

~~SECRET~~

SECTION 6: DEFENSE AGAINST OSA-KOMAR GUIDED MISSILE BOATS

Another significant threat which the ROK Navy faces is the North Korean OSA-KOMAR guided missile boats.

6.1 The Threat

The North Koreans now have 14-16 OSA-KOMAR boats armed with guided missiles. DIA estimates that the fleet will be expanded with additional OSA-KOMARs by mid-1974. Using these boats the North Koreans could: (a) harass ROK shipping; (b) disrupt ROK amphibious operations; (c) limit the rate at which supplies or reinforcements are brought into Korea during full-scale war.

Both the OSA and the KOMAR classes are armed with SS-N-2 STYX surface-to-surface missiles that have a range of approximately 20 nautical miles. The OSA boats have four launchers. The KOMAR boats have two.

The KOMAR class has a range of 475 nautical miles at maximum speed (38 to 40 knots) or 655 nautical miles at 20 knots. The North Koreans have 10-12 of these boats at the present time, and although they have had difficulty acquiring spare parts and replacement engines all are assumed to be in operational condition. The missiles use a liquid propellant which has a life expectancy of about 6 months. No information is available on the missile inventory, but it is likely that sufficient missiles have been provided to ensure operation of the KOMARs in the initial phase of hostilities. These boats have restricted their operations to the territorial waters (12 nautical miles) off the East Coast. The KOMARs currently utilize the ports of Chaho, Songjon and Munchon.

Four OSA class boats have recently been acquired. Little is known about their operational status or base of operations. The OSA class carries four STYX missiles. It has range and speed capabilities comparable to the KOMARs.

The North Koreans would probably use standard Soviet attack procedures against surface shipping. North Korean torpedo and gunboats would probably join in a combined missile/torpedo attack. The North Koreans have 30 motor gunboats and 24 motor torpedo boats with a variety of armaments that could be used against ROK shipping. The OSA-KOMAR boats would probably be used to interdict or harass logistical support and reinforcement efforts. Other threats would be met by the ROK unless the North Koreans were supported by the ChiComs. Harassing operations by OSA-KOMARs would be mostly against coastal shipping around minor ports. It is unlikely both for military and political reasons that North Korea, in harassing operations, would use KOMAR boats to attack Pusan, Chinhae, or Inchon.

While the OSA-KOMAR boats would present a serious threat to any amphibious operation, the ROK need not maintain its own countermeasures capability in order to conduct amphibious operations. Since its amphibious capability is limited to lifting a regimental landing team (RLT) on a short-haul basis, the

~~SECRET~~

~~SECRET~~

While the OSA-KOMAR boats would present a serious threat to any amphibious operation, the ROK need not maintain its own countermeasures capability in order to conduct amphibious operations. Since its amphibious capability is limited to lifting a regimental landing team (RLT) on a short-haul basis, the assumption can be made that US forces would be involved in any major amphibious effort and that appropriate defense measures against the OSA-KOMARs would be provided.

Current ROK counter-infiltration plans take into account the threat of OSA-KOMAR attack. Major combatants which would become likely targets for a missile attack are not assigned patrol duty along the DML or its extension. The assumption is made that the North Koreans would not use the OSA-KOMARs against the smaller units because the reduced pay-off would not be worth expending the missile boats and probable subsequent escalation of the conflict.

6.2 ROKN Defense Capabilities

The optimum method of defense against the missile threat is to develop a standoff capability beyond the range of the missiles. Detection in itself is a major problem. Electronic counter-measures (ECM) equipment can be used to detect the STYX missile guidance radar (Square Tie), but effective emission control doctrine can limit even this capability. The guidance radar system could be left in standby until just prior to firing the missile. The cost of developing even this limited detection capability may be economically prohibitive. An effort is being made, however, to provide the major ROKN fleet units - DD, DE, PG and APD - with ECM equipment capable of detecting the Square Tie guidance radar. ^{50X1} has estimated that the cost per ship would be about \$4 million. More advanced versions could cost as much as \$6 to \$7 million per ship. COMNAVFOR/KOREA efforts to obtain even interim ECM capabilities for his ships may be frustrated by the reduced MAP funding available for Korea. ECM equipment has been included in the recent Counter-infiltration/Guerrilla and Force Improvement Requirements, 1969 (CIGFIR) submitted by COMUSFORKOREA. A total of \$96,000, which includes operating and maintenance costs, has been requested to provide SLD-2 portable ECM equipment for the 6 larger ROKN ships.

At present, the only ROK defense against these boats, once they are detected, is provided by ROKAF F-5s and F-86s which are kept on alert to provide a strike capability against agent boat infiltration efforts. In the event of hostilities, aircraft could patrol at low altitude about 25 miles from ROK naval forces or probable target areas. The limited sea keeping ability of the boats and present intense patrol efforts do enhance the prospect of their detection prior to approaching vital target areas. The location of all guided missile boats on the East Coast does limit the threat. A severe limitation of the ROKAF defensive capability is their requirement for visual flight conditions in conducting an effective attack. Provision of maritime patrol aircraft, also included in the CIGFIR proposal (see Section 7 and Chapter V), would greatly improve ROK detection capabilities.

~~SECRET~~

~~SECRET~~

Improved defense against the OSA-KOMAR threat will require effective communications between naval units, command centers and ROKAF units, as well as close coordination. The ability of the ROK forces in these two vital areas is reportedly quite limited. Acquisition of real time communication capabilities would be a major improvement. The acquisition of SSB (Single Side Band) equipment to replace existing CW and UHF capabilities has also been deferred as a result of the limited funding that is available.

6.3 Conclusions

Until detection and communication capabilities are significantly improved, ROK ability to meet the OSA-KOMAR threat will be marginal at best. The only real alternative is to rely on the assumption that the OSA-KOMAR boats would only be utilized overtly in an escalated conflict which would make U.S. military hardware assets available. The proportional cost of preparing the ROKN and ROKAF to meet this specific threat without U.S. assistance is prohibitive. U.S. Navy patrol aircraft (P-3) conduct patrols in the Sea of Japan and the Yellow Sea and do provide a significant additional detection capability. In the event of overt aggression, which would characterize employment of the OSA-KOMARs as missile launchers, Seventh Fleet units would be made available as a major countering force. Providing the ROK forces with a countering missile program within the time frame of this study would be economically prohibitive in terms of money, manpower and materials.

~~SECRET~~

~~SECRET~~

SECTION 7: COUNTER-INFILTRATION REQUIREMENTS

7.1 Introduction

The most serious threat that the ROK Navy currently faces is preventing seaborne infiltration of North Korean agents. North Korean efforts to infiltrate substantial numbers of agents and guerrilla bands into ROK territory have increased dramatically in the past several years.

In a significant policy shift, Kim Il Sung, in late 1964 and early 1965, decided to aggressively pursue guerrilla warfare as a means of accelerating movement toward his announced goal of reunifying Korea on Communist terms. The North Korean Premier is aware that the well-established US/ROK positions along the demilitarized zone can effectively be outflanked by sea.

