drive-through tunnels. One type of drive-through tunnel is built above water level with rails connecting the launching and docking systems at both ends. There are also a number of drive-through tunnels built at water level. Many of the drive-through installations probably have underground maintenance and support facilities.

151. Those facilities built at water level will permit faster deployment and recovery of units and are well suited for protecting naval combatants in an alert status. All of these underground facilities will provide excellent protection against attacks by forces armed with conventional weapons. The underground facilities might also be effective for defense against nuclear attack.

III. STRATEGY, CAPABILITIES, AND PROSPECTS

152. The increasingly hostile nature of Sino-Soviet relations throughout the 1960s radically altered China's strategic problem. It not only undermined the deterrent effect of the Sino-Soviet defense treaty vis-à-vis the US but created the additional threat of attack from the north and northwest. The schism between China and the USSR also left the Chinese with no friendly source from which to acquire the modern industrial plant and technology and the special materials essential to the production of sophisticated weapons.

153. In these circumstances of apparent vulnerability, the Chinese were careful not to show any sign of weakness; there was no scaling down of Peking's pretensions in its ideological dispute with the USSR, no obvious slackening of efforts to undermine US influence and position in Asia, and no diminution in efforts to gain status as a world power. Behind this brave front, however, the Chinese have been at pains to control the risks of direct military confrontation with the two superpowers while moving resolutely ahead to strengthen their military capabilities.

154. The greatest relative weakness of the Chinese vis-à-vis the US and USSR was in the field of strategic weapons. They assigned first priority to ambitious and costly programs that would in time provide China with a credible deterrent against nuclear attack. China also hoped to discourage any would-be invader by building up its conventional forces and being prepared to fight a protracted war. After strategic programs, air and naval modernization has had the higher claim on resources; modernization of the army seems to have received a somewhat lower priority. This is consistent with the Maoist precepts for taking full advantage of China's vast territory and huge population to wage a "people's war."

155. It is readily apparent that our understanding of Chinese strategy relies heavily on inferences drawn from what we perceive to be the geopolitical realities facing China and from what concrete actions the Chinese appear to be taking by way of weapon programs, troop dispositions, and other preparations. As mentioned earlier, there is virtually no open literature or direct information available on Chinese military planning and thinking, aside from Maoist writing on "people's war," and we have relied heavily on analysis of force structure and deployments in the more detailed discussion of strategy that follows.

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A. Defense Against a Soviet Attack

156. China's strategy for defense against a possible Soviet invasion follows Mao's principles of "luring deep" and "people's war." It is based upon giving up territory, conserving the main forces, and mobilizing the entire population against the invader.

157. The physical and economic geography of China's north and northwest are well suited to this strategy. The land is mostly arid, much of it is mountainous, and the population in these border regions is very sparse. There are practically no large Chinese cities or major industrial centers within 100 miles of the Russian border, and the nearest major center to the Mongolian border is Pao-t'ou, some 110 miles by air and more than 300 miles by feasible ground routes. Thus, the Chinese could give up considerable territory in northern Manchuria, Inner Mongolia, and Sinkiang without any serious impact on their powers to resist.

158. Another factor encouraging the Chinese to adopt a Maoist-type defense in the north is that Soviet troops along the border have much greater firepower, air support, and mechanized mobility than the PLA. Should the Chinese attempt to maintain a strong defense close to the border, their forces would be in danger of being cut off and destroyed by superior Soviet firepower and mobility. Peking has avoided such deployment. Except in southeastern Manchuria where at least two divisions are within 75 miles of the border, the nearest large main force units lie well back, in most cases 200 miles or more.

159. Recently a few smaller units—up to regimental size for artillery—have been positioned closer to the border along main lines of communication. Apparently these are to perform a local-defense function, delaying the enemy advance and making him pay a price. At key points defensive positions have been

prepared. For example, the Chinese have dug caves in the mountain sides near the Urunchi railhead (300 miles from the border) and in the mountains above Chi-ning on the rail line from Mongolia (about 150 miles from the Mongolian border), and have built the eight mounded structures at Shuang-ch'eng-tzu with accompanying caves and bunkers. There appear to be some fixed defenses on the Manchurian rail lines leading from the USSR and from near the eastern border of Mongolia, but they are less developed.

160. If the enemy fought his way past these positions, further lines of local defense would oppose him, and his ever-lengthening supply lines would be harassed by guerrillas drawn from the ranks of the militia and the Production and Construction Corps. Command and control of these guerrilla activities would probably emanate from military subdistricts and local defense force units of the PLA, with orders being relayed by every available means of communication.

161. Under this strategy, key main force units would be held back to preserve their strength. When the invading forces had become overextended and weakened, the main forces would be committed to a tactical offensive to destroy the enemy.

162. As the enemy was drawn deeper into China, the Chinese would expect the relative capability of their forces to increase. A determined Soviet thrust could almost certainly reach a few hundred miles into China. Whether it could reach Peking is a moot point. If it did, the Chinese presumably would retreat southward, farther into the interior and continue the war. The Chinese look back to their experience in fighting both the Nationalists and the Japanese invaders and profess confidence that Maoist tactics can ultimately defeat a better equipped force.

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163. An attack from the north, however, need not necessarily come in the form of a massive ground force invasion. In 1969, when Sino-Soviet tension was at a peak, the Soviets hinted broadly at the possibility of air strikes against China's nuclear weapons centers. Peking's ability to react against such a strike is limited. In a conventional exchange, China's principal retaliatory capability would consist of medium and light bombers which would have little chance of penetrating Soviet air defenses and reaching important targets in significant numbers. China could hardly respond to a Soviet conventional air strike with its own nuclear weapons because of the danger of provoking a devastating retaliation. In terms of defense, China has little capability against supersonic bombers or against coordinated multiple attacks. Most of its interceptor aircraft are too slow and lack an all-weather capability, its air defense communications system is not yet fully modernized, and it has only about 50 SAM battalions. No effort has been made to concentrate air defense on the advanced weapons facilities at the expense of other defense requirements.

164. Recognizing their vulnerability to air attack, the Chinese have been attempting to duplicate and disperse key facilities. (This is discussed in III C, page 50.) At the same time, they are trying to improve their air defenses against attack from the north, and there are programs underway that will further enhance these defenses. Over the period of this Estimate, active air defense will play an increasing role in defense strategy.

B. Defense Against Attack From the East

165. In contrast to the northern border regions, the coastal areas of China have important concentrations of population and industry. Most of China's great industrial complexes as well as numerous secondary centers are within

150 miles of the sea. Here there are no great areas of sparsely inhabited wasteland to be sacrificed in order to stretch the enemy's supply lines and increase his vulnerability. A defense strategy based on drawing the enemy inward would mean the immediate loss of important segments of China's industrial capacity and major concentrations of population. It seems clear that Peking does not intend to employ this strategy and that the Chinese are prepared in east China for a forward defense.

166. The navy would be involved in the first line of defense in the east. Fifty or so attack submarines could be used to meet an attacking fleet, but their main function would probably be to harass enemy sea lines of supply. The small but growing force of missile-equipped destroyers and destroyer escorts could attack approaching forces well out to sea under the cover of their own land-based fighter aircraft. (In future years, air-to-surface missiles might be available to strike some distance at sea.) Enemy forces near the coast would be met by the rapidly growing force of missile boats and by numerous torpedo boats. Coast artillery, which the Chinese continue to deploy in fortified positions, and, in some places, cruise missiles would also come into play.

167. If an enemy force landed, it would be met by both local defense and main force units. But the Chinese are also prepared for defense in depth. For example, as far inland as the rail junctions of Shih-chia-chuang and Cheng-chou (which lie inland some 180 miles and 320 miles, respectively) there are mounded structures with scores of associated lesser weapons positions, apparently designed to slow the enemy advance.

168. A substantial number of bombers and fighters could also be committed to defense of

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the coast. If the attacker gained air superiority over the coast, the Chinese probably would move a substantial portion of their aircraft to bases deep in the interior. The underground storage facilities for aircraft and the demonstrated capability of the Chinese for rapid repair of airfields would make it difficult for an attacker to destroy the air force on the ground.

C. Passive Defense

169. Another indication of China's defense mindedness is the immense effort that has gone into passive defenses—i.e., dispersal and shelter construction. The Chinese regime has been building a large portion of its new factories—especially those for defense-related industries—in interior regions. Factories having some strategic value tend to be dispersed in out-of-the-way valleys and canyons, reducing the vulnerability to detection and attack.

170. Perhaps to a degree unmatched elsewhere in the world, the Chinese are building civil defense facilities. Shelter trenches by the thousands exist in towns and around factories, schools, and military installations. Underground shelters ranging from simple bunkers to large tunnels with sophisticated life-support equipment are being built in the cities.

171. Large tunnels now in existence or under construction at 75 or so of China's airfields will be able to shelter most of China's fighter force. Tunnels now built or under construction at China's naval bases will be able to shelter all of the navy's existing submarines and missile boats.

172. Because 85 percent of the Chinese population still resides in the countryside, the everyday economy of the people is much less dependent upon sophisticated communications and transportation networks than is the case with other major powers. These factors help

to reduce China's vulnerability to bombing, conventional or nuclear.

173. China's energetic program of civil defense, along with the advanced state of its program of constructing shelters for aircraft and ships, suggests that its leaders are not entirely bluffing when they say that, even after a nuclear attack, sufficient strength would be left to repel a follow-up invasion designed to subjugate the nation.

D. Offensive Strategy and Capabilities

174. While the main focus of China's strategy is defensive, this is not to say that Peking has given no thought to contingencies in which offensive operations beyond its borders would be necessary or desirable. And in any case, a military force which has been developed to put up strong resistance against invasion by the US or USSR inevitably has a considerable offensive capability against lesser foes. China's armed forces are substantially—in most cases overwhelmingly—superior to those of any nation along its periphery excepting the USSR. Geography and the urge to preserve its defensive capabilities against the USSR and US are the chief factors limiting China's capabilities against its Asian neighbors.

175. To take the easiest area first, if Peking were to decide to directly invade with its armed forces, it could conquer all of Southeast Asia if opposed by only local armed forces.

176. In the case of south Asia, the logistic problems presented by the Himalayas and the sterile reaches of the Tibetan Plateau severely limit China's offensive capabilities. Although the Chinese could mount an assault across the Himalayas using several divisions, problems with long and difficult supply lines would prevent them from sustaining any offensive into India beyond the Himalayan foothills. There

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are, moreover, only three airfields in Tibet from which close air support missions could be staged. A few other airfields in western China could be used to mount longer range bombing attacks across the Himalayas.

177. These facts limit China to defense along the border and to limited-objective offensive actions like the one in 1962. Even the 1962 effort, it should be noted, required months of logistic buildup and a temporary increase in troop strength in Tibet. Thus, even a limited offensive action into south Asia would almost certainly be preceded by a long buildup of supplies and troops. China's strategy in the area appears to be defensive; it calls only for maintaining sufficient strength in Tibet to repel and punish any intrusion by Indian forces.

178. The case of Taiwan is different. If Peking decided to use armed force to take the island, a considerable redeployment of land, sea, and air forces would be required before launching an invasion. In addition, extensive training and exercises of amphibious and air-borne forces would be necessary.

179. Once these prerequisites had been achieved, China's forces could almost certainly take Taiwan in the absence of US military intervention. Even in this case, however, the operation could be quite costly if the Nationalists were determined to resist. But the relative superiority of the PLA will increase during the period of this Estimate.

180. In Korea, the narrow width of the peninsula limits the number of troops that could be militarily effective in combat. Logistic calculations based on geographic limitations and upon force strength during the Korean war suggest that if the Chinese were to take the unlikely option of participating in a major attack against the south, they could

commit as many as 35 combat divisions to the attack.

181. But in any of these contingencies, Peking would be constrained by the necessity of providing for defense needs elsewhere, particularly vis-à-vis the Soviet Union, and by the requirements of internal security.

E. Prospects

182. The next several paragraphs discuss what we believe to be the most likely trends in the development of the PLA over the next five years. The judgments set forth are based on inferences drawn from what seem to be Peking's strategy to meet its military requirements, on an analysis of procurement and development programs now underway, and on our estimates concerning likely advances in China's technical and economic capacity.

183. While there is admittedly much uncertainty in making such predictions, there are also factors that impart some measure of confidence. A nation's armed forces represent, at any point in time, the cumulative effect of past policies, and in China's case especially there is a self-sustaining momentum which is resistant to sudden change—both in tempo and direction. In the first place, the Chinese are already making a major and burdensome effort; they could do somewhat more, but they are certainly much nearer the margin of their capabilities than either the US or USSR. And in this connection, probably because they have sacrificed so much to get where they are, the Chinese often seem to feel an unusually strong compulsion to press ahead with long-standing programs so as to realize something on their costly investment even when it means extensive production of obsolescent equipment. Shifts in priorities and emphases, of course, are possible, but here too there are limits to Peking's flexibility.

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China's technology and industrial plant are still not sufficiently developed to permit rapid conversion to major new programs of great complexity. Even if the Chinese soon adopted a different set of military policies they would only be in the early stages of fruition toward the end of the period of this Estimate.

184. For the reasons outlined above, we believe that the most likely prospect for China's armed forces over the next few years is one of steady improvement, largely as a result of policies and programs now underway. Although this essentially "straight line" projection suggests that there may be few, if any, spectacular developments in the PLA over the near term, it does indicate a continuation of Peking's resolute effort to use its limited resources to build a formidable war machine.

185. It is possible, however, to conceive of circumstances involving changes in Peking's perception of the threat, new Chinese leadership, or a dramatic turn in world politics that might cause China to alter significantly the strategy and programs as outlined in this Estimate. Indeed there are numerous permutations of events that could affect the development of China's military establishment, and the following is meant only to be illustrative of the possibilities.

186. For example, a further opening to the US and an easing of Sino-Soviet tensions could encourage Peking to ease back on the throttle more or less across the board. It is even conceivable that at some point the Chinese would seek meaningful tripartite agreements on arms control with Moscow and Washington. On the other hand, a worsening of relations with one or the other of the superpowers could lead to shifts in priorities. A flare-up on the China-USSR border, for instance, could prompt the Chinese to greater efforts to upgrade and enlarge its ground forces and border defense

capabilities. Conversely, a relaxing of the immediate threat on the border might result in Peking's putting a stronger focus on longer-term programs for the development of strategic weapons, especially if at the same time Sino-US relations had taken a turn for the worse.

187. It is more difficult to envision developments not directly involving the superpowers that would greatly influence China's military efforts. China already has an awesome superiority over many of its neighbors and has programs in train that will widen the gap. With respect to Japan, a policy of seeking political and economic leverage is clearly the most promising road for Peking to follow. China's strategic programs, undertaken primarily for other reasons, have their message for Japan as well. But military programs pointedly designed against Japan would not only risk causing the Japanese to respond with their great technological prowess but would quickly impinge on important interests of the US, USSR, and other major powers throughout the world.

188. Changes stemming from decisions not directly linked to international developments are also possible. China's military planners might decide that the PLA should be equipped with weapons that are not so inferior to those of the US and USSR. This could involve cutting back on production of obsolescent equipment in favor of fewer but more modern weapons and giving R&D efforts a larger slice of the military budget. Concretely, this might mean a quick phasing out of Mig-19 and Il-28 production, a substantial increase in the production of F-9s and Mig-21s, and early serial production of the Hsian-A or a similar more advanced aircraft. For the navy it might mean early cessation of R-class submarine construction in favor of the new Ming- and Han-classes and greater efforts to master the techniques of operating as a deepwater navy. For the

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ground forces, emphasis might be placed on the development of new equipment that would upgrade firepower and mobility and efforts to provide a potent arsenal of tactical missiles with appropriate modern guidance systems and warheads.

189. But even considering the possibility of developments such as the examples just cited, there are factors which shape China's military policy that are relatively fixed. Whoever might be leading China's more than 800 million people would almost certainly seek leading-power status for the nation and would strive to narrow the military gap between China and the superpowers. Deviations from present general military policies would probably be at most matters of degree rather than of kind. The goals would remain similar and the means probably would not change drastically. Therefore our estimates of forces for the five year period ahead essentially project present policies. They do so in terms of ranges which allow for some of the uncertainties involved, including possible speedups or slowdowns in various programs.

Ground Forces

190. The ground forces are receiving newer and better equipment that will gradually up-

grade their firepower and mobility—both notable weaknesses at present. While these improvements will not be sufficient to enable the Chinese to project large modern forces far beyond China's borders, the PLA should be able increasingly to contest an invasion more effectively and in somewhat more forward positions than is now the case, especially on the northern and northwestern frontiers. In addition to the modernization program, there may be other changes—e.g., more attention to improving and equipping militia and paramilitary forces—that will enhance the usefulness of what still is China's main military asset: virtually unlimited manpower. This judgment assumes, however, that such measures do not run afoul of doctrinal dispute and are not carried to the extremes that Mao's policies have frequently been taken in the past.

Air and Air Defense Forces

191. In short, the already formidable defensive capabilities of the Chinese Army will be enhanced, and the prospect of engaging this massive force will become a more and more unattractive proposition for any potential adversary.

