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GAME WARDEN

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FOREWORD

In addition to the documents listed in the bibliography appearing at the end of the main text, this research contribution is based on: command histories; NavForV in-house working papers, memoranda, and drafts of briefings and studies; interviews; and information provided by the Central Intelligence Agency (CIA) and the Defense Intelligence Agency (DIA).

Most of this information (except that provided by the intelligence agencies) can be found in the Vietnam Command Files and the NavForV Provenance Files at the Naval History Division Archives. The authors express their appreciation to Oscar Fitzgerald of the Naval History Division for his patience and help in using these files. The authors, of course, assume full responsibility for their interpretations of these documents.

INTRODUCTION

Game Warden was the U.S. Navy/Vietnamese Navy (VNN) operation established in December 1965 to deny enemy movement and resupply on the major rivers of the Mekong Delta and the Rung Sat Special Zone (RSSZ) in South Vietnam (SVN). The U.S. considered river control to be an essential element in the overall plan to pacify SVN.

This research contribution examines the threat in the Mekong Delta and the RSSZ, specifically on the rivers. Game Warden's response to the threat and limitations on that response are discussed, and enemy resupply needs, logistic routes, and infiltration options are examined. Game Warden's full effect on the enemy remains unknown, but changing trends in his use of Delta and RSSZ waterways are noted.

The Game Warden concept was expanded with the beginning of Sea Lords in October 1968. Sea Lords is beyond the scope of this report, and the discussion of Game Warden in the Delta and the RSSZ ends with September 1968.

Figure 1 shows some of the key geographical locations highlighted in this report.