The specific purposes of infiltration include intelligence collection, propaganda dissemination, terrorism, sabotage, agent recruitment and efforts to establish an indigenous guerrilla base. As a result of NK efforts, tensions between the two Koreas have increased and the danger of escalating the conflict through miscalculated retaliation overshadows the significance of individual raids.

With minor exceptions the U.S. has managed to suppress retaliatory forays into North Korea but the danger remains that continued ROK frustration in efforts to stop infiltration may increase pressure for strikes against the North. Although ROK President Park apparently does not want to engage in major retaliation, he must maintain military support if he wishes to remain in power. The ROK defense measures will become an increasingly political issue. At the same time, ROKG over-reaction, political repression and poorly administered internal security programs could result in the alienation of portions of the populace and endanger this bulwark against North Korean subversion. Eventual return of ROK military commanders from Vietnam and competing military leaders who have been forced to accept the unglorious defensive roles at home may well add a new group of hawks to the Korean scene.

Finally, if the infiltration efforts can divert badly needed capital from development to defense efforts in South Korea, they will have achieved partial success.

~~SECRET~~

~~SECRET~~

This section deals with one facet of ROK naval requirements which may have as many psychological and political considerations as military. The overall infiltration problem is treated elsewhere in Chapter Five.

7.2 The Nature of the Problem

Extent of Infiltration. The first problem is measuring the extent of the infiltration threat. Although there are many tabulations of Armistice violations from both US/ROK/UNC and NK sources, it is impossible to state the actual number of seaborne landings that have been made. In 1967 there were probably 46 landings, and in 1968 there were probably 19. In the first four months of 1969, there have been 4 landings. The diminishing number of landings is attributable to increased seaward patrols by the ROK Navy, which averaged nine per day in 1967, 19 per day in 1968, and in 1969 will average about 33 per day. Plotted on a curve, however, the diminishing returns become apparent: additional patrols in excess of about 25 do not significantly reduce the number of landings, which can be forecast as about 10 or 12 for the year.

In January, an agent landed near Pusan after three previous attempts had been thwarted by ROKN patrols. In February an agent landed on an island west of Inchon. Again the same month, ROK DD-92 engaged in a gun battle with an agent boat which was attempting to reach Haeju from the south. The destroyer sustained 10 personnel casualties, including 2 dead. The preponderance of evidence indicates that this boat had failed to achieve its landing and was attempting to return to Haeju. In March, on the east coast, at least four NK agents landed approximately 55 miles south of the DMZ, attacked a police guard post, and returned to the sea, only to have their raft sunk under them. In April, two fishermen were kidnaped from a southwestern island and presumably spirited away to North Korea. The agent's boat in this case was undetected.

Infiltration Routes. Although infiltration routes through the DMZ are still used, an estimated 60-70 percent of the North Korean Intelligence Service (NKIS) agents reach South Korea by sea. South Korea's coastline has many outlying islands and coves that provide adequate cover for seaborne infiltration. The surveillance effort is complicated by the indigenous fishing industry and coastal shipping which create a large amount of legitimate traffic that must be screened. Indiscriminate harassment or destruction would seriously hamper the local economy and undermine the people's allegiance to the government. Marine products provide most of the animal protein in the Korean diet and have become an important export commodity. The fishing fleet follows the seasonal migration of various types of fish to banks and habitual feeding areas. These masses of varied boats provide excellent cover for the agent boats which are normally disguised as a part of the fishing fleet.

There are 50,000 fishing vessels which normally operate in Korean waters. The total number of boats which fish beyond 20 nautical miles is about 6,200. At any one time, about 20 percent of these will be in port for unloading, repairs, etc. It can be anticipated that 4,960 boats will be operating beyond 20 nautical miles.

~~SECRET~~

~~SECRET~~

The breakdown of fishing activity by patrol area is indicated below:

| | <u>East Coast</u> | <u>West Coast</u> | <u>South Coast</u> |
|--------------------------------|-------------------|-------------------|--------------------|
| <u>% of Boats</u> | 18.2 | 11.5 | 70.3 |
| <u>No. of Boats</u> | 900 | 575 | 3485 |
| <u>Area (length and width)</u> | 250 mi x 20-80 mi | 175 mi x 100 mi | 50 mi x 300 mi |
| <u>Boat Density</u> | 0.06 per sq mi | 0.033 per sq mi | 0.23 per sq mi |

Almost all boats which fish beyond the 20 mile limit are powered vessels.

Agent boat infiltration routes have been established on both coasts. Although the West Coast is highly vulnerable to infiltration because of the heavily indented coastline, numerous islands, and easy egress from the beach areas, a limiting factor is the severe variations in the tides (from 12 to 33 feet) that cause extensive mud flats and navigational hazards. The tide cycle also tends to limit the hours during which infiltration attempts can be made. By contrast, the East Coast offers good landing conditions but limited cover because of the relatively straight coast line. The mountainous terrain immediately inland hampers access to the population centers and many of the military installations. Figure 7.1 shows the normal infiltration routes. Note the frequency with which they coincide with existing fishing areas. On the longer West Coast route a North Korean tanker, prepositioned in Wang Chia Bay on the Chinese Santung Peninsula, is frequently used to support the agent boats.

There are several factors which determine the choice of routes besides the presence of the fishing fleets and operational requirements. The period of April through the first part of November offers the most favorable temperature, sea, and wind conditions. The freezing coastal waters of the northwest coast during winter months help to restrict agent traffic and prevailing winds make landing operations hazardous.

North Korean Infiltration Capability. The relative importance that the North Koreans place on their infiltration program is clearly reflected in the quality and sophistication of equipment used. The boats are generally new construction, high-speed, long-range craft that are not operationally restricted by range or speed requirements. They are reportedly capable of 35 knot speeds and can outrun most ROK vessels. Some of the boats are large enough to carry as many as 30 men. They are usually heavily armed and have some navigational equipment and radar. Although there is no exclusive type in use, motorized sampans or less sophisticated boats may be used when operations require deception rather than speed or range. The