192. The outlook for air and air defense forces is one of substantial increases in size

PROJECTED LEVELS OF MAJOR GROUND FORCE WEAPONS IN CHINA

TYPE OF WEAPON	ESTIMATE	PROJECTION	PROJECTION
	AT MID-1972	FOR MID-1975	FOR MID-1977
Mortars	40,000-50,000	47,000-57,000	53,000-63,000
Armored Vehicles			
Light Tanks	350-700	700-900	1,000 [?]
Medium Tanks	5,000-6,500	6,500-8,500	8,000-10,000
APCs	600-900	1,700-2,500	3,000-4,000
Field Artillery and			
Rocket Launchers *	11,000-14,000	14,000-17,000	15,000-19,000
AAA ^b	15,000-20,000 ^b	20,000-25,000 ^b	25,000-32,000 ^b

* Includes only more modern pieces of Chinese manufacture.
^b Includes AAA assigned to the air force.

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with qualitative improvement proceeding at a more modest pace. China has a diminishing backlog of 400-500 Mig-19 fighters to be worked into operational units, and Peking may decide to phase out production of this aircraft in favor of Mig-21s. Heretofore, China's interceptors have been subsonic/low supersonic with only a few being all-weather capable, and most are forced to rely on rockets and guns for aerial weaponry. In all probability the Chinese Mig-21 will be armed with missiles and will be equipped for all-weather operations.

193. The Chinese have made a considerable investment in the Mig-21 program, and we would expect the aircraft to enter the force in considerable numbers. At present, however, we lack positive evidence that series production of the Mig-21 is underway.

194. If the Chinese have delayed or abandoned the Mig-21 production program, they might extend Mig-19 production pending availability of the Hsian-A. This interceptor, a prototype of which is currently being tested, may be available for deployment in the mid-1970s.

195. As for other types of aircraft, the new F-9 fighter-bomber represents a significant qualitative improvement in China's ground attack capability. We expect the Chinese to continue production of Mig-21s and F-9s for most or all of the period of this Estimate. There is a question as to how much longer the Chinese will continue to produce the obsolescent Il-28 jet light bomber; they may soon conclude that the cost of building and deploying more aircraft with such limited

PROJECTED LEVELS OF OPERATIONAL MILITARY AIRCRAFT AND
SURFACE-TO-AIR MISSILE BATTALIONS IN CHINA

TYPE OF EQUIPMENT ¹	ESTIMATE	PROJECTION	PROJECTION
	AT MID-1972 ^a	FOR MID-1975	FOR MID-1977
Fighters			
Mig-15/17	2,050	1,200-1,800	600-1,700
Mig-19	1,400	1,500-2,500	1,500-2,500
Mig-21	28	300-675	400-1,375
F-9	185	300-950	300-1,000
Hsian-A (or comparable model) .....	...	0-20	30-275
Bombers			
Il-28	390-400	400-600	400-600
Tu-16	40-50	100-170	150-270
Transports			
Light	415	...	...
Medium	27	...	...
Helicopters	255	400-650	450-1,100
SAM Battalions	50	75-140	90-200

^a These are estimates, not counts. Information is particularly inadequate on the Mig-21s.

^b There is no evidence of a program for domestic production of light or medium transports. Any increase in inventory would depend on purchases abroad.

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capabilities is not warranted. Although the Chinese will probably continue to use the Tu-16 jet medium bomber primarily as a strategic weapon carrier, some will probably be assigned to reconnaissance tasks and some may be produced in a tanker version.

196. SAM deployment is proceeding at a faster clip than in years past, and the Chinese are producing AAA in considerable quantities. Deployment of the Chinese version of the SA-2 could be supplemented by a low-altitude weapon which could also become available during the period of this Estimate. Radar coverage is being extended, and new communications equipment now becoming available will improve the command and control of China's air defense system. By the late 1970s, the Chinese will have an improved capability for limited area defense; they will,

however, still have a long way to go in providing adequate protection of important targets.

197. In sum, China's air and air defense capabilities, except perhaps in numerical terms, will continue to be a poor match for the attack forces of the US and USSR, and China will continue to be vulnerable to a large-scale air attack that employed the latest equipment and technology.

Naval Forces

198. Current naval shipbuilding programs and the investment the Chinese are making in additional construction capacity clearly attest to an ambition to become an important naval power. Production of attack submarines, destroyers, and guided-missile patrol boats is already substantial, and China will

PROJECTED LEVELS OF OPERATIONAL COMBAT SHIPS IN CHINA

<u>TYPE OF SHIP</u>	<u>ESTIMATE AT MID-1972</u>	<u>PROJECTION FOR MID-1975</u>	<u>PROJECTION FOR MID-1977</u>
Submarines			
Attack Classes			
S-1	2	...	...
W	21	21	21
R	27	40-45	40-45
New Diesel (Ming)	2	10-20	25-35
SSN (Han)	1 ^a	3-5	5-10
Ballistic Missile	b	b	2-4 ^b
Destroyers and Destroyer Escorts			
Conventional Weapons	8	5	5
Guided Missile	8 ^c	25-35	35-50
Patrol Ships and Craft			
Patrol Escorts	15	10-15	10-15
Submarine Chasers	34	40-45	50-55
Missile Boats	55	130-140	145-155
Motor Gunboats	400	450-470	490-510
Torpedo Boats	260	275-285	290-315

^a The evidence, though not conclusive, suggests that the Han is nuclear powered.
^b The Chinese have one G-class diesel-powered ballistic missile submarine for use as a test platform. Operational units projected for 1977 are nuclear-powered submarines.
^c Two or three of these ships may not be completely combat ready at this time.

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soon have nearly as many submarine building positions as the Soviet Union is currently using. At this point, additions of new units and advances in technology seem to be outstripping the Chinese capability to operate their navy to its full potential. Given the complexity of learning to operate as a deepwater navy, this condition is likely to persist throughout the period of this Estimate. Although we believe there is a good chance that the Chinese will begin to "show the flag" with some of their newer units, there is little likelihood of establishing a major naval presence in waters distant from China for at least several years. In the meantime, the Chinese Communist Navy's already impressive capability as a coastal defense force will continue to grow.

Tactical Nuclear Weapons

199. Finally, we think it likely that the Chinese will acquire a tactical nuclear capability during the period of this Estimate. A tactical bomb is the best candidate for an early capability. Somewhat later, toward the end of the period of this Estimate, the Chinese will probably be capable of deploying tactical nuclear missiles or rockets. Similar to the case of their emerging strategic capability, the most the Chinese can hope for in this area is a measure of deterrent—i.e., though still badly outmatched, the possession of enough such weapons to cause a stronger enemy to desist from using his superior capability.

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ANNEX A

THE GROUND FORCES

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THE GROUND FORCES

I. ORGANIZATION

1. The Ministry of National Defense (MND) is the central controlling authority for all military forces in China, and MND control over the Chinese Army is exercised through the General Staff Department. The arms of the ground force—including the engineers, railway engineers, artillery, armor, chemical defense, and signal corps—rank at the same level as the air force and navy, but apparently have no separate headquarters. Instead, the ground force arms are supervised through functional headquarters within the General Staff Department.

2. For administrative and command purposes, the ground forces are organized into 11 regional commands. The commander of each region is not only responsible for the administration, training, and readiness of all ground forces within his geographic jurisdiction, but is also the senior military authority in his area. In those military regions incorporating portions of the coast, naval authorities maintain close contact with regional headquarters. Headquarters of the air defense districts are normally located near those of the military regions, and air force officers serve on the staffs of the military region commands.

3. Each military region has one or more military district (MD) commands whose geographic limits generally correspond to provincial boundaries. MDs appear to be respon-

sible mainly for administrative matters, overseeing local defense forces, maintaining internal security, and organizing and training the militia. There are some exceptions to this rule, however. The Tibet MD, for example, appears to incorporate duties of both a typical MD headquarters and a tactical headquarters. Local defense forces on the Burmese and Laotian borders and those along the Fukien coast are commanded by army and military region headquarters rather than by MD headquarters.

4. In recent years the Chinese have apparently been taking some steps to ensure that components of the army conform more closely to the categories of fighting units envisioned by Mao Tse-tung in his theory of "people's war". According to this theory, the army should have two types of regular fighting units—"main forces" and "local defense forces." Main force units should be heavily equipped and be ready for service in any part of the country. Local defense forces, however, should be organized and equipped to operate in a localized area of the country. Local defense units would also work closely with available paramilitary forces—the militia and the Production and Construction Corps in resisting an invasion.

5. To implement Mao's theory of specialized forces for "people's war," the MND has apparently assigned the control of certain local

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defenses to some armies. Armies so assigned become responsible for directing all forces within their designated zones of defense. Increased attention to Mao's military theories is also shown by the fact that MDs and sub-districts as well as local defense force units appear to be working more diligently to improve training and preparedness for war within the militia and Production and Construction Corps. The close relations developed between local defense commands and the paramilitary forces in peacetime should result in better-coordinated defense operations in event of war.

6. MND control of ground force organizations in the field has been facilitated since 1970 by an improvement in communications. Progress in replacing the manual Morse system with radioprinter circuits has served to improve the speed and accuracy of communications. The MND is now able to make simultaneous contact with all tactical headquarters within a geographic area. [REDACTED]

II. STRENGTH

8. With an estimated manpower strength of about three million, the Chinese Army is the largest in the world. Our estimates, however, are probably conservative, and the actual size of the Chinese ground forces could be larger.

10. Most of China's armies are main force fighting units. In addition, main force units include armor, artillery, anti-aircraft artillery (AAA), railway engineer and some independent infantry divisions as well as signal, transport and combat engineering regiments. Local defense forces consist of all divisions and regiments assigned to border defense or military internal security duties and some independent infantry units. These forces can be supplemented by specially-assigned armies or by any of the various types of main force units. An inventory of China's ground force units is shown on the following page.

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CHINESE GROUND FORCE UNITS AS OF 1 JULY 1972

ORGANIC UNITS (36 * Armies) ^b			INDEPENDENT UNITS (Continued)		
DIVISIONS	TYPE OF UNITS	REGIMENTS	DIVISIONS	COMBAT UNITS	REGIMENTS
102	Infantry	—		COMBAT SUPPORT UNITS	
—	Artillery	33	16	Field Artillery	10
—	Anti-Aircraft Artillery	23	10	Anti-Aircraft Artillery	6
—		—	3	Antitank	—
102	Total Organic Units in the Ground Force	58	—	Rocket Launcher	2
			—	Anticheical Warfare	1
			—	Engineering	42
			—	Signal	13
			29		74
INDEPENDENT UNITS				SERVICE SUPPORT UNITS	
DIVISIONS	COMBAT UNITS	REGIMENTS		Motor Transport	48
11	Infantry	1	15	Railway Engineering	3
3	Airborne	—	—		
	(Subordinate to air force)		15	TOTAL INDEPENDENT UNITS IN THE GROUND FORCE	51
8	Armored	13	120		264
50	Border Defense/Military Internal Security	111			
4	Cavalry	14			
76		139			

^aIn addition there may be two and possibly three more armies.

^bAn army normally consists of a headquarters, 3 infantry divisions, 1 artillery, and 1 AAA regiment for a total of about 43,000 men.

11. The Chinese ground force is, in organization as well as in numbers, primarily an infantry organization with relatively little in the way of organic armor, artillery or motor transport equipment. The following table compares the current estimated levels of equipment for a representative Chinese infantry division with equipment levels for Soviet and US infantry divisions.

12. Some Chinese military planners probably press for more heavy equipment at a faster rate for the ground forces. But the available evidence suggests that the top

ground force modernization at a pace which would not severely tax national resources or interfere with other weapon programs. In the meantime, the army is well equipped by Asian standards, and optimal use of available armor, artillery, and motor transport is assured by assigning it to specialized divisions and regiments which can be moved to support regular infantry forces as required.

13. But whether one judges the Chinese Army by Asian or Western standards, in the final analysis the real strength of the Chinese ground force lies in its manpower. Because of

REPRESENTATIVE DIVISIONS	PERSONNEL	WHEELED VEHICLES	TRACKED VEHICLES	ARTILLERY
Chinese Infantry	12,600	425	50	40
Soviet (Motorized Rifle)	10,500	1,972	250	208
US Infantry	15,845	3,214	244	131

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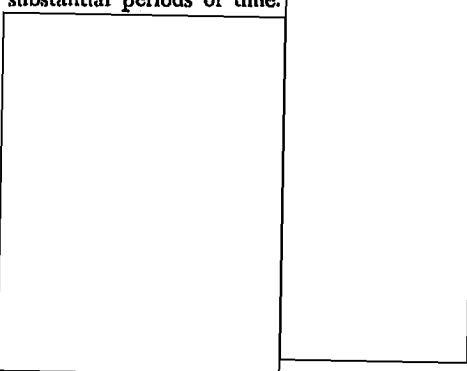
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the relatively low proportion of men under arms in China, the MND has been able to set stringent requirements for entry into the armed forces. Peking's selection policies have produced an army noteworthy for its physical stamina, discipline and motivation.

III. TRAINING

14. The Chinese press and radio comment far more on the political than the military aspects of training in the Chinese Army. As a result, we can tell that political indoctrination for Chinese troops is intensive and involves substantial periods of time.



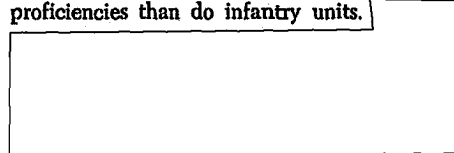
15. From all of these sources we are able over time to develop a picture of the extent and nature of training in past years, but it is far more difficult to provide current assessments of this activity. Primary emphasis of combat training traditionally has been at the individual and small unit level, with each unit tailoring its training to the capabilities and needs of its personnel. We do not know the total extent and exact nature of this training, but the following types of exercises and activities have been referenced: long distance marches, bivouacs, and mountain climbing; live fire involving artillery, anti-aircraft machine guns, and small arms; armor training

consisting of road march, firing, and assault exercises; combined arms training; joint training with the militia; chemical and biological defense drills; nuclear defense; and, finally, map reading.

16. After the hiatus caused by the Cultural Revolution, the tempo of military training for the ground forces began to pick up in 1968. So far, most of the known field training activity has occurred at regimental level and below, and the average Chinese foot soldier is probably well trained in the fundamentals of combat tactics and techniques. Improvement in communications equipment and in command and control techniques (such as triservice national alerts) has been notable, and communications training and command post exercises of division, army, and even regional headquarters level have become increasingly common. Thus we see that the level, complexity, and frequency of military training has increased. It is also apparent that the focus of ground force training remains defensive; there is little evidence to indicate that China's ground forces are being prepared for out-of-country operations.

Armor and Artillery

17. Because of the special nature of their equipment and operations, armor and artillery units require more training to maintain basic proficiencies than do infantry units.



Though our information about armor and artillery training is somewhat sketchy, it does permit the judgment that China's armor and artillery units have at least enough proficiency for the conduct of effective defensive operations.

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Airborne

18. The three known airborne divisions of the People's Liberation Army (PLA) are deployed in the Wuhan Military Region in central China. Personnel in these divisions participate in frequent airborne training exercises. These exercises are small scale, usually involving fewer than 200 parachutists and small amounts of equipment. China's airborne units have participated in sizable airlift operations. Frequently, during natural disasters, men and supplies are airdropped to affected areas.

[redacted]

[redacted] Although these relief operations appear to have been relatively large, the numbers of troops and aircraft that have participated are not known.

19. A calculation of China's maximum airlift capability would have to include both civil and military transports. If most of the military fleet and part of the civilian fleet were mobilized, one lightly armed division of about 10,000 men could theoretically be carried to a distance of 500 nautical miles (nm) in one day. An operation of that size, especially if it extended into unfriendly territory beyond China's borders, would present severe difficulties for the untested Chinese transport force. Air transport units would have to be brought under unified command and control, and important military and civilian air transport services would be neglected. No training for a large-scale airlift or for an accompanying fighter escort has been noted. For these reasons it is unlikely that the Chinese would transport units of larger than regimental size by air. Such airlifts probably would be confined to Chinese territory, to countries such as North Vietnam or North Korea; or to poorly defended countries such as Laos or Burma.

Biological and Chemical

20. Although the Chinese recognize the effectiveness of biological warfare (BW) and chemical warfare (CW), they lack a strong offensive and defensive capability with regard to these toxic materials. Since 1960 the Chemical Defense Corps has been tasked with the responsibility for the use of biological as well as chemical agents within the Chinese forces. The Corps has staff representation from army down to battalion level. Elite soldiers, known as "Chemical Defense Troops," receive training and are equipped for all phases of CW and BW and for defensive measures in event of a nuclear attack.

21. The Chinese generally follow Soviet practice in tactics for the employment of chemical agents. Although the Chinese could use grenades and land mines, artillery still appears to be the primary delivery vehicle for chemical agents. The ground forces have a variety of tube artillery weapons large enough to disseminate CW agents. We believe that the Chinese have at least two schools and one staff college for CW training. CW-type test facilities have been found at the Pai-ch'eng Weapons Test Range and at Wei-chou, 130 nm northeast of Lanchou. The facility at Pai-ch'eng, however, has not been active for several years.

Service Support

22. In contrast to the situation regarding the combat and combat support units of the Chinese ground force, we do have evidence that the service support units (motor transport and railway engineers) are highly trained and generally effective in their assigned duties. By the nature of their assignments, service support troops acquire on-the-job training and experience on a daily basis. The railway engineers have demonstrated in their construction proj-

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ects in North Vietnam and in south-central China that they are among the best in the world.