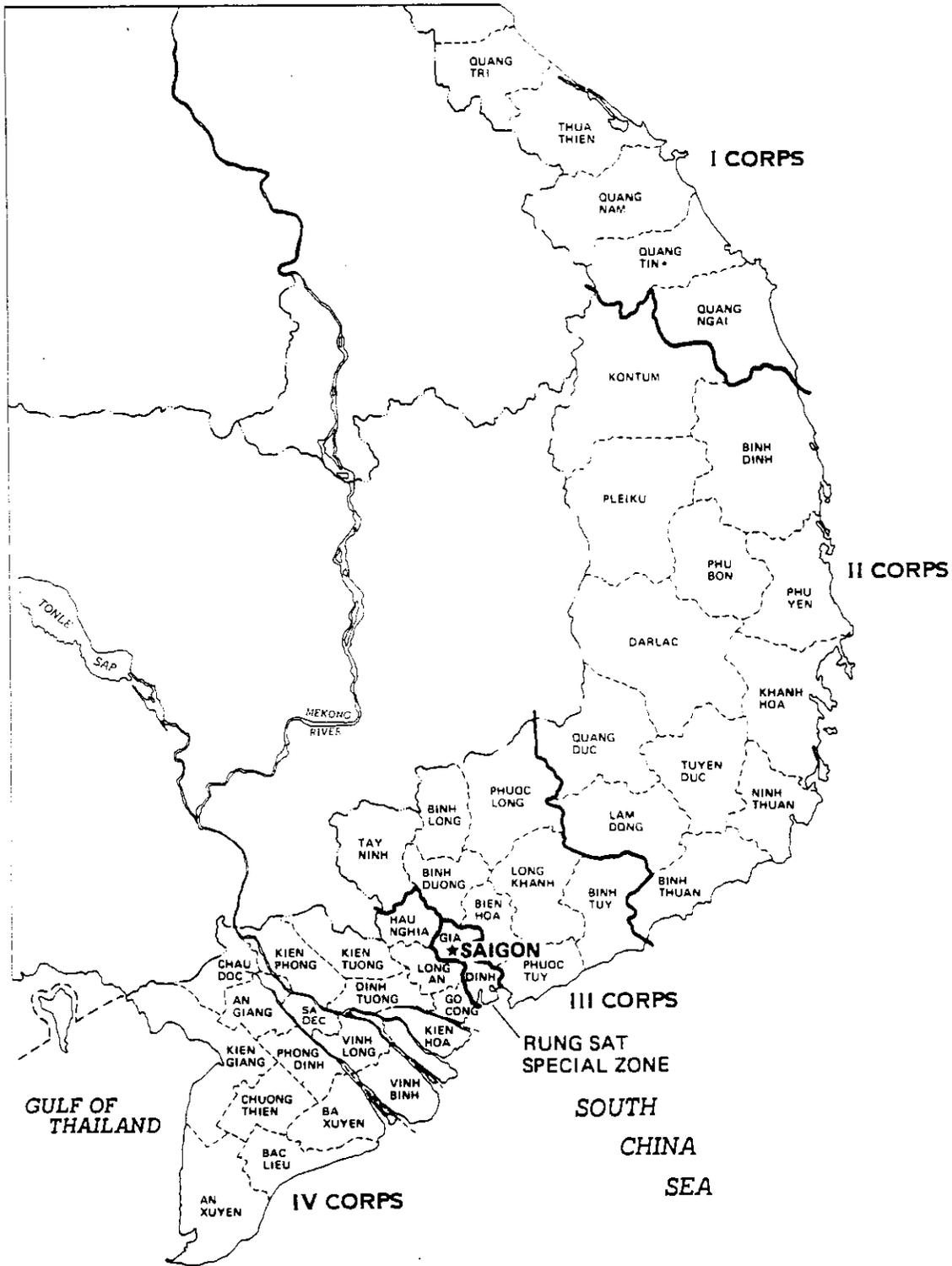


FIG. 1: SOUTH VIETNAM

SUMMARY

During the early 1960s, the Viet Cong (VC) in southern SVN successfully undermined the SVN government's attempts to develop a sense of national responsibility among the population. Much of the southern half of the country--III and IV Corps¹--was under VC control. But to maintain and increase this control, the VC had to infiltrate war materials into SVN.

Through the early part of 1965, the U.S. Military Assistance Command, Vietnam (MACV), considered the sea to be the main infiltration resupply route to southern SVN. Even before the major U.S. commitment in SVN in 1965, Cambodia was suspected to be a link in the resupply chain. There was, however, a question concerning the emphasis the communists placed on infiltrating supplies from Cambodia in relation to the emphasis on seaborne infiltration.

Before 1963, the Mekong/Bassac River complex was the major route from Cambodia to SVN used by the enemy for resupply. By 1966, additional enemy crossing points were located on the Cambodian/SVN border, and there were implications of high-level Cambodian military or government complicity in supplying the VC. MACV noted that Cambodia was the only area bordering SVN that could harbor communist forces with no threat of being countered by U.S. military action. Supplies from Cambodia were brought into SVN by inland waterways and overland routes.

Until 1966, the VC openly transited the major rivers of southern SVN and taxed the local population. The insurgents' use of the rivers for logistical movement was thought to be generally cross-stream rather than along-stream, especially in the lower Delta provinces fronting on the South China Sea. Lines of communication connecting VC base areas ran across major rivers. Near the Cambodian border, though, there was more along-stream traffic.

SVN military and civilian control of land, sea, and inland waterway routes was inadequate; the VNN River Force was particularly ineffective. Its main function was to furnish waterborne deployments and support for SVN army operations. But river patrol was given a low priority; consequently, the VNN River Force had inadequate resources with which to develop a significant capability for such patrols.

¹To avoid confusion with the VC system of military regions in SVN (MR-1, etc.), this report uses the older designation of "Corps areas" for allied operations--that is, I Corps, etc.

The U.S. Navy made its first large commitment in SVN in March 1965 with the establishment of Market Time, a U.S. Navy/VNN coastal surveillance operation. Market Time was to seal off the SVN coast from infiltrators. By mid-1966, MACV discounted seaborne infiltration as a major, workable resupply method for the VC.

Game Warden was established in December 1965 as a joint U.S. Navy/VNN operation to deny enemy movement and resupply on the major rivers of the Mekong Delta and the RSSZ. The rivers in the upper Delta in SVN are the Mekong and the Bassac. In the lower Delta, the Mekong splits into 3 smaller branches; in the RSSZ, the Long Tau River was the major shipping channel to Saigon.

Game Warden assets included shallow-draft river patrol boats (PBRs), armed UH-1B helicopters, and, in the RSSZ, minesweeping boats (MSBs). PBRs and helicopters were based ashore or on bases afloat. Three of the afloat bases were tank landing ships (LSTs) stationed on the 3 major rivers of the lower Delta. PBRs operating from an LST or one of the other afloat bases were much more flexible in meeting the threat than were those operating from shore bases.

Game Warden river patrols enforced SVN curfews, interdicted some VC logistical and tactical movements, and succeeded in influencing some of the Delta population in formerly VC-controlled areas to support the SVN government. In the RSSZ, MSBs swept mines along the main shipping channels and prevented the VC from closing off these vital links to Saigon.

Game Warden forces in the Mekong Delta were originally intended to give about equal coverage to the major rivers. By mid-1967, units in the upper Delta had reported only light contact with the enemy and were repositioned to give maximum concentration of forces on the lower Delta rivers, where extensive VC activity had been noted.

By spring 1968, the enemy was infiltrating supplies over the Cambodian border with impunity. In response, PBRs were again deployed to the upper Delta. But in July, PBRs in the upper Delta were, once again, experiencing only light contact with the enemy.