~~SECRET~~

NORTH KOREAN SEA BORNE INFILTRATION ROUTES

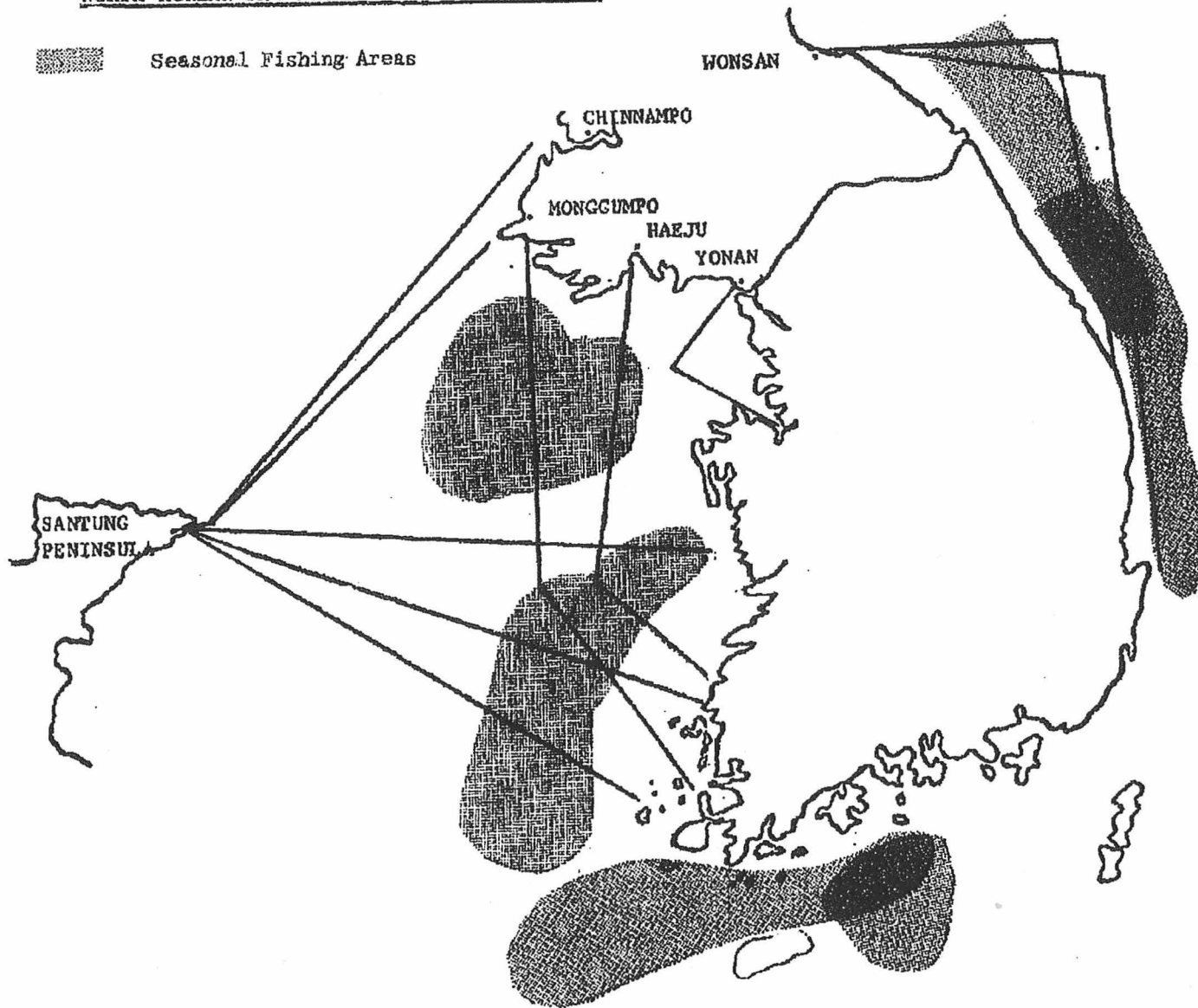


FIGURE 7-1

~~SECRET~~

agents themselves are well-trained and equipped. Their equipment often includes solid state communications equipment, modern cameras and ample sums of money (frequently counterfeit). Moreover, morale is probably high for guerrilla-type operations; the boats are permitted to request assistance if harassed or damaged. In April, 1967 when an agent boat was caught by the ROK Air Force, ROK radar observed several Communist Chinese aircraft enroute to intercept and a Chinese ship was diverted to the area. Imports, largely from Japan, of marine equipment suitable for use on high-speed infiltration boats and of rubber rafts for secret landings were doubled in 1968. Table 7-2 lists the characteristics of captured agent boats.

TABLE 7-2

CHARACTERISTICS OF SELECTED AGENT BOATS
(20-50 Ton Class)

| <u>Length</u> (feet) | <u>Diesel</u> <u>Propulsion</u> (No. Eng/HP) | <u>Speed</u> (Knots) | <u>Radar</u> | <u>Construc-</u> <u>tion</u> | <u>Color</u> | <u>Armament</u> | <u>Remarks</u> |
|-------------------------|--|-------------------------|--------------|---------------------------------|----------------|-----------------------------|-----------------------------|
| 59 | 3/300 | 35 | Yes | Wood | White | Small Arms | Sunk by ROKAF 4-17-67 |
| 65 | 3/300 | 20/30 | Yes | Wood | Grey/ White | -- | Constructed in 64 |
| 65 | 2/1180 | 32 | Yes | Wood | -- | 1X32MM Recoil- less | Constructed in 64 |
| 86 | 3/1200 | 35 | No | Wood | White | 1X82MM Recoil- less | Ran Aground, 6-3-67 |
| 98 | -- | 30 | -- | Wood | -- | Mortars, Machine Guns | Sunk by ROKN, 10-13-66 |

7.3 ROK Counter-Infiltration Efforts

The ROK effort to counter seaborne infiltration can not be judged only by its ability to catch agent boats. Since 1964, they have apprehended only four. However, by continued improvement in patrol posture, and with increased practice and coordination, a significant reduction has been achieved in North Korean landings. There has been a direct correlation between the attrition of seaborne landings and the increased patrol posture. The deterrent impact of added patrols must be taken into consideration. Moreover, after a density of about 25-30 patrols, additional patrols fail to achieve a significant attrition on agent boat landings. If the ROKN can continue a 25 patrol posture, successful agent boat landings should be kept below 12 in 1969.

~~SECRET~~

~~SECRET~~

In time of peace, coastal patrol operations are the responsibility of the ROK fleet, Task Group 98.3. Despite the conditions of the Armistice, ships of other UN navies cannot participate effectively in counter-infiltration patrols, unless an agreement is reached with the Government of the ROK to assist it in enforcing its customs, or immigration laws. Since no such agreements exist, not even the US Seventh Fleet can intervene in suppressing infiltration of the ROK.

Patrol task force units are designated for the South, East and West Coasts.

In early September 1967, the ROK Navy patrol efforts were redirected toward coastal surveillance to protect the east and west coasts against clandestine infiltration. The ROK Navy shifted from a few disorganized, off-shore linear patrols with a 4% probability of detection into a systematic coastal barrier with a 50% probability of detection along the east and west coasts.* To implement the improved barrier, the ROK Navy increased the at-sea time of the ships from about 30% to about 42%.