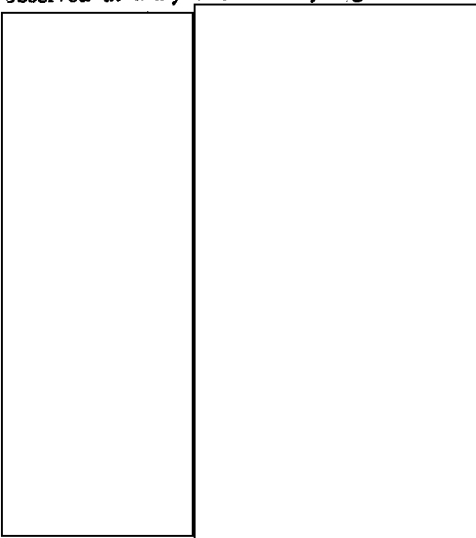
Recent Trends in Training

Political

23. One of the apparent results of the purge of Lin Piao as Minister of Defense was the immediate termination of the "Five-Good" soldier and "Four-Good" company rating systems which Lin pioneered and promoted. In both systems, being good at politics was the first and foremost criterion for excellence. Although Lin's rating systems are now defunct, it is most unlikely that political training in the army will be neglected. So long as Maoist dogma prevails, the army will have a domestic role to play which will require that its ideological awareness and political reliability remain at a high level.

Military

24. Since early 1970, exercises have been observed at army and military region level.



IV. DISPOSITION OF GROUND FORCE UNITS

25. Since late 1969, and in response to the Soviet threat, some of China's regular combat units have been shifted northward and inland from the coast. In the process, the Chinese appear to have established a strategic reserve of at least five armies in central China. All of the coastal military regions except Fuchou and Peking lost combat divisions. Even in these two regions, the number of combat troops within 150 miles of the coast went down despite overall gains for the regions. Despite these shifts, most armies are still concentrated in northern and eastern China where they are positioned to defend against attacks from the north or the east.

26. Two Military Regions—Shenyang and Peking—are of particular importance in an assessment of the disposition of ground force units in China. These two regions contain 14 of the 36 confirmed Chinese armies, 6 of the 8 armored divisions, nearly two-thirds of the army's independent tank regiments, and more than one-third of China's field artillery divisions and regiments. Adding to this list those border defense and support units which are also present, we find that about one-third of all Chinese ground forces are located in the Peking and Shenyang Military Regions.

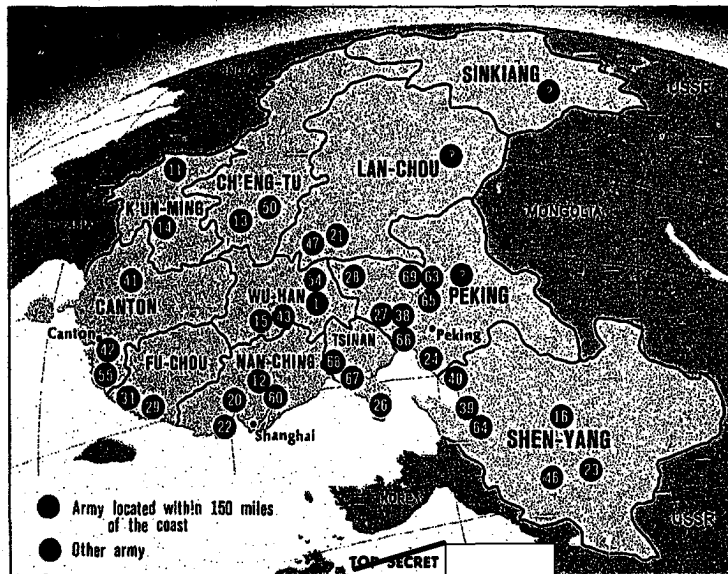
27. Reasons for this concentration are obvious. Much of the terrain is favorable for the use of armor and artillery, and both regions are vulnerable to invasion from land and from sea. The southern part of Shenyang encompasses China's industrial heartland, and the

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Concentration of Army Deployment, mid-1972



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Peking Military Region is important for industry as well as for being the administrative center of the country.

28. Outside of the Peking and Shenyang Military Regions, most of the remaining armies are concentrated in central and eastern China where some are positioned to defend the coast while others stand ready for redeployment to back up forces either on the coast or along the northern frontier. Only about one-sixth of China's armies are found in the four military regions which encompass the western half of China. Apart from the fact that western China is relatively lightly populated, there are other reasons for the scarcity of such units in the west. Chinese troops in Sinkiang would be isolated if Soviet forces succeeded in cutting the rail line which supplies the region. The

Chinese are, however, augmenting their ground forces in the northwest. Since 1969, one and possibly two armies have been placed in the Lanchou Military Region. Cover designators for at least 11 new tactical units of at least regimental size, and possibly comprising a new army, have appeared in the Sinkiang Military Region. The Himalayas form a natural protective barrier in the southern parts of west China, and to the south on the Asian mainland there are no states that threaten Chinese territory.

29. The Chinese are also known to have 50 divisions plus 111 regiments with special responsibilities for border defense or internal security. These units form a major element of the local defense force structure along the periphery of the country. Additional divisions

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and regiments—designated as cavalry or independent infantry units (see Table on page 61) share some responsibility for border defense.

30. Other elements of the ground force, such as signal and combat engineering regiments, are rather evenly dispersed among all 11 military regions. In contrast, railway engineering units appear only in the Chengtu, Lanchou, Peking, Shenyang and Wuhan Regions. Although motor transport regiments are found in every region, more than half are located in western and southwest China where rail lines are scarce or non-existent.

V. PARAMILITARY FORCES

A. The Militia

31. In addition to regular military forces, China has enrolled vast numbers of its citizens (perhaps as many as 100 million) in the militia. The militia has traditionally been organized into three categories: ordinary, basic, and armed. The ordinary militia, which comprises the vast bulk of this body, receives very little military training. Only the armed units—estimated to have five million members—could be mobilized quickly for combat in time of war.

32. In recent years, a fourth category has appeared. The Chinese have begun to organize the most highly qualified and reliable elements of the armed and basic militia into what they call independent militia regiments. These units, organized by the *hsien* (county) armed departments, may be designed to serve in wartime as armed units capable of operating anywhere within the *hsien* or possibly even elsewhere. It has recently been reported that large numbers of such "regiments", each having 200-300 men, have been created. It has also been reported that many militia "divisions" are

being established throughout the country. We do not know the size of these reported division units, but they are unlikely to contain more than a thousand men.

33. Armament is minimal within the militia. Individual weapons are available only to members of the armed and independent militia. The principal weapons are rifles (retired from PLA inventories) and hand grenades. In a few cases, light machine guns and field artillery pieces, as well as small caliber anti-aircraft weapons and even bazookas, have been noted with the militia. Over the years, ammunition for the militia has been particularly scarce, and in their training most militiamen rarely fire more than two or three practice rounds per year.

34. Militia training comes under the purview of MD commands in conjunction with local defense force units of the PLA. Most training, however, is provided internally by the militia organizations themselves. The militia is partly staffed and largely commanded by former PLA personnel. Under the current terms of military service, about 900,000 soldiers are released from active duty each year. These ex-soldiers form the nucleus for the militia, and their experience enhances the military capabilities of the organization.

35. Although militia units exist throughout China, they are most numerous in the densely populated areas. Capabilities of the militia even within a single category vary, depending upon the frequency and seriousness of military training. At the present time, the militia participates in patrolling borders and coasts, assists in maintaining internal security, and may be capable of repelling small parties of intruders or invaders. Because of its dispersal and minimal armament, the militia by itself would be unable to halt advances by larger formations of well-armed invaders.

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36. The large pool of partially trained civilians and former soldiers that make up the militia would constitute a valuable asset in time of war. Indeed, the militia is the *de facto* reserve for China's armed forces. Militiamen would also be available to provide logistic support to regular PLA units and to harass an invading enemy. In addition, some armed and independent militia units might in wartime be upgraded to local force status and be incorporated into the regular PLA in accordance with Mao Tse-tung's theories of "people's war".

37. For the past several years, Peking has stressed the importance of improving organization, training and ideology within the militia. The limited available intelligence suggests that the improvements that have occurred have been uneven, and that the militia still apparently has a long way to go—particularly in training—before it approaches the goal of being a fully-trained and well-equipped citizen army that can respond efficiently to the requirements of national defense.

B. The Production and Construction Corps

38. The Production and Construction Corps is another paramilitary adjunct to the PLA. Units of the Production and Construction Corps are now found in every military region, and the total number of Corps members may be upwards of four million, of whom not more than a third have had previous military training. The majority of Production and Construction Corps membership now probably consists of urban youths who have been "sent down" to the countryside.

39. Leadership positions within the Corps are mainly filled by active duty and retired PLA officers, which permits the Corps to provide its own military training. Except for the armed units (variously designated as on-

duty, guard, armed, or militia companies), weapons are scarce within the Corps, and military drills frequently involve the use of dummy weapons.

40. The Production and Construction Corps has certain things in common with the militia: its personnel spend much of their time in productive work rather than in military training; its units have different categories of readiness; and its use in wartime would to some degree parallel that of the militia. But the key difference is that the Production and Construction Corps comes under the direct administration of the PLA. This means that the degree of regimentation and control over the lives of Corps members is greater than that of militiamen who are administered by civil authorities. Because of the location of Production and Construction Corps installations and because of personnel selection procedures, membership in the Production and Construction Corps consists mainly of individuals who are separated from their families and dependents. This fact means that Production and Construction Corps members could be mobilized more readily and quickly to perform full time defense duties in event of a national emergency.

41. Although the Production and Construction Corps is now a nation-wide organization, the largest concentrations of units and personnel occur in the border regions where the state is using the Corps to develop agriculture and industry and to strengthen China's defense posture by implanting large numbers of loyal Chinese along the borders. The following Table shows the estimated ranges of Production and Construction Corps manpower in each of the military regions of China:

42. Because of the size and nature of the Production and Construction Corps, it could probably muster quickly a force of one million partially trained personnel if required for national defense.

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<u>MILITARY REGION</u> <u>(YEAR OF FIRST REFERENCE)</u>	<u>TOTAL PERSONNEL</u>	
	<u>MINIMUM ESTIMATE</u>	<u>MAXIMUM ESTIMATE *</u> <u>(BASED ON PROJECTIONS)</u>
Sinkiang (1954)	1,000,000	1,500,000
Lanchou (1965)	150,000	320,000
Chengtu (1965, 1968)	60,000	100,000
Peking (1968, 1969)	125,000	250,000
Shenyang (1968)	180,000	330,000
Fuchou (1968)	100,000	180,000
Canton (1969)	500,000	850,000
Nanking (1970)	100,000	140,000
Kunming (1970)	180,000	370,000
Chinan (1970)	30,000	60,000
Wuhan (1971)	40,000	90,000
TOTALS	2,465,000	4,190,000

*The maximum personnel estimates are based on evidence of the existence of additional Production and Construction Corps divisions and regiments over and above confirmed units.

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ANNEX B

CHINESE COMMUNIST AIR FORCE

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CHINESE COMMUNIST AIR FORCE

I. ORGANIZATION

1. The Chinese Communist Air Force (CCAF) consists of some 43 divisions, two independent fighter regiments, one independent medium bomber regiment, one independent reconnaissance regiment, several independent transport regiments, and a number of small, unidentified combat and miscellaneous units throughout China.

2. The CCAF is headed by a commander in chief in Peking, who exerts operational and administrative control over all air units and installations. Command and control is exerted through 10 air districts and a limited number of air elements assigned directly to air force headquarters in Peking. Air districts, in turn, usually are divided into one or more sub-districts depending upon the size of forces they control.

3. A command center for air defense, located in Peking, coordinates and controls all air defense operations through staffs in the air district headquarters. These staffs direct operations by the air control and warning network, anti-aircraft artillery (AAA), surface-to-air missiles (SAMs), and interceptor aircraft supplied by both the air and naval air force.

4. Air force bomber divisions are subordinate to air district headquarters or to CCAF headquarters. Independent bomber and reconnaissance regiments are controlled directly by air force headquarters in Peking. There is no known tactical air command within the CCAF. Control of aircraft in ground attack operations

probably is accomplished by the air district or subdistrict headquarters in coordination with the military region or military district headquarters.

II. STRENGTH

5. The CCAF, with an estimated 365,000 personnel, has about 3,150 jet fighters, 250 jet light bombers, and some 43 Tu-16 jet medium bombers. And about 84 antiquated Tu-2 and Tu-4 piston engine bombers are still in service with the CCAF. As in the past, most aircraft are deployed in the six air districts adjacent to the eastern periphery from the USSR to North Vietnam. Far western China remains only thinly defended by interceptor aircraft.

6. The Chinese are modernizing their air force with domestic production of Tu-16 jet medium bombers, Il-28 jet light bombers, Mig-19s (including the modified version), F-9s, and probably Mig-21 fighters. Because the Chinese are reluctant to retire older models from service, the already large air force continues to grow.

7. The CCAF has about 400 transports, most of which are old, light piston aircraft supplied by the Soviets or captured from the Chinese Nationalists. The transport force, which is substantially understrength for a large country with such large military forces, is being augmented slowly by purchases of foreign transport aircraft and by domestic production of the MI-4 Hound medium helicopter.

8. The bulk of the air force is assigned to air defense. Thirty-six of the 43 divisions are

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equipped with fighters, 5 with light bombers, and only 2 with transports. Thirty-one of the CCAF divisions are believed to have a primary mission of air defense, and 5 apparently are assigned a primary function of ground attack. The typical division in the air force has 2 or 3 regiments, each composed of 20-30 combat aircraft.

9. In addition to its aircraft, the CCAF has 21 AAA divisions and about 50 SAM battalions. Each SAM battalion occupies one SAM site. SAM and AAA units provide an important increment to China's air defenses, protecting administrative and industrial centers, advanced weapon facilities, airfields, and other military facilities from air attack.

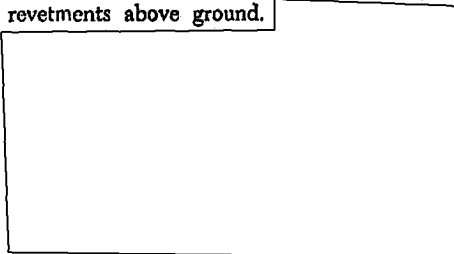
III. AIRFIELDS AND UNDERGROUND FACILITIES

10. The Chinese have built or improved more than 100 airfields during the past 7 years. When all construction projects identified so far are completed, China will have nearly 200 airfields suitable for operations by combat aircraft. As many as half of these airfields currently are occupied only occasionally by combat aircraft, or are unoccupied. Some 50 of the airfields appear suitable for sustained Tu-16 jet medium bomber operations, and about 100 are suitable for Il-28 jet light bombers. Although the CCAF is large and growing, airfield capacity is more than sufficient to accommodate present and projected aircraft inventories.

11. The large and expensive effort to afford physical protection against air attack for the military establishment includes underground storage facilities for aircraft. Underground parking areas have been completed or are under construction at about 75 Chinese airfields. When all of these projects are completed, enough space will be available to ac-

commodate most of China's fighter aircraft. Except for several underground facilities where light bombers might be housed and one where medium bombers might be accommodated, dimensions of the entrances to these shelters show that aircraft larger than fighters could not be protected.

12. The Chinese probably will not use the underground facilities to their theoretical capacity, at least under normal peacetime conditions. To do so they would have to consolidate their fighters at fewer bases. They would also sacrifice a large degree of combat readiness by increasing the amount of time which would elapse before their fighters could react to an air attack. Although the Chinese have provided more than one entrance to nearly all underground parking facilities and are building alternate runways adjacent to many, it would take much longer to scramble fighters from the underground facilities than from revetments above ground.



IV. AIR DEFENSE

13. The Chinese have achieved significant, though uneven, improvements in nearly all aspects of their air defense system. The air control and warning system has been augmented by the initial deployment of longer range early warning (EW) radars and by improvements in low-altitude coverage. New and more efficient methods of communications are gradually being developed and introduced into the operational forces. The size and quality of the interceptor force is growing, and

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deployment of SAMs is expanding faster than in previous years.

14. These general improvements have not been sufficient, however, to overcome the deficiencies of Chinese air defenses when measured against those of the US and USSR. The number of all-weather interceptors has increased little, if any, during the past two years, and air defense communications still are not rapid and efficient enough to cope with large-scale air attacks. Although the inventory of fighters with some supersonic capability is large and expanding, most of the interceptor force still is fully capable only of intercepting subsonic targets flying below 50,000 feet. Only the small element of Mig-21s is fully capable of high-altitude intercepts of supersonic targets. This deficiency will be remedied when and if Mig-21s are produced and when and if the Hsian-A, a Chinese-designed delta-wing interceptor, enters into service in a few years.*

Air Surveillance

15. The Chinese air surveillance network has radars deployed at some 700 sites throughout the country. This network provides essentially complete EW detection and continuous tracking of high- and medium-altitude targets over the entire country and out to about 200 nautical miles (nm) from the border. Low-altitude coverage is limited to a belt about 100 nm deep along the coast, and farther inland it is limited to the vicinity of important cities, industrial and military centers, and to some areas along the Sino-Soviet border.

16. Air surveillance and ground-controlled intercept (GCI) capabilities were improved by the introduction of models of Chinese radars, five of them versions of Soviet air

* The performance characteristics of Chinese combat aircraft are discussed in Annex D "China's Research and Development and Production Programs."

defense radars, which entered service between 1965 and 1970. These radars improved the capability of the air defense system to resist jamming and to track high performance targets. One of these radars, designated Odd Lot, is a mobile system which apparently can be used either for GCI or as an acquisition radar for SAMs. Another radar, designated Flat Face, has improved Chinese low-altitude tracking capabilities.