With the mounting frequency of infiltration a joint US-ROK plan, Counter-Infiltration - Counter-Guerrilla Concept and Requirement Plan (CIGCOREP) was developed in October, 1967 to counter this threat. Thirty-two million dollars were provided from service funds. This plan for the detection and prevention of agent team landings by fast boats or fishing boats on the ROK coasts calls for the use of naval and air forces in the seaward barriers and Korean National police and civilian coast watchers backed up by quick reaction teams ashore. The following specific improvements were possible as a result of the CIGCOREP program:

1. Fifteen radar sites were established along the coast and on outlying islands to increase the ROK ability to detect shipping closing the coast.
2. The ROK inventory of patrol craft was expanded by the addition of the following units:
 - a. Four 40' and nine 65' Sewart patrol boats.
 - b. Two 65' Fast Patrol Boats (FPB) which are funded for in-country construction.
 - c. Twenty-three 36' LCPLs are funded for in-country construction and an additional twenty-five are programmed.
 - d. Nine 95' Cape Class Cutters (LFB) are in-country.
3. The number of major surface units was increased by the addition of two destroyers, three APDs reactivated in-country and reclassified as PGs, an additional PC conversion reclassified as a PG, and one MSC. In addition, four MSCs and four MSF/PCE conversions are scheduled for delivery to the ROK Fleet during FY 70-74.

* ROK estimates

~~SECRET~~

300

~~SECRET~~

The seaward barriers are essentially composed of ROK naval forces. The ROK Air Force and US Navy aircraft, when available, fly supporting reconnaissance flights. The offshore patrols take advantage of routine Navy surveillance flights and are periodically augmented by CINCPAC. These are normally P-3 aircraft.

The ROK Air Force conducts airborne patrol operations utilizing C-46 aircraft. Until recently, these planes had only visual means of spotting the contacts. Flares dropped from C-46s are used during night operations to illuminate the target for the destruct aircraft. CINCPAC P-3 patrol planes are also used. The respective patrol areas are indicated in Figure 7-2.

The present patrol plan, named "Sang-Uh" after a particularly vicious shark, has 42 sectors. Ships are concentrated in those sectors north of 35 30'N, the area where landings would probably take place, and the most lucrative potential target area.

Units are assigned sector patrols along the coastline, about 20 miles in width and extending about 40 miles seaward. The outer patrol sectors are about three times the size of the inner sectors and extend an additional 60 miles to seaward. They are not usually occupied by units. Duration of patrols is up to 40 days for destroyers, and shorter periods for smaller units. All ROKN ships in the present inventory, with the exception of the AO's, have been assigned patrol missions.

Whether a patrol will be effective depends often on personnel, rather than equipment limitations. Unless the patrol is aggressively conducted, it will not be effective. It is easy to blame inability to detect or classify contacts on faulty equipment rather than human error or inattentiveness. Random patrols must be conducted to prevent the enemy from exploiting the patrol crafts' pattern of operation. Vessels edging close to patrol borders in anticipation of relief or seeking shelter in bad weather often leave gaping holes in the surveillance net.

The need for cooperation and coordination is particularly strong. While the ROK Navy has acquitted itself quite well in individual ship operations, it has continually failed to demonstrate the capability for inter-ship or inter-service coordination. Both are particularly critical in the surveillance effort. Merely providing more ships and newer equipment will not solve this problem.

The ROK authorities continue to push for high-speed patrol craft which are capable of overtaking the fast agent boats. Successfully concluding a stern chase is not the solution. As US forces in MARKET TIME surveillance operations in Vietnam have learned, it is much more profitable to maintain coordinated random barrier patrols. Once a contact is spotted, adjoining patrol craft are vectored into intercept positions. The speed of the US MARKET TIME patrol craft is comparable to those ROK Naval units used for patrol purposes.

~~SECRET~~

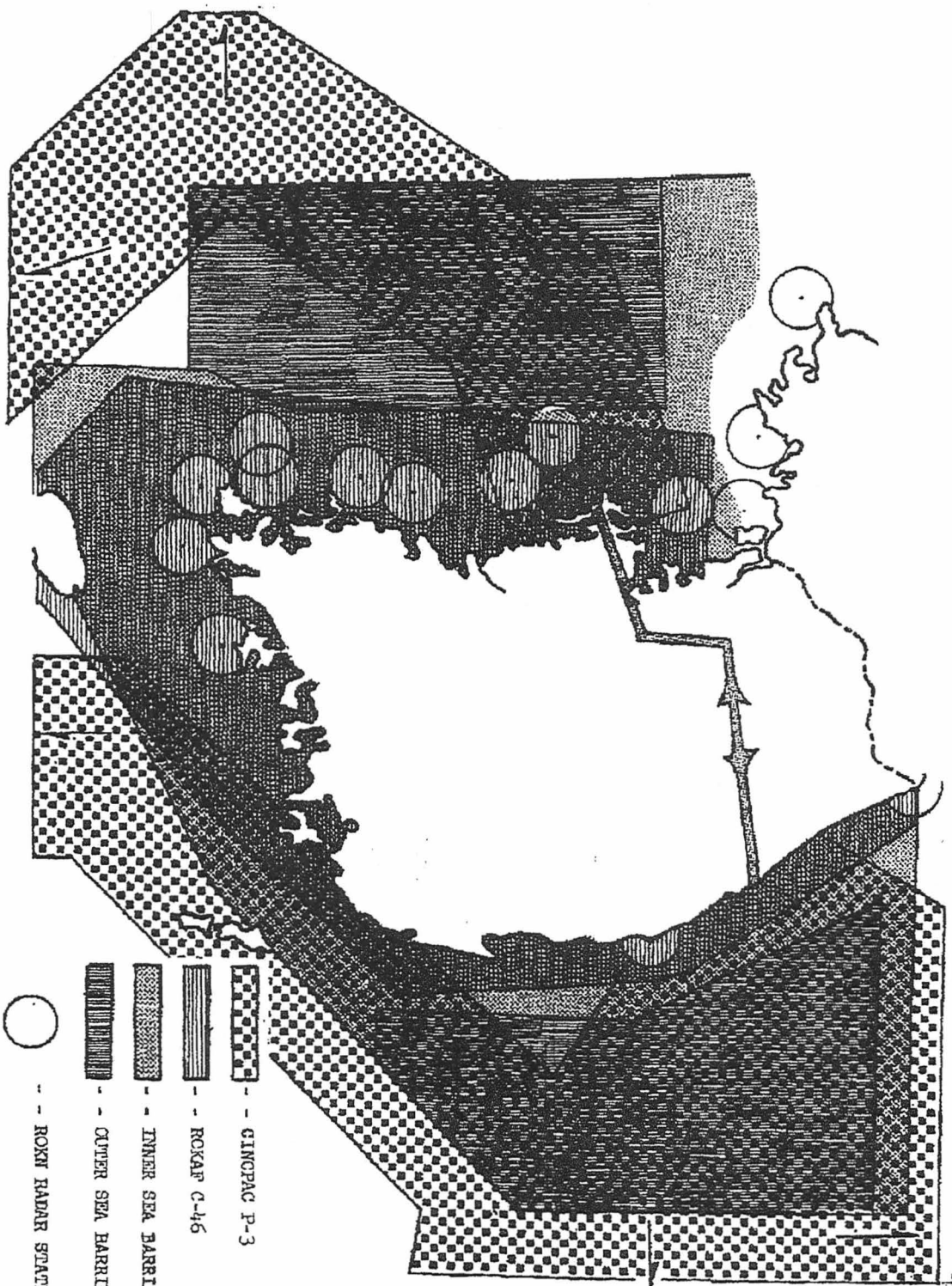


FIGURE 7-2

- -- ROKAT HADAR STATIONS
- ▨ -- OUTER SEA BARRIER
- ▩ -- INNER SEA BARRIER
- ▧ -- ROKAP C-46
- ▦ -- GINCPAC P-3

~~SECRET~~

CIGFIR. It has been difficult for ROK forces to assess the impact that their counter-infiltration efforts are having. After an intense effort by ROK forces with US assistance to meet the seaborne threat created by the North Koreans in 1967, they found a different type of problem facing them in 1968.

There are indications that the North Koreans are now utilizing three new tactics: (1) Agents have used inconspicuous junks or fishing craft to infiltrate the coast in the vicinity of Haeju. (2) Agent boats have mingled with ROK fishing vessels accompanying them south of the demarcation lines when the fishing fleet returned home from these prohibited areas. (3) Multiple landings have been made to handle large numbers of men.

As a result of this changed threat another force improvement plan has been advanced for ROK forces to enhance their counter-infiltration capabilities, the Counter Infiltration/Guerrilla and Force Improvement Requirements (CIGFIR) for ROK/US forces in Korea. The CIGFIR plan will continue to develop a layered defense of the DMZ and seaward approaches.

The force improvement plan draws heavily upon the TRW Counter-Infiltration Study which was concluded in November 1968. The study concluded that a coastal radar system would be the most advantageous cost-effective system. Their plan is to use Coastal Marine Radar (Raytheon 1645) for detection, patrol vessels for classification, and land-based quick reaction forces for neutralization. The effective coastline for a coast-watching system is 1707 miles long while for a radar system spaced at 12 to 20 mile intervals it is only 815 miles.

CIGFIR, if fully implemented, would add the following counter-infiltration assets to the ROKN inventory: (1) 21 new radar sites; (2) 37 new Raytheon Radar (1645); 19 WPB 95 ft. Cape Class Cutters; (4) 18 50 ft patrol craft (PCF); (5) 2 AOCs; (6) 29 MSL/MSMs; (7) 12 harbor defense craft. This will give a total of 36 radar sites and 37 additional high-speed patrol craft. The AOC's, if obtainable, would enhance patrol effectiveness by providing an underway replenishment capability and resultant increases in maximum patrol duration. The Raytheon radars are not logistically supported by the US Navy and could become a serious supply problem when repair parts and other maintenance became necessary.

Advantages of the CIGFIR Equipment: (1) The detection and classification capability of the ROK Navy would be significantly increased; (2) the agent boats could be detected before they reach the coast.

Disadvantages of CIGFIR: (1) A significant amount (\$43 million) of sophisticated equipment, both radars and boats, would be added to the ROK Navy inventory, and would be both difficult and costly to maintain. (2) The necessity of this large an increase in material has not been fully justified. Proper utilization of existing equipment could be an alternative. (3) The life-span of the equipment being procured would be comparatively short, especially with poor maintenance. (4) A marked increase in operating and maintenance costs could be anticipated.

~~SECRET~~

~~SECRET~~

7.4 Suggested Alternatives

While one method of enhancing counter-infiltration capabilities is to increase the amount of equipment employed, an alternative method might be to ensure full utilization of equipment already on hand:

- a. Institute an exchange program with US MARKET TIME units and coastal surveillance centers. This would allow ROK personnel to benefit from US Navy experience under similar circumstances in Vietnam, envision adaptation for their own situation, and make the point that initiative and imagination, not more sophisticated equipment, make the difference between success and failure. This would tie in very well with the recent establishment of a joint ROK/US Operations Center.
- b. Put ROK search parties on vessels in the fishing fleet. These teams would identify suspicious vessels and could prevent the fleets from becoming a haven for infiltration boats.
- c. Create exclusion zones adjacent to an extension of the DMZ and near likely infiltration areas.
- d. Adopt a system of rewards and penalties for cooperation or failure to cooperate with ROKG anti-infiltration efforts. The ROKG should further exploit the people's animosity toward North Korea.
- e. Re-examine the present bounty system. In its present form, it may obstruct vital coordination and cooperation in the counter-infiltration efforts.

~~SECRET~~

~~SECRET~~

SECTION 8: ALTERNATIVE FORCE STRUCTURES

8.1 Summary

Due to the current ROK and USG interpretation of the threat posed by North Korean forces, there are a limited number of alternative forces that can be realistically created. It is possible to isolate four major alternatives.

Alternative A - The Present Force Level without Improvements: The existing force structure

Alternative B - The Present Force with Minimal Equipment Improvements:

Alternative C - An Improved Force which concentrates on Counter-Infiltration Capability Improvements: (A sub-case which provides for anti-infiltration equipment and additional force improvements is also provided.)

Alternative D - An Independent ROK Naval Capability.

The foreign exchange (MAP or DOD-CIGFIR funds) and ROK budget costs of these alternate programs are summarized in Table 8-1 on the following page.

8.2 Limiting Factors

Before any alternative ROK naval force can be properly evaluated, there are numerous limiting factors which must be taken into consideration. The discussion which follows isolates some of these factors that undoubtedly will have an impact on the effectiveness and feasibility of any alternative that is developed.

a. The political role that forces play. The US cannot afford to overlook the political impact that ROK naval forces have on Kim Il-song and the North Koreans on one hand and domestic South Korean politics on the other. President Park is fully aware of the fact that the acquisition of destroyers and additional patrol craft has enhanced the image of his navy and himself. The addition of ships to the inventory, regardless of how badly they are maintained or manned, does add to ROK prestige.

In the current atmosphere of rising political tension any tangible reduction of ROK naval forces would be politically unacceptable. In this respect the Republic of Korea may be a victim of its own propaganda. Having given wide coverage to Kim Il-song's threat of reunification by 1970, by means of force, if necessary, and having treated the intensified infiltration of North Korean agents as a manifestation of this, reduction of naval forces, even if for valid reasons, would be unacceptable.