17. Since mid-1970 the Chinese have been deploying a series of several new types of radars in northern, eastern, and southern peripheral areas. These radars, deployed in varying numbers and combination in at least 14 locations, apparently are designed to improve long-range tracking. [redacted]

18. China may have an airborne EW system in the developmental stage which will supplement the ground-based EW network.

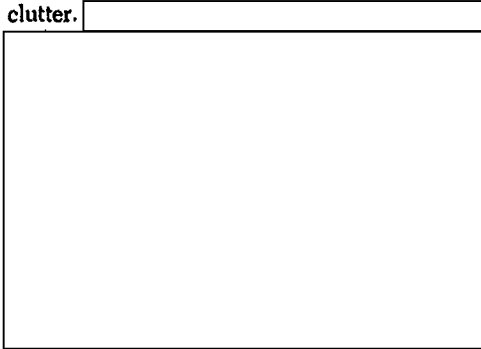
[redacted] Even an unsophisticated airborne EW radar, however, would be useful in extending the range of surveillance seaward thereby increasing the warning time of the air defense system. Another possible application for the radar might be as a tracking aid in an ocean impact area for long-range intercontinental ballistic missile testing.

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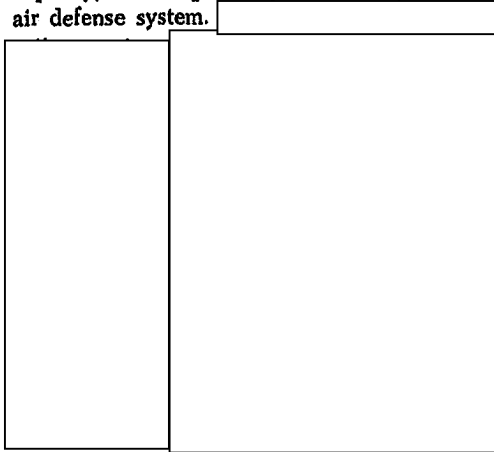
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19. The Chinese have the Scan Odd airborne intercept (AI) radar used on Mig-17 and Mig-19 interceptors. The Chinese have made some modifications to that radar, apparently to improve their ability to acquire and track targets against a background of clutter.



20. Although the Chinese have developed and apparently are evaluating several mechanized communications systems with increased capacity, none is presently used widely in the air defense system.



Weapon Systems

21. The Chinese rely on interceptor aircraft as their primary weapon for air defense. The approximately 37 divisions and small number of other units which make up the

interceptor force in the CCAF and the Chinese Communist Naval Air Force (CCNAF) are equipped with some 1,850 Mig-15/17s, 1,400 Mig-19s, and about 28 Mig-21 jet fighters. The interceptors are concentrated in the 6 eastern air districts extending from Manchuria to North Vietnam. The estimated numbers of interceptor aircraft, including those in the naval air force, within the air districts are given in the Table below:

	<u>MIG-15/17</u>	<u>MIG-19</u>	<u>MIG-21</u>
Shenyang	460	300	—
Peking	305	160	6
Chinan	245	200	—
Fuchou	50	150	—
Nanking	415	180	19
Canton	250	200	—
Kunming	50	70	—
Wuhan	125	55	—
Chengtu	50	4	—
Lanchou	100	80	3
TOTAL	2,050^a	1,399	28^b

^a Includes about 200 Mig-15/17s with a primary role of ground attack.

^b Does not include 20 Mig-21s observed at the production facility in September 1971. These and possibly more may have been delivered undetected to operational units.

22. All interceptor divisions now have at least one regiment of Mig-19s, and a few have two regiments of these aircraft. Mig-21s still are deployed in small numbers with only a few units, so that the capability to intercept supersonic targets flying at high altitudes remains small. The extensive deployment of Mig-19s in northern, eastern, and southern China has improved China's ability to intercept most targets, however.

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Many Chinese pilots probably have attained fair to good combat proficiency, but the average Chinese interceptor pilot probably would profit from more frequent training in live intercepts.

24. China's SAM system is designated CSA-1 by US Intelligence. The CSA-1, is basically a copy of the earliest model of the Soviet SA-2 system. The Chinese have modified the missile guidance radar, probably to improve its performance against electronic countermeasures; they may also have made some modification of the missile itself.

25. The rate of SAM deployment has increased during the past two years. Only an average of some 4 battalions per year were deployed during the late 1980s. We believe the rate has now reached about 20 a year, and we have identified a total of some 50 deployed SAM battalions in China. The accelerated deployment suggests that the Chinese have opted for extensive deployment of the CSA-1 rather than limit it in anticipation of a follow-on system.

26. At one SAM site in the Peking area the Chinese have built some type of protective shelters for two launch positions and the central guidance area, possibly in an effort to provide some degree of protection against conventional air attack. They are expected to employ similar measures at other sites.

27. The Peking and Pohai Gulf areas are the most heavily defended, with a total of 12 SAM battalions around Peking and 5 near the entrance of the Pohai Gulf. Elsewhere, 2 or 3 SAM units each defend Shenyang, Shanghai, Nanking, Wuhan, Canton, Kunming, Chengtu, Lanchou, and Koko Nor. A

few other SAM units are scattered in key locations in the interior and near the periphery.

28. Although the rate of deployment has increased, China's SAM defenses remain thin for so large a country. Coverage is extensive only in the Peking-Pohai Gulf areas, and even there it is not yet complete. We believe that the Chinese will continue or possibly increase the present rate of deployment over the next few years. At the present rate of about 20 per year, some 150 CSA-1 battalions would be deployed by mid-1977. Emphasis on providing permanent protection for important cities, industrial areas, and military facilities is expected to continue.

V. CONVENTIONAL BOMBING AND GROUND ATTACK

29. Although offensive capabilities are growing, the present composition and deployment of the conventional bomber forces indicates that they are oriented toward defense of the mainland. The bomber forces consist of about 540 aircraft, including some 43 Tu-16 jet and 12 Tu-4 propeller-driven medium bombers, 390-400 Il-28 jet light bombers, and about 90 aged Tu-2 propeller-driven light bombers.

Medium Bombers

30. The medium bomber force almost certainly has a primary mission of strategic attack, but it also is suitable for conventional bombing missions. Because of their value as a deterrent, however, the Chinese probably will limit their Tu-16s to a nuclear attack role until more of these aircraft are available. As the only Chinese aircraft capable of striking at distances over 600 nm, the medium bombers probably would be targeted against strategic areas in the Far East and in the central USSR.

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Light Bombers

31. The primary mission of light bombers is tactical offense and defense within China and, secondarily, in nearby peripheral areas. China's Il-28s over the years have been deployed in a pattern suited more for defense of the mainland than for peripheral offensive operations. The range capability of these aircraft with normal bomb loads of 2,200 pounds largely limits their activity to the mainland and immediately surrounding areas.

32. There are about 100 airfields in China from which Il-28s could operate. By concentrating light bombers at airfields closest to their borders, the Chinese could strengthen their capability to operate in such potential target areas as Mongolia, South Korea, Taiwan, Southeast Asia, and small parts of the Soviet Union and extend their operations from western China into northern India.

33. [REDACTED] have provided indications of Chinese tactics and strategy for light bomber units. The usual attack profile for the Il-28s is a high-low-high mission. They fly toward the target at an altitude of 20,000 to 25,000 feet, descend to a lower altitude to make their attack, and then climb back up to 20,000 to 25,000 feet. The lower altitude near the target reduces the likelihood that the bombers will be detected but reduces the operating radius of the aircraft. Results of training exercises reflected [REDACTED]

[REDACTED] indicate that Chinese crews are reasonably proficient—both visually and with radar—considering they have no equipment for automatic guidance of their weapons.

34. We do not know whether the Chinese intend to use Il-28s to deliver nuclear weapons. A fission weapon or even a thermonuclear weapon may be available which could be car-

ried by the Il-28. Training of Il-28 crews has consistently emphasized conventional tactics in exercises involving ground support or attack against surface ships and submarines.

Ground Attack

35. Limited resources and a decision to accord priority to air defense have combined to impede the growth of a strong Chinese ground attack fighter force. The Chinese, however, have taken several steps since 1969 to strengthen their capability for ground attack. The measures include the introduction of the F-9 fighter-bomber, the formation of a fifth ground attack division, and at least a temporary increase in ground attack training among some interceptor units. The ground attack force now includes 445-455 aircraft including about 200 Mig-15/17s, 185 F-9s, and 60-70 World War II vintage Il-10 propeller-driven fighters.

36. The F-9 is becoming China's primary conventional ground attack fighter-bomber, and has a potential for delivering tactical nuclear weapons. This aircraft resembles the Mig-19 but has a greater range-payload capability, and its deployment is making the greatest improvement in the ground attack force since the conversion to jet fighters in the mid-1950s. The estimated performance capabilities of the F-9 in a ground support role are given in Table D-IX on page 112.

37. The pattern of observed training indicates that Mig-15/17s of all ground attack divisions concentrate on a narrow range of bombing and strafing techniques. Limited information [REDACTED] indicates that these units are skilled in basic ground attack maneuvers and gunnery. Despite these basic skills, the force of older fighters has serious deficiencies. The greatest may be shortcomings in tactical flexibility re-

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sulting from an apparent failure to conduct extensive joint training with ground force units. Another deficiency is the lack of navigational aids and electronic guidance systems on China's older fighters. Deployment of F-9s is adding to the firepower, versatility, and range of the force.

VI. THE NAVAL AIR FORCE

38. The CCNAF is a land-based organization. Its primary mission is the air defense of ports and other important naval installations along China's 3,000 mile coast. Secondary missions include antishipping operations, maritime reconnaissance and, most recently, anti-submarine warfare (ASW). The air force is primarily responsible for the air defense of some naval installations such as those near Canton, however, and the CCNAF would generally need the aid of the CCAF in the event of a large-scale attack.

39. For air defense, the CCNAF has some 450 fighters—about 250 Mig-15/17s and 200 Mig-19s. Because of the necessity for close cooperation, naval fighter units come under the operational control of the CCAF during coastal air defense operations but revert to naval control at other times. CCNAF air defense capabilities are adequate to counter an attack by any of the Asian nations except the USSR. They would not be capable of defending against a sustained attack by a modern, well-equipped air force. The ability of the CCNAF to provide protection of naval forces at sea would be limited to about 200 nm. None of the more advanced Mig-21 or F-9 fighters has been assigned to the CCNAF.

40. The light bomber force, consisting of 140-150 Il-28 Beagles, is capable of carrying out torpedo bombing and strafing attacks against lightly-defended, slow-moving targets at sea. For several years, CCNAF bombers

appeared reluctant to venture out over water, but overwater operations increased during 1971. [redacted]

[redacted]

41. The introduction of an antiship air-to-surface missile (ASM) into the CCNAF would greatly enhance its antishipping capabilities. There is no evidence of an active program in China which we can clearly identify as ASM-related, although the Soviets helped to build what may be an ASM support facility at the Shuang-ch'eng-tzu airfield in the late 1950s. Recent activity and the presence there of possible ASM-related crates suggests that the Chinese are still interested in developing an ASM for their air force. If they should do so, employment as an antiship weapon would be a logical step. If such a weapon were developed, Tu-16s could be transferred to the CCNAF to serve as the carrier.

42. Maritime patrol and overwater reconnaissance flights are carried out by Il-28 light bombers and by BE-6 Madge and AN-2V Colt seaplanes. [redacted]

[redacted]

In March 1971, Madge aircraft conducted possible ASW-related operations in the Yellow Sea, operating in excess of 60 nm from land and in conjunction with surface ships. These activities apparently are part of the initial Chinese attempt to develop an airborne ASW capability.

43. Although the advances made by the CCNAF are not startling, they do point to a steady and continued increase in China's ability to defend important naval areas from air attack and to develop a modest air defense capability in off-shore coastal waters.

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Also evident are a limited, but real, antiship capability and the beginnings of an airborne ASW force.

Military Airlift

44. China's small military airlift force consists of some 27 medium transports, 215 light transports and 130 helicopters, and is organized into 2 transport divisions and at least 4 independent regiments. The Chinese also have about 200 transports and 100 helicopters assigned to general support and dispersed in small elements throughout the country.

45. Most of the transport of air cargo and airborne support of China's military force is provided by one air force division of about 95 aircraft—10 AN-12 Cub medium transports and some 85 light transports—deployed in the Wuhan Military Region. The Chinese use the AN-12s for priority cargo flights within and outside China. The light transports are used for routine air transport and in support of airborne operations.

46. Airlift support to the People's Liberation Army headquarters and CCAF headquarters is provided by the 34th Division, which is based in the Peking area and is equipped with 15 medium transports, 41 light transports, and about 35 helicopters. Most of its aircraft are designed to carry passengers rather than bulk cargo.

47. The continued emphasis on production of combat aircraft during the next few years

probably will prevent a great improvement in the airlift capability from domestic production. Only one model of small fixed-wing transport and possibly a modified MI-4 helicopter appear destined for series production in the near future. It is possible, however, that the Chinese will produce copies of a Soviet turboprop transport such as the AN-24 or AN-12.

48. In the meantime, the Chinese will probably add to their transport capacity through purchases abroad. They have recently purchased several AN-24 light transports from the USSR and have taken delivery of four Il-62 long-range transports. Two more of these are on order, and negotiations are proceeding for several more. The Chinese have also shown interest in buying more British Trident jet transports and most recently have been considering various Boeing transports, including even the 747. Some of these aircraft would probably be used in civil aviation.

49. Helicopter lift capability is being augmented by the acquisition of Soviet MI-6 Hook heavy helicopters. The MI-6 is the largest operational helicopter in the world, carries about 60 troops or a normal load of about 9½ short tons, and has a radius of 150 nm. The Chinese have purchased 10 turbine-powered MI-8 Hip medium helicopters from the Soviets and are negotiating for the French Super Frelon heavy helicopter.

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ANNEX C

CHINESE COMMUNIST NAVY

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CHINESE COMMUNIST NAVY

I. ORGANIZATION

1. The Chinese Communist Navy (CCN), consists of some 275,000 men (excluding the naval air force), and is headed by a commander in chief with headquarters in Peking. Directly subordinate to him are the three fleets, each with a specific geographic area of responsibility. The North Sea Fleet is responsible for the coastline from the North Korean border to about 34 degrees north latitude, roughly the shoreline washed by the Yellow Sea. The East Sea Fleet patrols from 34 degrees north latitude to the Fukien-Kwangtung border at the southern end of the Taiwan Strait. The remainder of the coastline, to the North Vietnamese border, is the responsibility of the South Sea Fleet. Each fleet is essentially self-sufficient and, although interfleet exercises are rarely observed, the forces in each fleet carry out similar training, thus making it possible for the CCN to re-deploy and concentrate its forces in the event of a conflict.

2. Operating forces in each fleet consist of a submarine force, a main surface force, a motor torpedo boat force, a mine-sweeping force, an amphibious force, a naval coastal defense force and an auxiliary force. All ships are normally under the operational control of the fleet commander. Naval air force units are also based in each fleet area, with control exercised by the commander in chief through the naval district commander.

II. MAJOR SURFACE FORCE

3. There are five classes of major surface combatants operational in the CCN: The Gordyy- and Luta-class destroyers, equipped with antiship missiles, and the Riga-, Kiangnan-, and Kiangtung-class destroyer escorts. Recent photography suggests that two Rigas have been converted to carry antiship missiles, and the Kiangtung may be the CCN's first surface-to-air missile (SAM) ship. In all, there are 16 major surface units presently operational, nearly evenly dispersed among the three fleets. Missile-equipped ships are primarily concentrated in the North Sea Fleet, although it is anticipated that all four of the East Sea Fleet's Rigas will receive a cruise missile conversion, and missile-equipped Lutas are under construction in all three fleet areas.

4. The principal strength of the Chinese major surface force lies in the antiship offensive power of its missile ships. The 25 nautical mile (nm) CSS-N-1 missile, an adaptation of the Soviet Styx, can effectively out-range the naval weapons of any other Asian naval force.

5. The newest Chinese major combatants—the Luta and Kiangtung—both have an estimated endurance at economical speed of some 4,600 nm. This represents a marked increase over the 2,600-mile Gordyy and 3,000-mile Kiangnan. Despite this increased steaming range, there is as yet no sign that the Chinese intend to undertake distant deployments. The potential, however, is being developed.

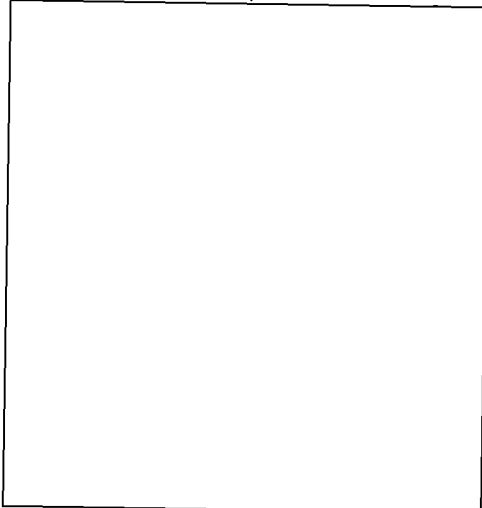
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6. Major weaknesses of the major surface force include inadequate air defense, poor antisubmarine detection equipment and only marginal antisubmarine warfare (ASW) weapons. The CCN appears to be making an effort to upgrade its anti-aircraft capability with the deployment of what may be its first SAM unit.



7. Similarly, ASW remains a major obstacle. The Chinese have generally relied on obsolescent sonars of Soviet design installed aboard their warships during the 1955 to 1960 period. The best sonar range reported to date by a Chinese surface unit is about two nm. There is no direct evidence on the sonars being installed on new construction destroyers, but the Chinese are installing what appears to be a modification of a Soviet-designed 15 kilohertz active sonar on some of their submarines. It would be a logical step to install a similar system on surface warships, and there are indications that the Chinese may be doing this. Ranges of such a sonar probably would remain limited to several miles. The capabilities of Chinese ASW weapons are consistent with the performance of their sensors. The CCN stockpile includes depth charges, ahead-

thrown weapons with maximum ranges of some 2,000 yards on the newest combatants, and obsolescent Soviet-designed ASW torpedoes.

8. The Chinese have also been heavily dependent on Soviet design concepts for conventional naval guns. During the past year, however, two medium caliber guns, apparently of indigenous Chinese design, have appeared. The first, a 130 millimeter (mm) gun on the Luta destroyer, resembles a gun on the Soviet Kotlin-class, while the second, a 100 mm gun on the Kiangtung appears to be wholly of native design. Neither provides any significant increase in capability; in fact, the latter is of a somewhat dated design, apparently requiring across-the-deck ammunition supply and manual loading.

9. In sum, the capabilities of the CCN's major surface forces fall far short of those possessed by the navies of the major maritime powers. Against even moderately dense air or antiship missile attack, their defenses would be ineffectual. ASW capabilities are inadequate to cope with modern submarines. Nevertheless, the major surface forces are a valuable adjunct to coastal patrol units and, in fact, they often operate in a coastal defense role. Further, and perhaps more important, the existence of relatively modern surface combatants is an important prestige factor for a country with aspirations to great power status.

III. SUBMARINE FORCE

10. With more than 50 units, the Chinese submarine force is the world's third largest. The bulk of the force is composed of W- and R-class—both medium-range attack submarines designed by the Soviets in the 1950s. W-class construction in China ceased in the early 1960s with 21 units having been completed. Since then some 27 R-class have been built

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and construction is continuing. A single G-class ballistic missile submarine was completed in 1965, probably from components provided by the Soviets. In 1968-1969, this unit underwent a major overhaul during which some or all of the original missile-launching equipment was removed. Following the yard period, it operated frequently, probably in routine training activity. During the past year, the G-class was sighted at Hsiao-ping-tao Naval Base with two new missile tubes installed, indicating a Chinese intention to use this submarine as a test platform for a submarine-launched ballistic missile.

11. In addition to the R-class program and the G-class conversion, there are two other submarine programs in progress at Chinese shipyards. Satellite photography in mid-1971 revealed a submarine under construction at the Wu-ch'ang Shipyard in Wuhan which at first was believed to be a modified R-class.



At least two shipyards are building the Ming, and two additional shipyards, both recently completed and more modern, could also join the program. Construction rate for the Ming could reach as many as 10 units per year by 1975. Currently only two units have been identified. Both were launched in 1971 and may now be operational.

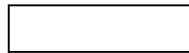
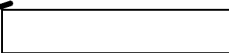
12. Most significant for the future of the Chinese submarine force is the Han-class. The Han is an indigenous Chinese design with a streamlined hull and sail planes. Only one unit has been launched, but others may be under construction at Hu-lu-tao, China's most modern shipyard.



The streamlined hull design, sail planes and probable single screw of the Han-class are consistent with nuclear-power submarine design and suggest that the Han-class is nuclear powered. This also accords with Chinese statements made in the early 1960s that a nuclear submarine would be built. There is evidence that a Chinese nuclear propulsion research and development (R&D) effort has been under way since the late 1950s, although only fragmentary information is available on the program. China is known to have imported much of the necessary material and technology to build a marine reactor plant.

13. But the evidence is not unequivocal. The Han-class was launched at Hu-lu-tao Shipyard in late 1970 or early 1971. After a fitting out period of about eight months, it conducted sea trials late in the summer of 1971. By the end of October, it was again seen at Hu-lu-tao and there were no signs of any problems resulting from the trials. By late January 1972 it had been transferred to the Hsiao-ping-tao submarine base, most likely to conduct submerged trials before joining the fleet. This short fitting out time and apparent lack of initial problems would be unusual for a first nuclear submarine.

14. Whether or not the Han-class is nuclear-powered, the appearance of a submarine with an advanced hull design is further evidence of Chinese intent to expand their submarine warfare capabilities. At a minimum, the Han-class is probably a prototype for a class of nuclear-powered submarines. There are indications that a second unit of the Han-class, or yet another new class of submarine will be launched at Hu-lu-tao in 1972. Production



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there could quickly reach several units per year.

15. Despite the size of its submarine force, the CCN's ability to conduct antishipping torpedo-attack operations is not rated highly.

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[redacted] In consequence, the Chinese submarine force has probably attained only the most basic standards of proficiency in antishipping operations and currently poses little real threat to naval forces operating in the open ocean.

16. The Chinese submarine force has, for all practical purposes, no ASW capability against modern, quiet submarines. Although improved sonars are probably being installed on new and converted units, these sensors at best probably reflect only a slight Chinese improvement on Western and Soviet technology of the 1950s. Consequently, Chinese submarines are liable to be detected at greater ranges than they could detect their adversaries. A successful ASW action by present units, therefore, could almost certainly result only from a chance encounter, and then only with considerable luck.

17. This picture may begin to change somewhat as the Han-class becomes operational. The technological advance implied by the Han-class suggests that the Chinese could have developed a significantly improved sonar for use in their new submarines.

IV. PATROL SHIPS AND CRAFT

18. With approximately 760 units, some 55 of which are missile-equipped, the CCN's minor surface force is probably its most proficient component. Units exercise frequently and often in company. Occasional Nationalist incursions help to keep the force ready for action. The capabilities for the minor surface forces are being upgraded by the addition of new units, many of which are missile-configured. There are presently two classes of missile patrol boats under construction in Chinese shipyards. Construction is continuing at the rate of 10 to 15 per year on Soviet-designed Osa-class large guided-missile patrol boats equipped with four Styx-type antiship missiles. In addition, a Chinese-designed missile boat—the Hoku—is being built. This boat is similar to the Soviet Komar, and carries two missiles. The Chinese have also built one unit of another new class—the Hoha—an enlarged version of the Osa, with four Styx-type launchers. Others may follow this prototype. Overall missile boat construction could be as high as 30 units per year.

19. Twelve Hainan-class large submarine chasers have been constructed to date and the program appears to be continuing at a pace of about two each year. At 190 feet and over 500 tons displacement, the Hainan is Communist China's largest native-designed coastal patrol craft and in this category is exceeded in size only by some of the 15 aging patrol escorts (PFs). (Most of the PFs are captured foreign units of World War II vintage.) The

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Hainan supplements the ASW capabilities of the major surface force, but its sensors and weapons, like those of the larger ships, have extremely limited range.

20. The Huchwan hydrofoil motor torpedo boat provides the Chinese with a high speed torpedo boat capability. Approximately 150 of these units were constructed (including 30 for export) before construction stopped in 1971. The Huchwan is not a conventional hydrofoil. It has foils forward to provide stability at high speed, but the stern planes on the surface. It carries 2 antiship torpedoes and 2 twin machine guns and has a top speed of some 50 knots. Several Shantung-class hydrofoil motor gunboats were also constructed in an apparently unsuccessful attempt to produce a more heavily armed hydrofoil craft. There are indications of continued Chinese efforts in unconventional hull forms for combatants.

21. On the whole, the capability of coastal patrol forces to carry out their defensive mission appears excellent. They are, however, far less effective as an adjunct to the major surface forces for ASW. The Chinese seem to be making little effort to upgrade the ASW equipment on these ships.

V. AMPHIBIOUS FORCE

22. The CCN has some 35 amphibious ships. These ships have a lift capability of about two infantry divisions (32,000 men) for short haul operations. This capability could be supplemented by some 475 small landing craft and thousands of miscellaneous boats and junks. In unopposed port-to-port operations, the Chinese merchant fleet could transport an additional 60,000 to 70,000 troops. During peacetime the amphibious force is used in routine river and coastal transport duties. Exercises involving a few ships occur from time to time, but no large-scale amphibious exer-

cises are carried out. While the Chinese are producing some landing craft suitable for amphibious lift, this construction is not sufficient to alter significantly the character or capabilities of the force.

23. With adequate air support, the Chinese Communists could probably successfully assault the offshore islands, providing they were prepared to accept heavy casualties. A landing on Taiwan, however, would be a much more difficult and complex operation. The Nationalists should have ample warning as the Communists assembled their invasion fleet, and even after the invasion fleet got underway it would take about 12 hours to transit the Taiwan Strait. The Communists would, of course, have to maintain air and naval control of the Taiwan Strait, and they would have to depend heavily on air power for fire support of the landing force because the CCN's naval gunfire support capability is inadequate to support a large-scale landing against a defended coast. The CCN has practically no capability to carry out distant, large-scale amphibious operations.

VI. MINE WARFARE

24. The waters off China are suitable for mining for distances varying from 30 miles off Hainan Island to some 200 miles off the northern coast. The Chinese are well aware of the efficacy of mine warfare; almost all naval vessels are capable of laying mines, and the CCN mine stockpile is probably very large. The People's Republic of China received about a dozen varieties of moored contact and bottom influence mines from the USSR before 1960. They are probably producing copies of several of these mines. The only known indigenously designed mine is a drifting mine which maintains a depth of 10 to 30 feet.

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25. By augmenting its naval forces with some of the thousands of available junks, the CCN could implant formidable minefields. In conjunction with other coastal defense forces, these fields could significantly hamper landing operations. At a minimum, an invader could suffer a considerable delay while sweeping channels for assault craft.

26. The CCN minesweeping force is probably too small to effectively counter a determined mining offensive. It has only some 30 major units, including 25 of the ocean-going Soviet T-43 class. Most of the T-43s are currently acting as patrol craft, but retain their minesweeping equipment. Although the Chinese have a need for additional minesweepers, no ships of this type are currently being built, and the program may have been terminated. Only one minesweeper of indigenous design has been observed—the single Woosung-class MSM, first seen in 1963. Some 50-60 Lienyun-class trawlers have been built which seem suitable for easy conversion to minesweepers. No large wooden-hulled mine-countermeasure units have been built. T-43 minesweepers are capable of sweeping acoustic and magnetic mines, and all minesweepers are fitted to sweep moored mines.

VII. COASTAL DEFENSE

27. The Chinese have a system of slightly over 100 communication and observation posts (COPs) for seaward surveillance. The COP organization, as an integral part of the coastal defense system, is responsible for visual and radar tracking of intruders. The COPs are primarily concerned with surface targets, but some have an air search capability as well. The posts are strategically located on offshore islands or prominent land formations and, [redacted] they provide a solid early warning perimeter. The

COPs report to filter centers which are a part of the shore-based arm of the Naval Coastal Defense Force, subordinate to the fleet commander. The fleet commander retains control of patrol vessels which investigate targets reported by the COPs.

28. Supplementing the COPs and patrol vessels are coast artillery batteries and four guided-missile sites, one of which is unoccupied. Gun batteries are situated at most ports and on many offshore islands.

29. The Chinese received a number of Samlet (SSC-2B) coastal defense cruise missiles from the Soviets prior to 1960. Some of these 45-mile range missiles are deployed, the remainder having been used up in R&D test programs. The Chinese apparently are not producing the Samlet. They have, however, produced two cruise missiles, one of which resembles the Soviet Styx while the other appears to be some two feet longer. If this added length is used for fuel, it would increase the nominal 25-mile range of the Styx. There is evidence that this longer missile is being deployed to coastal defense sites.

VIII. AUXILIARIES

30. The CCN's auxiliary force, although it has been expanded somewhat in recent years, is still inadequate to support large-scale or open-ocean combat operations in distant waters. There are no ships now under construction suitable for sustaining a naval force at sea in extended operations. None of the CCN's oilers is configured for underway replenishment, and there are no specially designed ammunition or stores replenishment ships in the order of battle. The auxiliary force does have one small submarine tender, the 4,000-ton Tachih, first observed in 1964. The Tachih is probably capable of providing intermediate-level repairs and of rearming

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submarines, but it is more suitable for operating in small ports and anchorages than in open-ocean support. In addition, there are two submarine rescue ships which could provide some support to submarines on patrol.

The most significant new additions to the auxiliary force are survey ships. At least three of these auxiliaries, including the new Yenlun-class catamaran, are for acoustic survey work in coastal waters.

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ANNEX D

MILITARY RESEARCH AND DEVELOPMENT AND PRODUCTION
PROGRAMS

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MILITARY RESEARCH AND DEVELOPMENT AND PRODUCTION PROGRAMS

I. RESEARCH AND DEVELOPMENT

1. During the past few years, various reports have indicated that important changes have occurred in the organizational framework for science and technology in China. These reports, [redacted] suggest that the State Scientific and Technological Commission was abolished in 1969 and that some scientific and technological (S&T) bureaus were resubordinated to the Ministry of National Defense (MND). [redacted]

[redacted]

2. As with any state-sponsored activity in China, ultimate authority over the organs for military science and technology rests with the Politburo of the Central Committee. Party policy for China's military R&D is channeled to the MND through the Military Affairs Commission of the Party. The MND is believed to direct military R&D mainly through the National Defense Scientific and Technological Commission (NDSTC), institutes under the various services of the People's Liberation Army and the many research academies of the Ministries of Machine Industry. The MND also directly operates some R&D facilities such as the Academy of Military Medical Sciences. In addition, some universities and colleges, such as the Peking Aeronautical Engineering College, may still be controlled directly by the NDSTC.

3. An alternate line of authority over China's military S&T exists through government channels running from the State Council to the MND. Although this channel has appeared inactive in the past, it may begin to assume greater importance because of the fall of Lin Piao and his associates and the concomitant rise of Chou En-lai who heads the State Council.

4. China aspires for S&T self-sufficiency and has made creditable progress toward this goal. The Chinese themselves, however, recognize that they still have a long way to go in this field, and they clearly intend to make full use of available foreign technology to compensate for gaps in their own production capabilities and to speed up the process of acquiring modern weapon systems.

5. In carrying out national programs of R&D, the Chinese have assigned the highest priority to military development work. The most intense efforts have been on nuclear weapons and strategic missiles, but in the last few years development work on military aircraft, naval vessels, and tracked vehicles also has increased markedly, and development and deployment of a wide range of electronic equipment have proceeded apace.

Ground Force Research and Development

6. [redacted]

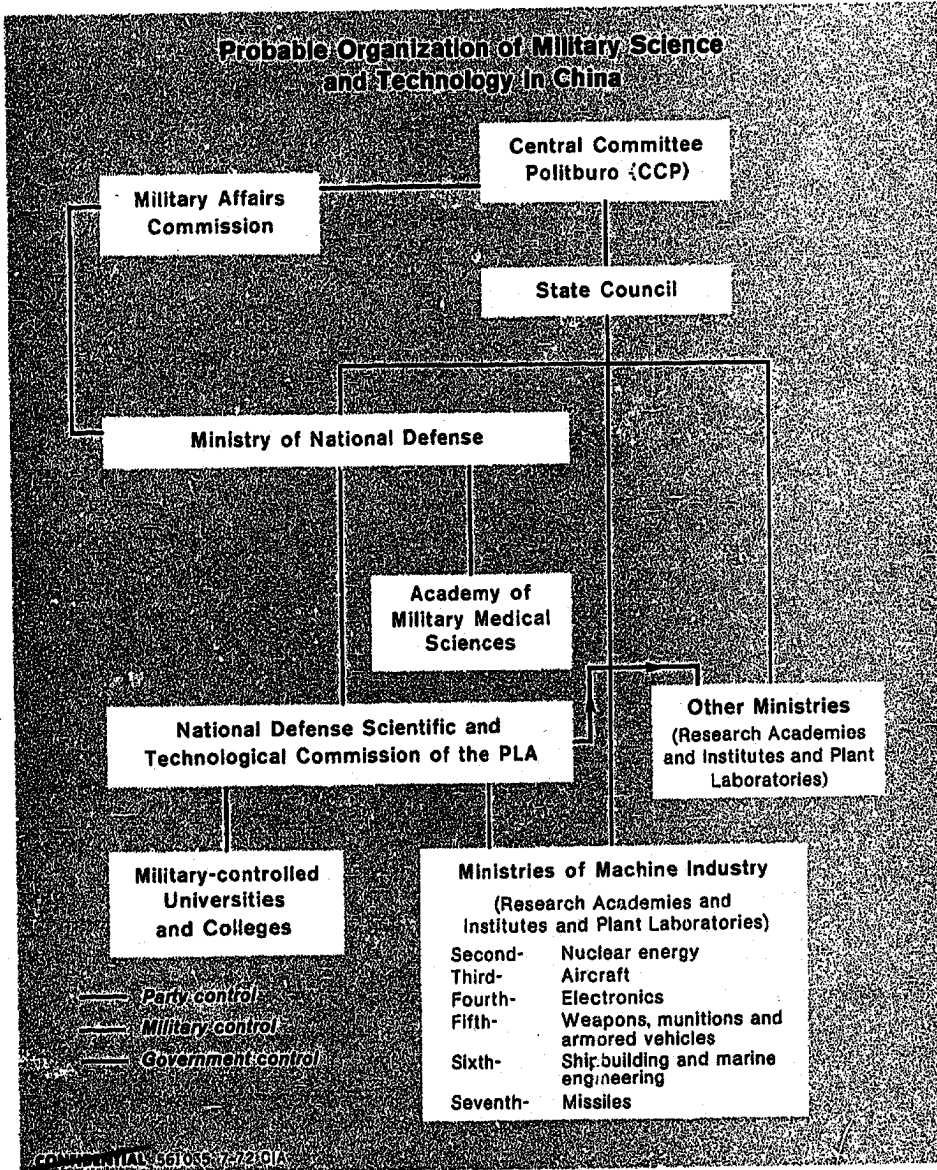
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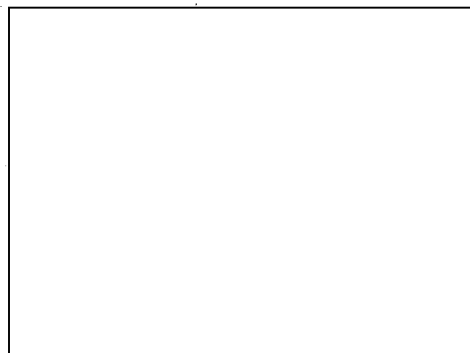
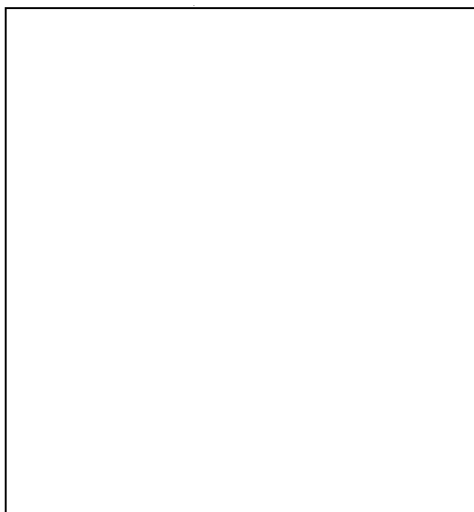
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Probable Organization of Military Science and Technology in China



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[redacted] The Chinese are, nevertheless, believed to have the technology to develop missiles at least comparable to the SS-1 series or SS-2 which the Soviet Union gave to China during the late 1950s. If such missiles are developed, Peking would probably intend to equip them with nuclear warheads. It is also likely that the Chinese are developing and testing small tactical free-flight rockets with ranges below 20 nautical miles at Pai-ch'eng.