The US commitment to the ROK Government in connection with the deployment of South Korean troops to Vietnam cannot be forgotten either. Our

~~SECRET~~

305

~~SECRET~~

TABLE 8-1

SUMMARY OF ALTERNATIVE COSTS (in million U.S. dollars)*

| | <u>FY 70</u> | <u>FY 71</u> | <u>FY 72</u> | <u>FY 73</u> | <u>FY 74</u> |
|---|--------------|--------------|--------------|--------------|--------------|
| <u>Present Program (Alternative A)</u> | | | | | |
| ROK Budget | 22.9 | 23.6 | 24.3 | 25.0 | 25.8 |
| MAP | | | | | |
| Operating Cost | 12.4 | 12.8 | 13.2 | 13.6 | 14.0 |
| Investment Cost | 0.0 | -- | -- | -- | -- |
| <u>Improved Force (Minimal)(Alt. B)</u> | | | | | |
| ROK Budget | 22.9 | 23.6 | 24.3 | 25.0 | 25.8 |
| MAP | | | | | |
| Operating Cost ** | 12.4 | 12.8 | 13.2 | 13.6 | 14.0 |
| Investment Cost | 10.3 | -- | -- | -- | -- |
| <u>Improved Anti-Infiltration Capability</u> | | | | | |
| <u>Alternative C</u> | | | | | |
| ROK Budget | 25.0 | 25.8 | 26.6 | 27.4 | 28.2 |
| MAP | | | | | |
| Operating Cost | 13.4 | 13.8 | 14.2 | 14.6 | 15.0 |
| Investment Cost | 19.1 | -- | -- | -- | -- |
| <u>Alternative C (CICFIR subcase)</u> | | | | | |
| ROK Budget | 25.8 | 26.6 | 27.4 | 28.2 | 29.0 |
| MAP | | | | | |
| Operating Cost | 14.8 | 15.3 | 15.8 | 16.7 | 17.2 |
| Investment Cost | 62.9 | -- | -- | -- | -- |
| <u>Independent Capability (Alternative D)</u> | | | | | |
| ROK Budget | 22.9 | 23.6 | 24.3 | 25.0 | 25.8 |
| MAP | | | | | |
| Operating Cost | 12.1 | 12.6 | 12.7 | 13.4 | 14.3 |
| Investment Cost | 4.3 | 7.2 | 8.9 | 7.0 | 7.9 |

* Includes inflation at an annual rate of 3%.

** This estimate includes \$5,534,000 investment costs contained in the FY70 CINCPAC MAP plan.

~~SECRET~~

~~SECRET~~

agreement that the integrity of Korea's defense will not be impaired by the deployment of ROK forces to Vietnam will certainly be taken literally by the South Koreans. For political reasons then, US options in considering alternative force levels will be limited to maintaining the status-quo or expanded force capabilities.

b. ROKN Manning Capabilities. An important factor which must be taken into consideration is the limited ROKN capability to man additional ships. South Korea does not have an over-abundance of skilled manpower available for utilization in naval expansion. The large influx of equipment which was provided subsequent to the PUEBLO and Blue House incidents has heavily taxed the ROKN training, operating and maintenance capacities. The ROK paucity of skilled managers and logistical planners will be a serious bottleneck in any efforts to absorb significant quantities of additional equipment.

At the present, the skilled/non-skilled ratio is about 3 to 1 throughout the navy. This skilled manpower is becoming increasingly difficult to acquire, particularly when the growing Korean economy offers attractive alternatives for eligible young men. A training program must also be integrated with any force improvement plan. The lead time or training of a technician or operator may be just as critical as that on the delivery of the equipment itself. An accelerated training program must precede acquisition of additional equipment. Training costs themselves may be prohibitive in terms of money, time and personnel.

Current plans do not call for a significant increase in manpower authorization for the navy.

c. Weather. The severe weather that typifies Korean waters also has to be taken into consideration. Habitability and sea-keeping capability requirements may preclude use of certain types of ships and equipment that have been successful elsewhere. Patrol lengths and transit times may be significantly different from those which characterize operations in Vietnam.

d. Leadership. The characteristics and human frailties of the ROK naval personnel must also be evaluated. The continued inability of ROK naval units to communicate and cooperate with each other is an important constraint on the level of sophistication their equipment should have. Even though the ROK Navy has demonstrated proficiency in single-ship operations, there is a serious lack of inter-ship coordination and almost no inter-service coordination. Tactical commanders are allowed great latitude in interpretation of orders. As a result, failure to transmit orders and information is reflected in their inability to achieve rapid, reliable and secure communications. The failure to develop these essential attributes may be caused by the fact that "... the higher echelons of the ROKN officer corps, who have not been brought up in this environment of emphasis on technical skills, still display indifference in the oriental tradition to technical matters considered beneath their station."*

* Study of the Mission, Structure and Organization of PROVMAAG-K and the Service Advisory Groups - Korea (C) CINCPAC Ser 002561 dtd 27 Sept 68, p. 12

~~SECRET~~

307

~~SECRET~~

The younger, technically skilled, officers and enlisted men simply do not get the command attention and responsiveness that their equipment and mission require.

The attitudes of senior ROKN officers in command roles approximate indifference. A recent shakeup of the higher echelons of the ROK Navy has for the time being dispelled this attitude. An increasing desire to achieve has resulted from constant and heavy pressure from higher governmental echelons.

e. Air Force Roles. The ROK Air Force fulfills two missions that a comparable US force would assign to the Navy. The Air Force conducts ASW and counter-infiltration patrols and provides an on-call strike capability against North Korean agent boats. It is assumed that the ROKAF will continue to carry out these two missions in any future division of labor.

f. Modernization and Maintenance Requirements. An assessment of the age, condition and capability of existing ships and the modernization and maintenance demands they will occasion in the future is important in developing MAP requirements. In FYs 1967-68 the ROKN was augmented by two destroyers, not fully modernized, five inactive APDs that were activated in ROKN shipyards and nine Cape Class Cutters. The FY 69 reduction in MAP funding has almost eliminated the investment funds needed to modernize the ROK ships. An evaluation of the impact of this reduction reveals that 57 ROKN ships must rely on CW and UHF communications. Forty-five ships have obsolete and ineffective search radars. The ships must also have adequate maintenance support. The ROKN has almost no electronic test equipment. As a result, maintenance of installed equipment has to be deferred until the ships reach port and consequently while they are deployed, vital equipment is inoperative or functions at a very low level of efficiency.

g. Other Uses of ROKN and Potential ROKN Resources. The ROK Navy is also meeting several additional demands. The added requirements are a result of the assistance which the ROK is giving to the US in Vietnam. At present, five of her amphibious vessels (3 LST's and 2 LSM's) are providing troop lift and logistical support to ROK units committed to Vietnam. These units are assigned for six to seven month tours transporting and landing amphibious vehicles, tanks, combat vehicles and other equipment in landing and amphibious assault operations. This contribution has reduced the ROK troop lift capability to less than the desired level.

Since 1966 ROK civilians have also manned US MSTs ships in support of Vietnam operations under a contractual agreement with the US Government. This mission has required utilization of a large number of skilled personnel who might otherwise be available to man the expanding ROK naval fleet. At present, the ROK personnel provides crews for 14 MSTs LST's and 5 medium-size dry cargo ships. With the exception of the Captains of the 5 cargo vessels, the entire crews are South Korean. The ships are US owned and fly the US flag.

h. Fuel. Before the current fleet modernization and expansion effort began, the ROK Navy was essentially reliant on diesel fuel. As the number of major combatants increases and steam-driven ships burning black oil are added to the fleet, existing POL storage and distribution problems will be further complicated (see Appendix F).

~~SECRET~~

308

~~SECRET~~

8.3 The Existing Naval Force

At present, the ROK Navy consists of 105 major units. The fleet can be broken down into five general categories: Surveillance and Ocean Escort, Mine-Countermeasures, Amphibious Assault Force, Auxiliary and Combat Support, and General Purpose Combatants.

a. Surveillance and Ocean Escort. There are a total of 58 units in this category ranging in size from small 40 foot SB's to Destroyer Escorts. Although many of the ships are old and obsolete, there is a continuing program to phase out the older units replacing them with PCE's which are modified MSF's. An attempt is being made to keep the PCE, PC, PF, PCEC force at 19 ships. As funding problems are encountered, the older ships will be kept on to maintain this level. A number of smaller patrol boats has also been added including the 95 foot Cape Class Cutter. In addition, 32 LCPL's are being built in-country to provide an in-shore patrol capability. Included in this grouping are three APDs which have been classified as PG's.

b. Mine Countermeasures. The mine countermeasures force was treated at length in Section 4 and will not be repeated here. Mention should be made of the fact, however, that the mincraft do double as patrol vessels and significant in-shore capability has been suggested in recent force improvement plans.

c. Amphibious Assault. This force consists of a total of 20 ships. The force objective is to retain the capacity to lift one Regimental Landing Team. Three LST's and two LSM's are assigned to support ROK forces in Vietnam. The LSM's are also used as patrol vessels and in re-supply of island radar sites. LSM-608 which is configured as a mine-layer is also included in this group because of its residual capacity as an amphibious assault ship. LSMR-311 is also included in this ship grouping. It is primarily designed for close-in fire support missions with 5" rockets. It also serves a patrol function.

d. Auxiliaries and Combat Support. This grouping includes 12 ships. The ARLs provide small cargo support for isolated areas of the ROK and for transfer of materiel from Pusan to Chinhae and the Naval Stations. The AOs are actually an odd mixture of small coastal tankers and yard oilers. Two of the ships have an extremely limited capability for underway replenishment. Their primary function is to transfer fuel from the refineries at Ulsan to POL storage facilities at Chinhae. The two ATA's are small ocean-going tugs which provide gunnery target service and limited salvage capability, in addition to their training ability. The ARL is a small but versatile repair ship that augments the repair capacity of the Chinhae Naval Shipyard. Its major contribution is in small boat repair and maintenance.

All the units in this grouping, with the exception of the ARL, also serve in a secondary mission as patrol craft.

~~SECRET~~
309

~~SECRET~~

e. General Purpose Combatants. Presently, 5 ships make up this grouping. Included are three Destroyers and two APD's. The ships presently fill a major role as patrol craft, but are equally important in ASW and naval gunfire support roles. The third destroyer is now completing refresher training in the US prior to joining the ROK fleet.

8.31 Base Structure

The ROK Navy has a single operating base at Chinhae. Small naval stations with limited logistical support capability are maintained at Gheju, Mukho, Pusan and Inchon. The Naval Station at Mokpo is not operational. A naval supply center, naval shipyard, and ordnance/ammunition depot are also maintained at Chinhae.

8.32 Cost of the Present Force

The total annual cost of operating the existing fleet is approximately \$9.2 million excluding personnel costs. The average annual cost per man in the ROK Navy is estimated at \$550. This expense is met by the ROK defense budget. A summary of ROKN base support costs with projection for the FY 69-74 time frame and a summary of operating costs for individual ship types is provided in Appendix B and C.

The development of adequate support facilities and capabilities is a serious continuing requirement which the ROK Navy faces. The fact that the fleet was created almost exclusively from extra-country sources has resulted in heavy reliance on the US for support.

MAP support is provided to all ROK units except two small oil tankers, one C-47 aircraft and units involved in the direct support forces deployed to South Vietnam. ROK naval units in Vietnam are supported by US service funds.

8.33 Current Deficiencies and Programmed Improvements

a. Chinhae Shipyard Modernization. Modernization of industrial, shop, and laboratory equipment has been planned. Total funding is estimated at \$3.3 million (\$2.3 million for equipment, \$0.7 million for construction costs, and \$0.3 million for other associated costs (supplies and maintenance). This would be matched by a ROKN defense budget input.

b. Additional Storage Facilities. Additional POL and ammunition storage facilities are planned. Two one million gallon capacity tanks and an additional 64,000 square feet of underground storage for ammunition would be constructed.

c. Additional Drydock. The ROKN has one drydock now at Chinhae, which can take ships up to 3,000 tons displacement. Construction of a second drydock has just begun, but additional funding is needed by the ROKN to obtain

~~SECRET~~

310

~~SECRET~~

associated machinery (pumps, air compressors, etc.). Best estimate for this machinery is about \$1.6 million.

d. Additional Tankers and POL Requirements. The ROKN now has 2 small tankers and 2 self-propelled oil barges. The additional ships being provided the ROKN and the increased tempo of ROKN operations, particularly against infiltration by sea of North Korean agents requires an increase in ROKN tankers to replenish ROKN ships and patrol craft on station. The increase in tempo of ROKN patrol operations, with the increase in North Korean agent infiltration by sea, and the additional USN ships provided to the ROKN (2 DD's, 1 MSC, 9 WPE's, 9-65 ft. patrol craft) during CY 68 will increase the ROKN POL requirements and therefore the MAP grant aid funding needed for POL items. This increased tempo of operations and local POL price increases will result in a POL funding deficit of about \$350,000 in FY 69. (See Appendix F.)

e. Ammunition Stocks. The ROKN obtains under the MAP grant aid program the following naval ammunition: 5 /38, 3"/50, 40mm and 20 mm. Other common ammunition is obtained from the ROK Army. MAP funding level for ROKN ammunition for these four naval types funded in FY 68 and on has been limited to: FY 69 - \$.565,000; FY 70 - \$1,271,000, and FY 71, \$1,425,000.

8.34 MAP Funding Limitations

Although Korea has received top priority for consideration in allocation of available MAP grant aid funds, it has been impossible to avoid some reduction. (In 1968 following increased infiltration efforts, the Blue House raid and Pueblo incident, the ROK received a \$100 million MAP augmentation and \$32 million from service funds). In FY 1969, although the MAP program called for a ceiling of \$160 million, the final allocation was reduced to \$139 million. This effectively reduced the Navy portion for Fiscal Year 1969 from \$16.4 million to \$12.7 million. (Foreign military sales are almost non-existent in ROK military-assistance program.) As indicated in Table 8-2 below, a comparatively small portion of the MAP grant aid is available for investment after operational and training requirements are met.