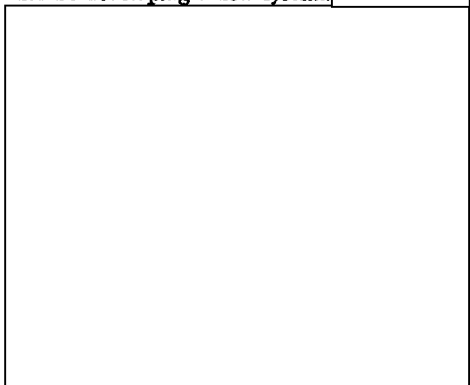
7. China has a number of test facilities associated with land armaments. The largest and most important identified R&D facility for ordnance is located near Pai-ch'eng, some 450 miles northeast of Peking. At this facility nearly 1 million square feet of floor space have been allocated for shops, technical offices, cadre training schools, R&D laboratories, and support services. A weapons test range associated with this R&D installation is the most significant of several military facilities in the vicinity of Pai-ch'eng. The range has a variety of sites for armor and artillery firing and for the testing of ballistics and munitions, projectiles of all calibers, armor materials and field fortifications, and possibly naval ordnance.

Missile Research and Development

8. The Chinese have made impressive strides in space and ballistic missileery, but there is as yet no firm evidence that a program is under way to develop a tactical land-based missile. [redacted]

9. [redacted]

[redacted] the Chinese have made limited improvements to the existing CSA-1 (China's version of the Soviet SA-2) system and may also be developing a new system. [redacted]



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[redacted]

10. The Chinese version of the Soviet Fan Song B radar associated with the CSA-1 system is known as Gin Sling. It apparently provides enhanced electronic counter-countermeasures capabilities and may have other improvements as well. [redacted]

[redacted]

11. It is expected that the Chinese will continue R&D efforts to further improve their ground-based SAM capabilities. Such efforts could lead to development of a low-altitude, short-range system which could become operational during the period of this Estimate. A longer-range, higher-altitude system may be developed later.

12. If the presence of a SAM system on the Kiangtung-class destroyer escort is confirmed, this would indicate that the Chinese had carried out a substantial R&D program. [redacted]

[redacted]

13. The Chinese are also working to provide their combat aircraft with improved weapons.

[redacted]

Aeronautical Research and Development

14. When the Chinese, with Soviet assistance, first undertook to establish an air force and an aircraft industry in the early 1950s, aeronautical faculties were established at several universities, and training schools were organized in the cities where aircraft factories were located. China now has three centers of higher education for training in aeronautical engineering: the aeronautical colleges at Peking and Nanking and the center at the Northwest Industrial University at Hsian. Each of these institutions has small subsonic and supersonic wind tunnels primarily for instructional purposes, and all reportedly have flight research departments with Mig-17 aircraft assigned for their use. There are indications that each school has been assigned specific areas of research responsibility.

15. Another research facility, possibly subordinate to the Institute of Mechanics, is adjacent to the aircraft factory in Shenyang. It has a medium-sized continuous-flow subsonic wind tunnel and a supersonic gas dynamics facility with the capability of developing speeds between Mach 4 and 5. This facility could be used to test scale models of supersonic aircraft and guided missiles. The Ch'ang-hsin-tien Missile Development Center also has research facilities which could be used very effectively for aeronautical research. The facilities include high-speed blow-down

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tunnels and a large continuous-flow tunnel that could be used for testing aircraft and other aerodynamic models at speeds ranging from high subsonic to Mach 2. In addition, a new wind tunnel may be under construction at Ma-liu-wan, near Chengtu.

16. China's R&D programs for aircraft propulsion have been weak, but to overcome deficiencies the Chinese are completing a large facility at P'ing-pa in Kweichow Province. No facilities for high-altitude testing have been identified at P'ing-pa, but they may be added later. Another jet engine test facility was recently identified under construction at Yuanling in Hunan Province. Some reports also suggest that an unidentified facility in Shenyang is involved in high-temperature metallurgical research in connection with jet engine development.

17. The Chinese now have three aircraft testing programs under way—for a jet fighter, a small transport, and a turbine-powered helicopter. The fighter, designated Hsian-A by the Intelligence Community, [redacted]

[redacted]

18. [redacted] it is powered by two of the type 37 engines used in the Mig-21. The Chinese probably will require several years to complete testing of the Hsian-A, and the first operational models probably could not be deployed prior to 1975. The [redacted]

19. A new small transport aircraft, designated the Nan-A, [redacted]

[redacted]

[redacted] The Nan-A apparently has two reciprocating engines and probably is intended as a follow-on to the AN-2, which the Chinese produced at Plant 320 until 1968. Testing of the Nan-A probably will require two or three years, with series production commencing shortly thereafter.

20. An MI-4 Hound helicopter modified by installation of a turbine engine [redacted]

[redacted] Because MI-4 helicopters are normally powered by reciprocating engines, this modified aircraft may represent the development of a Chinese-designed turbine-powered helicopter.

Naval Research and Development

21. With the objective of reaching self-sufficiency in the design and construction of ships—especially warships—the Chinese began to reform and expand their shipbuilding industry in the early 1950s, during the period of their first Five Year Plan. By the mid-1950s, they had established a number of institutes and schools for ship research and design, shipyard design, and shipbuilding.

22. Over the years, it has become increasingly evident that China's efforts in naval R&D have been focused on warships. For example, the large and well equipped ship model testing complex at Wuhsi (60 miles northwest of Shanghai) appears to have been built primarily for testing models of naval hulls; it could, of course, also be used for merchant ship development.

23. During the 1950s almost all material and technical aid to the Chinese shipbuilding industry came from the USSR. China relied primarily on sources in other countries during the following decade for some naval component imports. In recent years, however, although some equipment that was apparently designed for use in maritime construction pro-

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grams has been purchased abroad, there have been no confirmed imports of naval ship components.

24. The Chinese are beginning to achieve a sophisticated level in naval design and production. They are no longer merely emulating Soviet design practices but are also incorporating US and native concepts, as is indicated by the Han-class submarine and new combatants.

25. Although the greatest achievements of China's naval R&D programs have been in hull design, we believe that work is also being done in developing new and improved weapons and electronics for the navy. [redacted]

[redacted] much R&D work undoubtedly occurs at production facilities as well as within schools and institutes subordinate to the appropriate ministries.

II. PRODUCTION

Organization for Military Production

26. Once the general allocation of the economy's resources has been determined, the MND exercises considerable control over the defense industry sector of the economy in accordance with a 1967 mandate of the State Council. This control is exercised through the National Defense Industry Office (NDIO), which had been established by August 1965 to oversee defense production in the Second through Seventh Ministries of Machine Industry. These ministries and the NDIO control all significant defense-oriented production—nuclear weapons, aircraft, electronic equipment, ground force armaments, ships, and missiles.

27. By October 1970 local NDIO offices were probably present at all military region and district headquarters. These local offices probably provide liaison while the production facilities continue to be directly responsible

to the appropriate controlling ministry in Peking. There is also evidence suggesting that military control of the aircraft industry was further consolidated between September 1970 and July 1971 and that defense industries were unaffected by the State Council's reorganization of ministries in the fall of 1970.

Location and Distribution of Production Facilities

28. When the communists came to power in China in 1949, most of the nation's industry was concentrated in a few major centers: in Manchuria; in principal cities on or near the seacoast—Peking, Tientsin, Shanghai, Nanking, and Canton; and in particular centers in the interior—Wuhan and the Szechwan Basin. Since that time, however, China's leaders have adopted a conscious policy of dispersing and decentralizing industry.

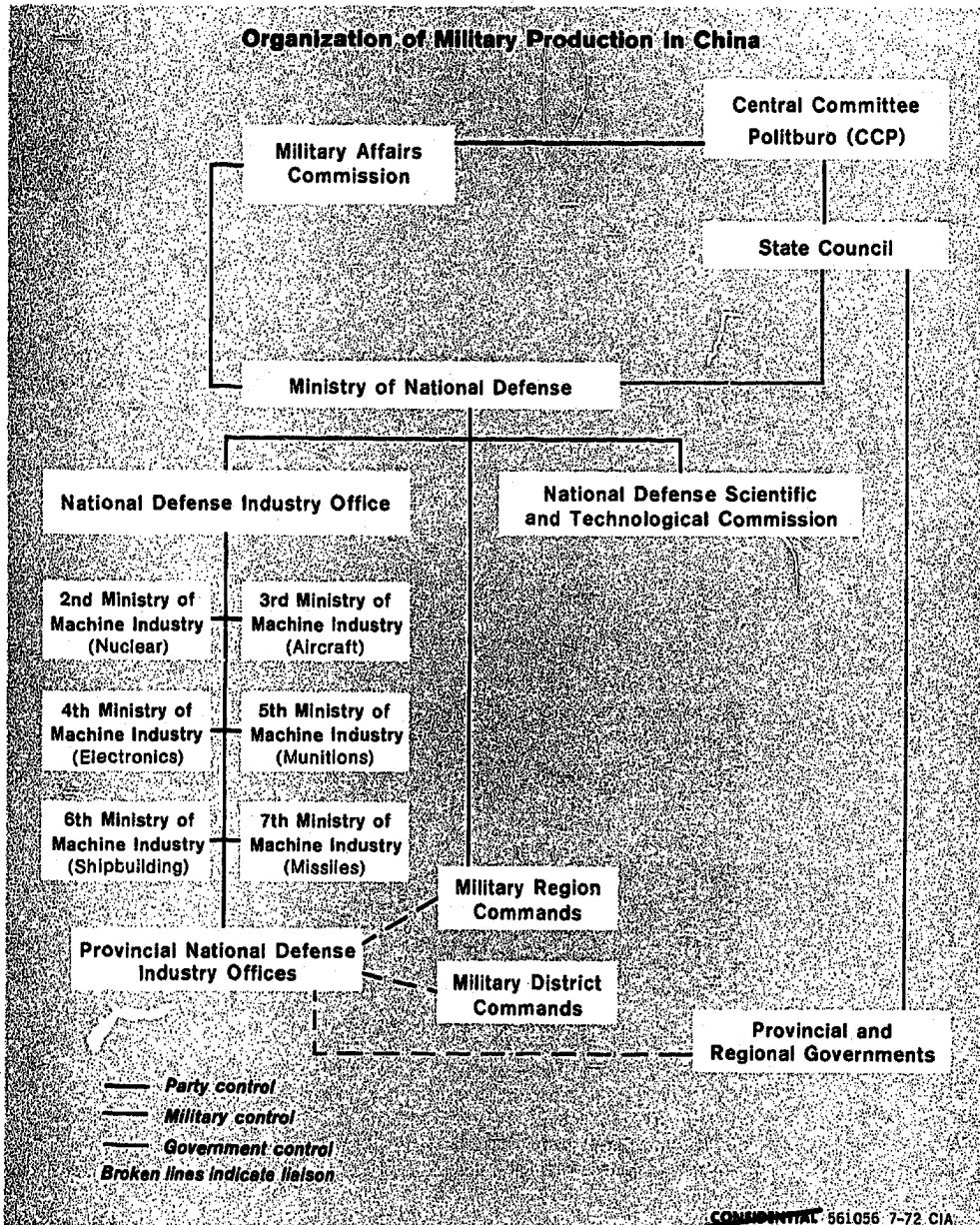
29. Several sources confirm the intention to concentrate new defense production facilities in the interior; Kweichow and Honan, for example, are two areas which are gaining defense industries for the first time. Even in established industrial regions, there seems to be a preference for building new facilities in the formerly non-industrial areas outside the major cities.

30. Peking's program for decentralization will eventually have three advantageous effects upon China: dispersal of industry will make China less vulnerable to enemy attack; it will help ease the problems associated with excessive urban congestion; and it will stimulate the development of resources in non-industrialized areas. At the same time, however, the remote location of many of the newer installations will increase transport costs and the costs of feeding and housing industrial personnel.

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Ground Force Production Programs

31. To date, China's production programs for ground force equipment have been deliberate and relatively unimpressive. Although these programs have mainly produced copies of conventional Soviet weapons, the Chinese have more recently begun to produce an increasing number of weapons of native design.

Armored Vehicles

32. Chinese industry is now producing armored vehicles at a rate of over 1,000 units each year. The cumulative effect of this production rate will be to provide the army with a larger, improved armored striking force. The mainstay of Chinese armored vehicle production has been the Type-59 medium tank (China's improved version of the Soviet T-54) which is being produced at a rate of about 700 units a year. About 1969, the Chinese

introduced a new APC. This amphibious tracked vehicle of native design is probably being produced at a rate of about 300 to 400 a year, but the annual production rate may double during the next few years.

33. Another important addition to the growing family of armored vehicles in China is the new amphibious tank which the Chinese may have designated as the Type-63. This tank represents a significant improvement over the Soviet PT-76; it is reportedly much faster than the Soviet amphibious tank and has heavier armor plus a larger gun. The characteristics of the Type-63 suggest that it will probably be used in roles of tactical reconnaissance or infantry support. This tank has also been noted in an assault role in Indochina. Overhead photography, however, has not indicated widespread deployment of this tank, and we therefore believe that the Type-

China's APC on Parade



This Chinese-designed armored personnel carrier is probably amphibious. It carries eight passengers plus a three-man crew. Armed with a 12.7mm antiaircraft machine gun, it weighs about 10 tons and is 17 feet long, 10½ feet wide, and 6 feet high. It is equipped with an infrared night-viewing light.

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TABLE D-I
COMPARISON OF AMPHIBIOUS TANK CHARACTERISTICS

	CHINESE TYPE-63	SOVIET PT-76
Weight	18 Tons	14 Tons
Engine	520 Horsepower V-12 (Diesel)	240 Horsepower V-6 (Diesel)
Speed	45 Miles Per Hour	27 Miles Per Hour
Primary Armament	85-mm Gun	76-mm Gun
Maximum Effective Range	900 Meters	650 Meters
Armor Penetration	4.4 Inches	2.7 Inches
Secondary Armament	12.7- and 7.62-mm MG	7.62-mm MG
Armor Thickness (Hull/Turret) .....	.8/1.2 Inches	.5/.6 Inches

63 is being produced in limited numbers—about 100 units a year.

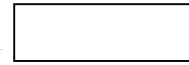
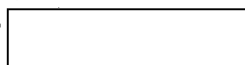
Small Arms and Ammunition

34. Total annual production of small arms in China is estimated to be about 500,000 units. Perhaps two-thirds of this consists of a new 7.62 mm assault carbine, known as the "No. 5". This improved weapon has a larger magazine load and an automatic firing capability. Reports from the field indicate that the No. 5 is an effective weapon.

35. The assault rifles—the M56 and its variant, the M56-1—account for less than one-quarter of China's annual small arms production, and various machine guns and the 7.62 mm pistol make up the remainder. The eventual termination of fighting in Vietnam may slacken demand for Chinese small arms in Southeast Asia, but the Chinese have a standing domestic requirement to provide small arms for the growing armed elements within the militia and the Production and Construction Corps. Although Peking will probably continue to export some small arms, domestic requirements will provide the principal reason for a sustained production level over the next several years.

36. Relatively little is known about the production capabilities of Chinese munitions plants. Evidence accumulated during the past two decades shows that more than 70 factories have been involved in the manufacture and assembly of ammunition in China. A high degree of specialization among these factories is indicated by the fact that as many as seven separate plants may be involved in the production and assembly of a single typical artillery round. Despite the large number of plants carrying on specialized tasks, we have only identified one major facility in China—Plant 805 at Pai-yin (near Lanchou)—which produces high explosives for military use. (There are several small plants which also produce high explosives.) Reports indicate that the Chinese Army uses ammunition sparingly in training, but the ground forces also have unknown quantities of munitions in war reserves. Peking, moreover, has exported large quantities of munitions to Vietnam.

37. Most of the ammunition produced in China has been copied from that of the USSR, and little has been done so far to produce improved conventional munitions such as cluster bombs and mass scatterable mines. We expect, however, more development in these areas during the next few years.



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Artillery and Crew-Served Weapons

38. The firepower of ground force units was improved with the introduction of heavier (85 mm) AAA in 1966, an 130 mm field gun in 1967, and an 82 mm recoilless rifle in 1970. The 130 mm field gun has the longest range of any artillery piece in the Chinese inventory. Since 1968, moreover, 122 mm guns and 152 mm gun-howitzers have been replacing older weapons.

39. Maneuverability appears to be an important consideration in the production of artillery and crew-served weapons in China. Among the four sizes of AAA weapons currently in production, the small 14.5 mm units account for more than two-fifths of the total annual output. Chinese industry also produces four sizes of mortars, but the smallest—the 60 mm—also accounts for over half of the annual output. Production of the RPG-7 grenade launcher since 1969 and the continued production of RPG-2 grenade launchers and 107 mm rocket launchers are also indicators of China's desire to equip the army with highly mobile weapons.

Communications Equipment

40. In the past, the bulk of Chinese military tactical radio equipment has consisted of amplitude modulation (AM), low-power high frequency (HF) and very high frequency (VHF) sets copied from US prototypes dating back to World War II or earlier. Later models included Chinese copies of Soviet R-series equipment. One of these copies provided the army with its first frequency modulation (FM) transceiver, a hybrid unit consisting of transistors and vacuum tubes. Since 1970, however, the Chinese have been manufacturing fully transistorized equipment of their own design. For field army use, the Chinese are expected to retain their present types of simple

communications equipment augmented by some additional sets of native design through 1973. Thereafter, equipment having higher power and affording preset channel selection and wider frequency coverage may begin to appear.

Biological Warfare and Chemical Warfare Capabilities

41. China has a sufficient number of competent scientists and facilities to support a biological warfare (BW) program. A number of production facilities for human and veterinary vaccines could be directed to produce infectious disease organisms for use in BW. Current Chinese research in genetic manipulation, cellular biology, bio-engineering technology, and biological materials for crop pest control could contribute substantially to such an effort.

42. [REDACTED]

[REDACTED] there is no evidence that the Chinese are directing BW-related resources towards the production of BW agents. We do know, however, that the entire army has been instructed in methods of defense against BW agents. Chinese defenses against BW attack, however, are weak. Protective equipment is inadequate, and the underground defense system generally lacks filtered ventilation, thus leaving the system highly vulnerable to BW attack.

43. The production of chemical warfare (CW) toxic agents is well within China's capabilities. The Chinese chemical industry is already producing significant quantities of phosgene and hydrogen cyanide for civilian purposes, and this production capacity could be converted to military use should the need arise. The Chinese have also synthesized small amounts of G- and V-type nerve agents for

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TABLE D-II
CHINESE GROUND FORCE WEAPONS: PRODUCTION DATA

TYPE OF WEAPON OR EQUIPMENT	DESIGNATION	DESCRIPTION: SPECIAL FEATURES/COPY OF WHAT/NEW DESIGN	DATE FIRST PRODUCED IN CHINA	CURRENT ESTIMATED ANNUAL RATE	ESTIMATED INVENTORY MID-1972
Armored Vehicles					
Medium Tank	Type-34	Produced in USSR; WW II Vintage	N.A.	None	800-1,500
Medium Tank*	Type-59	Copy of Soviet Type-54	1958	700	4,000-5,000
Light Tank	Type-62	Scaled-Down T-54	1965?	40-50	50-100
Light Amphibious Tank*	Type-63	New Design Based on Soviet PT-76; High Performance	1966?	100?	300-600
Armored Personnel Carrier*	Unknown	Chinese Design, Probably Amphibious	1969	300-400	600-900
Individual Weapons					
7.62 mm Pistol*	Type-54	Copy of Soviet 1933 (TT)	1954	15,000	1,000,000
7.62 mm Assault Rifle*	Type-56 & 56-1	Copy of Soviet AK47. Effective Range: 440 Yards.	1956	150,000	1,000,000
7.62 mm Carbine*	No. 5 (?)	Modified Soviet SKS. Has selective Fire Mechanism	1969?	360,000	1,500,000
Machine Guns					
7.62 mm Light Machine Gun*	Type 56 & 56-1	Copies of Soviet RPD & improved RPD	1964 (IMPD)	5,000	200,000
7.62 mm Heavy Machine Gun*	Type 57	Copy of Soviet SGM. Effective Range: 1,100 Yards	1963	1,000	10,000
12.7 mm Heavy Machine Gun*	Type-54 & 54-1	Copy of Soviet DSHK & improved DSHK	Unknown	1,000?	12,000
Anti-Aircraft Weapons					
14.5 mm*	Type-56 (Quad) Type-58 (Dual)	Copies of Soviet Weapons. Range: 15,000 Feet. Weight: 0.7 Short Tons (Dual & Quad)	1956 (Quad) 1958 (Dual)	1,000	7,000
37 mm*	Type-55 (Single Barrel) & Dual (Type Unknown)	Dual Version is of Chinese Design. Range: 20,000 Feet. Weight: 2.6 Short Tons (Single Only)	1959	200?	4,000?
57 mm	Type-57	Modified Soviet Design. Range: 20,000 Feet. Weight: 5.4 Short Tons	1959	1,000	5,000
85 mm	Unknown	Modified Soviet Design. Range: 34,000 Feet. Weight: 4.7 Short Tons	1960?	200?	1,500?

See footnote at end of table.

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TABLE D-II

CHINESE GROUND FORCE WEAPONS: PRODUCTION DATA. (Continued)

TYPE OF WEAPON OR EQUIPMENT	DESIGNATION	DESCRIPTION: SPECIAL FEATURES/COPY OF WHAT/ NEW DESIGN	DATE FIRST PRODUCED IN CHINA	CURRENT ESTIMATED ANNUAL RATE	ESTIMATED INVENTORY MID-1972
Artillery and Light Crew-Served Weapons					
82 mm Recoilless Rifle*...	Type-65	Probably Copy of Soviet B-10 Weight: 200 Pounds? Range: 430 Yards?	1965?	2,000	6,000?
40 mm Grenade Launcher*.	Type-69	Chinese version of Soviet RPG-7. Weight: 14 Pounds Range: 550 Yards	1969	5,000	10,000?
40 mm Grenade Launcher*.	Type-56	Copy of Soviet RPG-2. Weight: 6 Pounds. Range: 165 Yards	1956	2,000	30,000?
107 mm Rocket Launcher*.	Type-63-1	Chinese Design. Weight: 0.3 Short Tons; Range: 7,600 Yards	1967(63-1)	100	1,000
85 mm Field Gun*.....	Type-56	Copy of Soviet D-44. Weight: 1.9 Short Tons. Range: 17,000 Yards	1956	100	4,000?
122 mm Field Gun.....	Type-60	Copy of Soviet D-74. Weight: 6.2 Short Tons. Range: 25,000 Yards	1968	500	1,400?
130 mm Field Gun.....	Type-59-1	Copy of Soviet M-46. Weight: 9.3 Short Tons. Range: 30,000 Yards	1967?	200	1,000?
122 m Howitzer*.....	Type-54	Copy of Soviet M-1938. Weight: 2.8 Short Tons. Range: 13,000 Yards	1954	100?	5,000?
152 mm Gun-Howitzer.....	Unknown	Copy of Soviet D-20. Weight: 6.5 Short Tons. Range: 18,000 Yards	1970	100	300?
Mortars					
80 mm*.....	Type-63	Chinese Design. Weight: 27 Pounds. Range: 1,700 Yards	1963	1,000?	20,000
82 mm*.....	Type-53	Copy of Soviet M-1937. Weight: 123 Pounds. Range: 3,300 Yards	1953	500?	20,000
120 mm*.....	Unknown	Copy of Soviet M-1943 (?) Weight: 1,100 Pounds? Range 6,000 yd	1955	200?	4,000?
160 mm.....	Unknown	Chinese Design. Weight: 3,000 Pounds? Range: 8,500 Yards?	1963?	200?	2,000?

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training and testing purposes, but there is no evidence to suggest either pilot plant or full-scale production of any of these agents. There are in China at least 15 chemical plants producing organophosphorus insecticides, some of which are closely related to certain of the V-type agents. Only those, however, that produce the organothiophosphorus insecticides could be readily converted to produce CW toxic agents.

44. We believe that the Chinese still consider artillery to be the primary delivery vehicle for CW agents, and the Chinese Army has a variety of tube artillery weapons which could be used to disseminate CW agents. The 120 mm mortar is particularly suitable for toxic agent dissemination, but multiple rocket launchers such as the 140 mm could also be used in CW.

Surface-to-Air Missiles and Tactical Missiles

45. [redacted]

[redacted] The sustainer sections of CSA-1 missiles are assembled at the Shenyang Airframe Plant. The booster engine for this missile is manufactured at the T'ai-yuan Explosives and Solid Motor Production Plant (Number 245). Construction of several new buildings at the Shenyang Airframe Plant during 1969-1970 probably contributed to greater SAM production [redacted]

[redacted] and to increased deployment of SAM units during 1971.

46. [redacted]

[redacted] we as yet have no firm evidence that the Chinese are developing—let alone produc-

ing—tactical missiles for their forces. Although the Chinese were given an unknown number of tactical missiles by the Soviet Union in the late 1950s and have the technical capability to develop and produce tactical missiles, we have subsequently seen neither the hardware nor the forces to justify the assertion that the Chinese are now producing their own version of tactical missiles.

Naval Production Programs

47. China's rising production of naval ships in recent years is due to two factors: shorter construction times and expanding shipyard capacity. Much of this new capacity is only now beginning to be used, and the expansion of facilities is continuing. The growth of shipbuilding is illustrated by the fact that, during the past five years, China has about tripled the number of medium-range submarines under construction. In the years to come, a greater proportion of production will consist of complex and sophisticated ships which will take longer to assemble. Future increases in production, therefore, will depend upon efficient use of shipbuilding facilities, employment of advanced shipbuilding technology, and the completion of additional building ways now under construction.

Submarines

48. The Chinese are building their submarines at the following shipyards: at Hu-lu-tao in the North Sea Fleet area; at Wu-ch'ang and Kiangnan in the East Sea Fleet area; and at Huang-pu in the South Sea Fleet area. If China's submarine building ways were used exclusively to build R-class submarines, the Chinese could probably produce more than 20 in a year's time. We believe, however, that the Chinese will probably cease building the R-class submarine and will concentrate on

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building units of the Ming and other more sophisticated classes. These will take longer to build and will probably limit the construction rate to about 10 submarines a year during the period of this Estimate.

49. In 1971 the Chinese launched two units of the new Ming-class submarine. These ships appear to be a Chinese-designed variant of the Soviet diesel-powered R-class torpedo attack submarine. A production time of 18-24 months for these first two units was almost twice that of recent R-class units. Preliminary assessments suggest that the Ming-class may have larger engineering spaces and slightly improved habitability due to an increase in pressure hull diameter. The enlarged engineering spaces probably mean a change to the Ming's propulsion system. This might be a diesel-electric drive system instead of the direct drive used on the R-class submarines. Other possibilities include using three type 37D 2,000 horsepower engines instead of the two now found on the R-class.

50. The most advanced submarine yet produced in China is the single unit of the Han-class which first appeared early in 1971. The hull design of the Han-class is similar to that of the latest US classes of nuclear-powered submarines. While there is no clear indication of the type of propulsion plant installed in the Han, the Chinese are doing research in naval nuclear propulsion, and such a propulsion plant could most effectively use a hull with the configuration and size of the Han. If China's Han unit is nuclear powered, it would constitute a basis in propulsion and hull design for developing both a missile-carrying nuclear submarine as well as a fleet of long-range attack submarines.

Major Surface Units

51. China's major surface units consist of destroyers and destroyer escorts. Of these, the Luta-class guided-missile destroyer (DDGS) is China's largest combatant. This ship is being produced at the Luta (Dairen), Chung-hua (Shanghai), and the Tung-lang (Canton)

TABLE D-III

ESTIMATED CHARACTERISTICS OF CHINESE-DESIGNED SUBMARINES

Type	SSN(P)	SS
Class	Han	Ming
Full Load Displacement (Long Tons)	Estimated 4,500 (Sub)	Estimated 1,800 (Sub)
Length/Beam (Feet)	310/33	250/24
Main Armament	Probable 21-inch Torpedo Tubes	Probable 21-inch Torpedo Tubes
Secondary Armament	Unknown	Unknown
ASW Armament	Unknown	Unknown
Electronics	Unknown	Unknown
Propulsion/Total Horsepower	Unknown/Estimated 15,000	Diesel-Electric/Estimated 4,000
Remarks	Modern teardrop hull design, sail-mounted diving planes. Probably single screw. Believed designed for nuclear propulsion.	Chinese improvement of R-class medium-range submarine.

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shipyards at a rate of about 3 units per year. It is of native design but reflects some design influence of the Soviet Kotlin-class destroyer. Although the Luta and the Kotlin are about the same size, the new Chinese ship has many distinctive external features and is noteworthy as China's first indigenously designed ship employing steam turbine propulsion. Armed with two triple CSS-N-1 antiship cruise-missile launchers and having two twin 130 mm dual-purpose gun mounts, the Luta is a powerful warship by Asian standards. Its air defense capability is supplemented by 57 mm secondary weapons and by 25 mm weapons on the superstructure, and at least one unit has been seen with an early warning radar. Additional weapons include two multiple-tube anti-submarine warfare (ASW) rocket launchers, four depth charge mortars and mine rails.

52. The newest main surface combatant in the Chinese Navy is the diesel-powered Kiangtung-class destroyer escort (DE or DEG) which was launched about 1 October 1971. The main gun armament on this unit is two twin dual-purpose gun mounts (probably 100 mm) and four anti-aircraft mountings. The evidence indicates that the Kiangtung is equipped with a missile system new to the Chinese Navy. Photography shows two canvas-covered twin-arm launchers about 15 feet in length. Although these launchers could accommodate a small antiship missile or an ASW missile, they appear most likely to be naval SAM launchers. There is insufficient evidence at this time, however, to permit a firm conclusion as to the type of system involved. Although only one unit of the Kiangtung-class has been completed, the Chinese could produce several

TABLE D-IV

ESTIMATED CHARACTERISTICS OF CHINESE-DESIGNED DESTROYERS AND DESTROYER ESCORTS

Type	DDGS	DE (GP)
Class	Luta	Kiangtung
Full Load Displacement (Long Tons)	Estimated 3,500	Estimated 1,800
Length/Beam (Feet)	430/42	345/35
Main Armament	6 CSS-N-1 Cruise Missiles 4 130 mm Dual Purpose Gun (Twin Mounted)	2 Possible SAM Launchers 2 Twin 100 mm Dual-Purpose Guns
Secondary Armament	4 Twin 57 mm AA 4 Twin 25 mm AA	4 Possible Twin 37 mm AA; Mine Rails
ASW Armament	2 Multibarrel Rocket Launchers; 4 Depth Charge Mortars	2 Possible MBU-1,800 Rocket Launchers; 2 Depth Charge Launchers
Electronics	Unknown	Unknown
Propulsion/Total Horsepower	Steam/Turbine/Estimated 80,000	Diesel/Estimated 12,000
Remarks	First native steam-turbine powered combatant. Two triple missile launchers amidships. Extensive electronic equipment.	Possible first SAM-equipped warship. China's largest diesel-propelled combatant.

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Kiangtung DEs each year beginning in 1974. The Hu-tung Shipyard and one in the Canton area are the most likely ones to build these ships.

Patrol Ships and Craft

53. In 1964 the Chinese began producing a new 70-foot hydrofoil-equipped PT boat (PTH), designated Huchwan-class. Foils are actually only fitted forward on this native-designed patrol boat, but speeds in excess of 50 knots have been reported. This class supplements the rapidly aging torpedo boats still in the Chinese inventory. The Huchwan is a high-speed PT-type craft for operations in coastal waters, and does not appear to have an ocean-going capability. The Chinese have produced approximately 150 Huchwan units and have exported 30 of them to Albania. Production, however, was terminated in 1971. The Huchwan was built at the Hu-tung and Chiu-hsin Shipyards in Shanghai.

54. The mainstay of Chinese patrol squadrons has been the Shanghai-class motor gunboat (PGM), and more than 250 units have been produced since its first appearance in the early 1960s. The Shanghai is also a native-designed boat. Production has tapered off from a peak of about 50 units a year in 1966 to a current rate of about 30. The Shanghai is being built at two shipyards in Dairen and at the Huang-pu yard (Canton).

55. In 1964 the Chinese produced their first Hainan-class submarine chaser. This 195 foot, native-designed ship was probably developed to enhance fleet capabilities for ASW. Annual production rate of the Hainan-class subchasers is around two units a year, but the Chinese may double the rate at which they produce subchasers by the mid-1970s.