TABLE 8-2

MAP FUNDING FOR KOREA
(Amounts in thousands of dollars)

| Use | FY 67 | FY 68 | FY 69 | FY 70 | FY 71 |
|--------------|---------------|---------------|---------------|---------------|---------------|
| Investments | 4,231 | 18,363 | 2,277 | 5,534 | 8,994 |
| Training | 3,646 | 4,512 | 4,776 | 5,633 | 5,633 |
| OSM + Misc. | 7,669 | 9,130 | 6,981 | 5,823 | 5,264 |
| TOTAL | 15,546 | 32,005 | 14,034 | 16,990 | 19,891 |

(Note: The programmed figures for FY 69-71 are based on a \$160 million MAP ceiling.)

~~SECRET~~

~~SECRET~~

The Chief of the US Navy Advisory Group in Korea has indicated that the FY 69 MAP reduction will have the following negative impact on the ROKN:

- a. SSB communications for approximately 30 ships. This will prolong inadequate communications capability and degrade counter-infiltration efforts.
- b. ECM equipment for six ships. Without it the ROKN will be unable to detect SQUARE TIE radar from NK Komar boats.
- c. Numerous radio, radar and teletype equipment. Incompatible communications and inadequate detection capability of ROK fleet will continue; present equipment is obsolete, has unsatisfactory spare part backup and no longer meets even original WW II standards.
- d. Shipyard and repair ship equipment. ROK Navy is nearly capable of supporting fleet, but without programmed equipment will remain incapable of repairing DD/APD/PG main engines, 5"/38 cal guns, and fire control systems. The one ARL cannot support patrol ship electronics.
- e. Sixteen engines for in-country boat construction program. Completion of eight boats for counter-infiltration effort will be postponed.
- f. Dredging equipment. Ability to keep inner harbor of Chinhae naval shipyard useable will be lost. Ships are already grounding at low tide while moored at shipyard.
- g. Communication and radar equipment for conversion of LST to amphibious command ship. This equipment is essential to effective employment of ROK Marine Corps.
- h. Shore facility construction eliminated.

An attempt has been made to recoup these losses in the CIGFIR portion of CIGCOREP II.

In addition to the reduced MAP ceiling, rising costs further frustrate ROKN development efforts. A number of factors have created the cost increases that the ROKN now faces. Included are: Price increases averaging 5% per year; increased maintenance costs of about 1% per year (largely due to the age of the equipment) and the increased tempo of counter-infiltration activities which has added about 3% to the overall operating costs since the beginning of FY 68.

Because of the reduced investment funds available after operating and support costs are met, planned acquisition of new equipment has been significantly reduced. The only major items still in the FY 70 MAP Plan are listed in Table 8-3 on the next page.

~~SECRET~~

~~SECRET~~

TABLE 8-3

PRESENT PROGRAM FOR NAVAL MODERNIZATION (MAP)
(\$ Millions, quantity in parentheses)

| | <u>FY 69</u> | <u>FY 70</u> | <u>FY 71</u> | <u>FY 72</u> | <u>FY 73</u> | <u>FY 74</u> |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <u>GRANT MILITARY ASSISTANCE</u> | | | | | | |
| Minesweeper | | | 3.0 | 3.0 | 3.0 | 3.0 |
| Coastal 292 | | | (1) | (1) | (1) | (1) |
| Patrol Craft | | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| Escort 220 | | (1) | (1) | (1) | (1) | |

8.4 Alternatives

Four alternative force levels bear consideration in the context of this study, ranging from minor improvement of the current force to developing a basis for ROK regional naval cooperation:

The present force: Defense against NKN

The first option that we have is to maintain the ROK Naval force at its present size limiting expenditure of funds to normal operations and upkeep. This would provide the ROK Navy with a force of 105 ships and major patrol vessels. While this would avoid costly expenditures for investment in new equipment, the present fleet would deteriorate and operating expenses would continue to rise. Major deficiencies in electronics equipment, communications and armament would limit the effectiveness of the force and would provide a questionable capability to meet the North Korean threat. Current on-going programs for force improvement which include replacement of obsolete patrol craft and the MSC(O)s would be halted. This alternative would entail no MAP investment funds, \$23 million per year in ROK defense budget costs and about \$12-\$14 million in operating parts (foreign exchange) provided through MAP.

Minimal equipment improvements: Defense against NKN

Under this option the ROK Navy would keep its present number of ships, but essential improvements would be made in electronics and communications equipment and armament. Although there would not be a significant rise in the number of personnel required or a change in operating costs, the efficiency of the present force would be greatly improved. Normal scheduled improvements in the CINCPAC MAP Plan would be included.

The communications improvements envisioned would include single-side band equipment as well as UHF, FM and teletype equipment. The major electronics

~~SECRET~~

improvements include updated replacement radar and sonar equipment plus IFF and fathometer capabilities for those ROKN units which presently do not have it. ECM equipment would also be provided for the three DEs. The major armament improvement planned is provision of gunfire control systems for present armament on major ROKN ships. A detailed listing of all three types of improvements and related costs is provided in Appendix E. The actual cost totals \$4,737,789. The expenditures are almost equally divided between communications, electronics and armament improvement.

The primary advantage of this alternative lies in improved coordination capabilities of the ROKN fleet and more effective utilization of existing units. This alternative would include \$10.3 million in MAP investment FY 70-74 funds, \$23.0 million per year in ROK budget costs, and \$12-14 million in operating costs (foreign exchange) furnished through MAP (or in the future FMS).

Improved counter-infiltration capability

This alternative provides improved counter-infiltration capability only. This would provide all of the equipment in Appendix D with the exception of the suction dredge, the two AOGs, rehabilitation of Mokpo Naval Station and the support functions listed in items 20 through 25. This would entail investment costs of approximately \$19 million and operating costs of \$13-14 million. The cost to the ROK Government would be essentially the same.

Sub-case

This extra alternative adds a counter-infiltration capability improvements program (CIGFIR) to the modest recommendation made above. This entails a major expansion of the small craft in the existing ROK fleet. The actual number of major ships and patrol craft would be increased from 105 to 187. Principal additions are as follows: 6 LCU's, 19 WFBs, 18 PCFs, 2 AOGs, 29 MSL/MSMs, 12 Harbor Defense Craft, 1 Suction dredge, 21 additional radar sites. A complete listing of improvements provided under CIGFIR and their related investment and O&M costs is provided in Appendix D, Annex IV.

With respect to the remainder of the Navy, this alternative continues existing programmed improvements, primarily replacement of obsolete patrol craft and minesweepers. Certain facility improvements are included to offset base support deficiencies created by funding deficiencies in past years. The added MSL/MSMs are a major contribution to enhanced harbor defense and mine counter-measures capabilities. The two AOGs will provide the ROK fleet with an effective underway replenishment capability and will drastically extend possible patrol duration. This program would cost \$62.9 million in FY 70-74 US investment funds, \$24.7 million per year in ROK budget costs, and \$15-\$17 million in operating costs (foreign exchange) furnished through MAP (and DOD).

~~SECRET~~