These ships are produced at Chiu-hsin (Shanghai) and at Huang-pu.

56. Two classes of missile patrol boats are in series production in China: the native-designed Hoku and the Soviet-designed Osa. The smaller of the two—the Hoku-class—is a steel-hulled boat similar to the Soviet Komar and carries two CSS-N-1 missiles. A number of the Osa-class boats have been built with folding masts, apparently to allow the ships to be based in tunnels.

57. The Chinese have also built a single ship of the Hola-class and at least one Hoku variant. The new Hola-class represents an enlarged version of the Soviet Osa-class large guided-missile patrol boat. Both classes carry four CSS-N-1 missiles, but the Hola-class may be more seaworthy. The Hoku variant is about five feet longer than the Hoku, appears to be equipped with hydrofoils similar to the Huchwan PTH, and has a second 25 mm twin anti-aircraft mount on the stern. The Wu-hu and Chiu-hsin Shipyards are building about 10 to 15 Hokus a year while approximately 10 to 15 Osas are being produced annually by the Hu-tung Shipyard and possibly a yard in the Canton area.

Amphibious Ships and Craft

58. In the past, the Chinese have done little to renew or enlarge their aging fleet of landing ships. In fact, the only landing ship ever built by the Chinese was a medium landing ship completed in 1970, and no others of this class—the Yuling—are presently under construction. If the Chinese wish to maintain their present capability for amphibious operations, however, they will need replacements for their fleet of 35 amphibious ships, most of which are almost 30 years old.

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TABLE V

ESTIMATED CHARACTERISTICS OF CHINESE-DESIGNED PATROL SHIPS AND CRAFT

Type.....	PTH	PGM	PC	PTG	PTFG
Class.....	Huchwan	Shanghai	Hainan	Hoku	Hola
Full Load Displacement (Long Tons)	39.3	155	530	85	240
Length/Beam (Feet).....	70/14.5	128/18	195/24	89/20	142/25
Main Armament.....	2 21-in Torpedoes	2 Twin 37 mm AA	2 Twin 57 mm AA, or 2 Single 75 mm Dual Purpose	2 CSS-N-1 Cruise Missiles	4 CSS-N-1 Cruise Missiles
Secondary Armament.....	2 Twin 14.5 mm AA	2 Twin 25 mm AA; 1 Twin 81 mm Recoilless Rifle	2 Twin 25 mm Mine Rails	1 Twin 25 mm AA	2 Twin 25 mm AA
ASW Armament.....	2 or 4 Depth Charges	2-4 Depth Charges	2 MBU-1,800 Rocket Launcher; 2 Depth Charge Racks	..	..
Electronics.....	Skin Head or Decca 202 Surface Search	Skin Head or Pot Head Surface Search; Possible Tamir-11 Sonar	Pot Head or Skin Head Surface Search; Tamir-11 Sonar	Square Tie	Improved Square Tie
Propulsion/Total Horsepower	Diesel/3,800	Diesel/4,800	Diesel/7,500	Diesel/4,800	Diesel/12,000
Remarks.....	Foils forward only for stabilization. Aluminum hull. Thirty exported to Albania. 50-knot plus maximum speed reported.	Over 250 built; units exported to Tanzania, Pakistan, North Korea, Ceylon, and North Vietnam. Earlier variant has twin 57 mm forward, no 25 mm.	In production since 1964. Not all have MBU. Horsepower estimated based on use of three Soviet 40D diesels.	Steel-hulled, Chinese improvement on Komar. One or more variants, 94-foot overall and with a second AA mount aft, have also been built.	One unit built at Hutung 1970-1972. Lengthened Osa with larger radar, higher mast, possibly more powerful diesels.

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TABLE D-VI

ESTIMATED CHARACTERISTICS OF CHINESE-DESIGNED LANDING SHIPS AND CRAFT

	LSM	LCM	LCM	LCM
Class	Yuling	Yunnan	Yuchin	Yuchai
Full Load Displacement (Long Tons)	1,600	135	..	..
Length/Beam (Feet)	235/40	90/18	78/16	60/14
Main Armament	2 Twin 37 mm AA	2 Twin or Single 12.7 mm Machine Guns	2 Twin or Single 12.7 mm Machine Guns	2 Twin or Single 12.7 mm Machine Guns
Secondary Armament	2 Twin 25 mm AA Mine Rails	..	..	..
ASW Armament	..	..	..	..
Electronics	Possible Decca 707	None	..	..
Propulsion/Total Horsepower	Diesel/5,000	Diesel/800	..	..
Remarks	One unit completed 1970. Enlarged and rearranged US LSM-1 class, estimated 600 tons cargo.	Constructed in large numbers, estimated 75-90 tons cargo.	Bears some resemblance to US-built LCM (8).	Has features of US LCM (8) and Soviet T-4 class LCMs.

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59. The situation of Chinese landing craft is very different. China now has a fleet of 475 landing craft and has produced new ones at a rate of nearly 50 a year. Production of new landing craft was significantly reduced during the second half of 1971 and early 1972 at the Chung-hua Shipyard in Shanghai indicating that the Chinese may wish to maintain the number of their landing craft at around 500-550 units. Perhaps one of the reasons why the Chinese have been active in building landing craft rather than landing ships is the fact that the craft are being used as supply boats in rivers and coastal areas where a shallow draft permits offloading directly onto shores and beaches.

60. The Chinese have constructed at least three classes of landing craft suitable for amphibious lift operations. The most important is the Yunnan-class landing craft, medium (LCM)—a 90-foot unit of indigenous design. This class LCM accounts for more than half of the estimated annual production rate for landing craft in China. We believe that about 35 units of the Yunnan-class were built last year. A second Chinese-designed LCM known in the Intelligence Community as the Yuchin, is in current production. Until 1968 the Chinese were building a small landing craft of their own design—the Yuchai-class—and had exported several of these to Tanzania.

Naval Missiles

61. China's first antiship missile was the Samlet, a missile designed and produced in the USSR and given to the Chinese about 1959. This missile was never intended for shipboard use. Although coastal defense missile sites first appeared in China between 1959 and 1962, we have no evidence that the Chinese ever built their own Samlets. Instead,

Peking probably deployed Samlets that were built in the USSR. In the meantime the Chinese worked to develop their own capability to produce the Styx-type cruise missile for shipboard as well as land-based use. (Styx-type missiles produced in China are now designated by the Intelligence Community as the CSS-N-1.) Chinese production of this missile began at the Nan-ch'ang Airframe Plant about 1965, and more recently there is evidence that production may have begun at the Shenyang Airframe Plant.

62. The pace of the cruise-missile program quickened about 1969 when the keel of the first Luta-class guided-missile destroyer was laid and the Chinese began to equip old destroyer types with CSS-N-1 launchers. There are now seven of these units equipped with launchers, and an additional eight will probably be equipped by mid-1973. The number of building positions for Osa-class missile boats has at least doubled (now 10 or more) since 1969, and the Hoku-class missile boat entered series production at two shipyards. Also since 1969, Styx crates have been observed at the two operational missile boat bases which have underground boat storage facilities.

63. We believe that the Chinese may now be producing more than 200 CSS-N-1 missiles each year. At least half of this production is probably for the forces afloat to provide for an estimated 75 or so shipboard launchers being added each year over the next five years.

64. An elongated version of the CSS-N-1 ("stretched" Styx) missile was first noted about 1967, and it is believed that the extra length of this missile will provide increased range and perhaps a greater payload as well. This missile is apparently being deployed at coastal defense sites in China as a replacement for the Samlet.

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TABLE D-VII

CHARACTERISTICS AND PERFORMANCE OF CHINA'S ANTISHIP MISSILES*

	CSS-N-1 (STYX) ^a	CSSC-1 (SAMLET) ^a
Initial Operational Capability (IOC)	1965 or Earlier	1960 or Earlier
Maximum Range (nm)	About 25	25-45
Likely Operational Range (nm)	12-17	25
Cruise Altitude (Feet)	300-1,000	300-1,500
Speed (Mach)	0.9	0.8
Warhead	1,100 Pounds HE	2,200 Pounds HE
Guidance	Preset Autopilot With Active Radar Terminal Homing	Beam Ride With Semi-Active Homing
Propulsion	Storable Liquid Rocket/RATO	Turbojet
Launch Platform	Gordyy DDCS, Luta DDCS, Riga DECS, Osa PTFG, Holo PTFG, Komar PTC, Hoku PTC	Coastal Defense Sites ^b

* Based on characteristics of similar Soviet missiles.

^b A 23-foot version of the Styx missile now appears to be deployed at coastal defense sites. This missile probably has a longer range than the CSS-N-1 and may possibly equal that of the Samlet.

Aircraft Production Programs

65. The production of aircraft in China reached its highest level in 1971 when more than 900 aircraft of all types were produced. The Chinese now are producing jet fighters, jet bombers, trainer aircraft and helicopters at five airframe plants. Two Chinese-designed aircraft—a large jet fighter and a small transport—are being tested. The Chinese continue to emphasize production of fighter aircraft, and approximately 80 percent of the aircraft built in 1971 were fighters. Production of fixed-wing transports ceased with the termination of AN-2 production in 1968.

Fighter Programs

66. The largest aircraft production program undertaken so far by the Chinese is for the Soviet-designed Mig-19. Over 2,100 have been produced at Shenyang Airframe Plant 112, and

production reached 50 per month in 1971. More than 200 of these aircraft produced since 1970 have modified wing planforms which would allow improved maneuverability at lower altitudes and possibly provide increased internal fuel capacity.

67. Evidence acquired in 1971 indicates that the Chinese began production of the Mig-21 Fishbed interceptor in 1970 at Chengtu Airframe Plant 132. This achievement culminated an effort that probably began shortly after the acquisition of about 30 Mig-21s from the Soviet Union in 1962.

68. The Chinese exported about 12 new Mig-21s to Albania, [redacted]

[redacted] Chinese export of aircraft so early in their production run is surprising but not

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TABLE D-VIII

CHINESE NATIVE-DESIGNED FIGHTERS: INTERCEPT CHARACTERISTICS AND PERFORMANCE

Model	IOC	MAXIMUM SPEEDS (KNOTS) ^a			COMBAT RADIUS (NM) ^{a, b}			All-Weather Capability	RADAR Range Search/Track (NM)	MAIN ARMAMENT			MAXIMUM EFFECTIVE ATTACK RANGE (NM)		Attack Capability
		Sea Level	36,000 Feet	50,000 Feet	Combat Ceiling (Ft) ^a	W/O Ext. Fuel	With Ext. Fuel			In-ternal Guns	FFAR ^c	Air-to-Air Missiles	Guns Rockets	AAMs	
F-9	1970	650	900	800	55,200	440	600	No ^d	4 ^d	2x30 mm	16x57 mm or 32x57 mm	4xAA-2b ^e	0.5	4-6	Tail
Hsian-A	About 1975	650	1,200	1,320	64,200	525	620	Yes	15/10 ^f	2x30 mm	32x57 mm or 64x57 mm	4 Unknown ^e	0.5	5-7	Tail

^a Maximum speeds, combat ceilings, and combat radii have been calculated independently and cannot be achieved on the same flight profile. Maximum speeds and combat ceilings are with minimum air-to-air armament and without external fuel tanks.

^b Combat radius is calculated as an optimum profile, with only one set of armament, not full armament, except as indicated. If the aircraft carries guns, the combat radii are calculated without rockets or air-to-air missiles (AAMs). If the aircraft carries only AAMs, the combat radii are calculated with only two AAMs, not the full load. Optimum radii would be degraded by full armament; further degradation results from flying other than optimum profiles. See appropriate technical handbooks for more detailed data. These combat radii are calculated on the basis of optimum area intercept mission, involving subsonic cruise to and from the combat area.

^c Folding Fin Air Rockets.

^d The available evidence does not permit a definite assessment of the radar used by the F-9. It is estimated that a range-only radar with a range of 4 nm may be fitted. Alternatively, the aircraft configuration is suitable for installation of an airborne-intercept radar with a search/track range of 11/8 nm. It is possible that one is either fitted now or may be used in the future.

^e The type of missile is unknown. The AA-2 is estimated to be the most probable.

^f There is no evidence of the type of radar used. It is estimated that an airborne intercept radar is used, however, and the search/track range shown is a nominal value which is representative of the types available to the Chinese.

^g The type of missile is unknown. It could be either a MATRA 530-type with infrared or semi-active homing or an infrared AA-2.

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TABLE D-IX
CHINESE NATIVE DESIGNED FIGHTERS GROUND SUPPORT CHARACTERISTICS AND PERFORMANCE

DESIGNATION	IOC	INTERNAL GUNS (ALL MISSIONS)	REPRESENTATIVE ALTERNATE FUEL/BOMB/ROCKET LOADS			MISSION PROFILE (RADIUS IN NM)		
			FUEL POUNDS	FUEL TANKS	BOMB OR ROCKET LOADS	HI-LO-HI	LO-LO-HI	LO-LO-LO
F-9.....	1970	2x30 mm	6,500	0	32x57 mm rockets	335	200	115
					4x550 pound bombs	300	200	115
					2x1,100 pound bombs	280	190	115
			8,700	2	2x1,100 pound bombs	240	165	105
					2x550 pound bombs	475	310	170
					32x57 mm rockets	500	305	175
Hsian-A.....	About 1975	2x30 mm	11,500	0	2x1,100 pound bombs	445	285	165
					2x550 pound bombs	465	280	160
					4x550 pound bombs	440	260	155
			13,700	2	64x57 mm rockets	455	295	165
					2x1,100 pound bombs	430	220	140
					4x1,100 pound bombs	405	200	130
					570	280	195	
					575	375	205	
					540	270	170	

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unprecedented. China also exported Mig-19s in the first year of production.

69. [redacted]

[redacted] an apparent lack of deliveries of Chinese-produced Mig-21s to the Chinese Communist Air Force, casts doubt on the current status of Mig-21 production. Of course it is possible—even likely—that Mig-21s have been produced since last September but have not been delivered to operational units. If a delay or suspension of Mig-21 production has occurred, the Chinese may have decided to forego the Mig-21 pending development of the Hsian-A, a more advanced interceptor which could be available in the mid-1970s.

70. The Chinese also began series production of the F-9 fighter-bomber in late 1969 or early 1970, and the production rate is about 15 a month. They have now produced more than 280 of these aircraft, and about 185 have become operational in the air force. The F-9 is a Chinese-designed fighter resembling the Mig-19. The advantages of the F-9 over the Mig-19 are a greater range and payload capability.

71. The Chinese also are producing a Mig-17 trainer at Chengtu Airframe Plant 132. This tandem seat trainer, a modification of the Soviet single seat design, was first identified in photography of 1970. A review of photography indicated that trainers have been present since at least 1968. The start of Mig-21 production at Plant 132 suggests that the Chinese will soon end the Mig-17 program there, probably within the next year or so. An alternative might be to shift Mig-21 production elsewhere, possibly to Shenyang following termination of Mig-19 production.

Bomber Programs

72. The Chinese are producing the Tu-16 Badger jet medium bomber and the Il-28 Beagle jet light bomber. The first copy of the Soviet Tu-16 was produced at Yenliang Airframe Plant 172 near Hsian in late 1968. The current production rate is about two a month and about 50 had been produced by the end of 1971. The Chinese began producing Il-28s at Harbin Airframe Plant 122 in 1969. The current production rate is estimated at four a month, and a total of about 110 Il-28s had been produced by the end of 1971.

Transport Aircraft

73. China's production of general support transport aircraft has declined since 1968 when they were producing helicopters, transports, and primary trainers. Presently the Chinese are producing only MI-4 Hound medium helicopters, about 600 of which had been assembled at Harbin Plant 122 by the end of 1971. The current production rate is estimated to be 8 to 10 a month. The plant that had produced both transports and trainers—Plant 320 at Nan-ch'ang—began production of the F-9 fighter-bomber in 1970.

Air-Launched Missiles

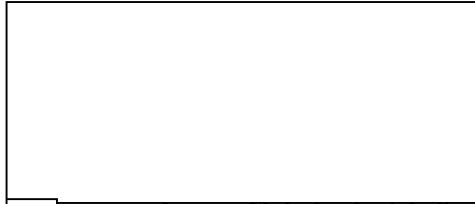
74. Most Chinese interceptors are armed only with cannon, but recent evidence suggests that China is increasing deployment of AAMs. Large numbers of Mig-19s equipped with weapon pylons—suitable for carrying AAMs or air-to-ground rockets—were photographed at Shenyang Plant 112 in 1970 and 1971.

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[redacted] The missile most likely involved is the ATOII or some variation of that vehicle, and the evidence indicates that AAMs are available for Mig-19 interceptors. No production facility for AAMs has been identified.

75. There is no firm evidence of a Chinese effort to develop air-to-surface missiles (ASMs) but they probably will follow the Soviet lead and eventually equip their Tu-16s

with such missiles. ASMs may be used against surface ships or ground targets.

Radars

76. Six major facilities for the production of air-surveillance and fire-control radars have been identified. These facilities are located at Nanking, Wu-ch'ang, Chengtu, Hsian, T'ai-yuan, and Sha-shih. Although these plants apparently provide adequate capacity for China's needs, additional facilities may be dispersed elsewhere in the country. Most of the production capacity for radars was completed with Soviet assistance before the Sino-Soviet split, but the Chinese built at least two radar plants and expanded three others during the 1960s.


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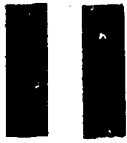
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