Evidence used in the planning of Sea Lords later in 1968 showed that the enemy generally crossed the border by canals or overland routes between the Bassac River and the Gulf of Thailand, or to the north of the Mekong River. Although the VC may have used the major rivers to cross the border before then, they probably changed their route to avoid PBR patrols. In the lower Delta, however, the VC were forced to cross major rivers to supply their base areas in the provinces between the rivers.

The concept of a static barrier on the major rivers of the Delta and RSSZ proved inadequate by 1968, and the Game Warden concept was expanded when Sea Lords began in October 1968. Sea Lords was a Delta-wide operation coordinating the combined assets

of the River Patrol Force, and 2 other U.S. Navy in-country task forces, and U.S. and SVN ground forces. Sea Lords would continually harass VC strongholds and interdict supplies infiltrated from Cambodia. The first Sea Lords barriers were established on canals 35 to 40 st.mi. from and parallel to the Cambodian border.

CONCLUSIONS

Until more information becomes available concerning Game Warden's effect on enemy operations, it is unlikely that its total impact can be assessed.

Some analysts have pointed to trends in the numbers of enemy incidents on the rivers as indicating areas that were critical supply routes for the enemy. But basing patrols on the frequency and intensity of contact with the enemy could be misleading. For example, the few PBRs deployed to the upper Delta experienced far fewer incidents than did those in the lower Delta. This could have signified heavier enemy concentrations in the lower Delta. However, the more intensive PBR coverage in the lower Delta and comparable enemy concentrations in both areas could have resulted in the greater number of incidents in the lower Delta.

Some conclusions, however, can be drawn from available intelligence, from assessments of Game Warden participants, and from an examination of the evolution of the operation:

- Game Warden interrupted enemy movement on traditional routes across the major Delta rivers.
- Enemy efforts to close the sea lanes to Saigon--a major VC objective--were denied by U.S. Navy/VNN forces.
- Game Warden secured many sections of the major Delta and RSSZ rivers for commercial use.
- Coordination between Game Warden and ground force operations was inadequate.
- The mobile afloat base concept provided flexibility to river boat operations, enabling river forces to respond to a continually changing threat.
- Curfews proved to be absolutely crucial to fulfilling Game Warden's mission.
- Helicopters were essential to riverine operations in fire support, observation, and medical evacuation.
- PBRs were adequate for patrols on large major rivers, but smaller waterways required more armor and armament.

- The young U.S. Navy officers and enlisted men assigned to river patrols performed aggressively and responsibly on their own initiative.
- The enemy proved to be flexible in adapting to Game Warden in the Delta by continually finding new routes for his supply lines.

BACKGROUND

MEKONG DELTA AND THE RSSZ

To understand the nature of the enemy that Game Warden had to deal with, it is important to first understand the environment in which he operated. The Mekong Delta is a vast lowland plain laced with an intricate and extensive waterway system (see figure 2). Most of the Delta is less than 10 feet above sea level. There are 2 major rivers in the upper Delta: the Mekong and Bassac. The Mekong in the lower Delta has 3 branches: the Co Chien Ham Luong, and My Tho. The Delta is also veined with thousands of canals, streams, and ditches.

The wet season lasts from mid-May to early October because of the southwest monsoon, and the dry season lasts from November through mid-March during the northeast monsoon. During the wet season, the ground is inundated because of the heavy rains and poor surface drainage. Typhoons can also cause flooding from July through December. From June through November, most canals are navigable by ships with a draft of more than 6 feet, but the canals are subject to tidal influences from the South China Sea and the Gulf of Thailand, making navigation difficult.

The Rung Sat Special Zone is a mangrove swamp laced with an intricate network of canals southeast of Saigon. The 2 major rivers of the Rung Sat are the Long Tau and the Soirap. The Long Tau River is the critical shipping link to Saigon. During high tides, any part of the Rung Sat can be reached by sampan.

About 6 million people -- almost 40 percent of SVN's population -- lived in the area south of Saigon in 1967. The average population density in the Delta was 460 persons per square mile; near Saigon, population density was 1,000 persons per square mile.

The farm population in the Delta was concentrated in small hamlets. Marsh areas were uninhabited since they are unsuitable for growing rice, the main occupation of most of the Delta population. The most densely populated provinces were those along the major rivers. The South Vietnamese farmer relied on the rivers and other waterways not only to carry his rich rice crop to market, but as his main line of communication. In 1966, there were more than 45,000 registered watercraft and uncounted thousands of sampans that traveled the estimated 3,000 n.mi. of navigable rivers and canals.

Villagers in the Delta (except for those around the port cities) had very little contact with the outside world. Their knowledge and interest in areas beyond their immediate environment was extremely limited. For centuries, tight-knit families had been the center of small village social structures known as hamlets. They were socially conservative and strongly resisted external influences. This situation presented the SVN government with a difficult problem -- developing a sense of national responsibility.

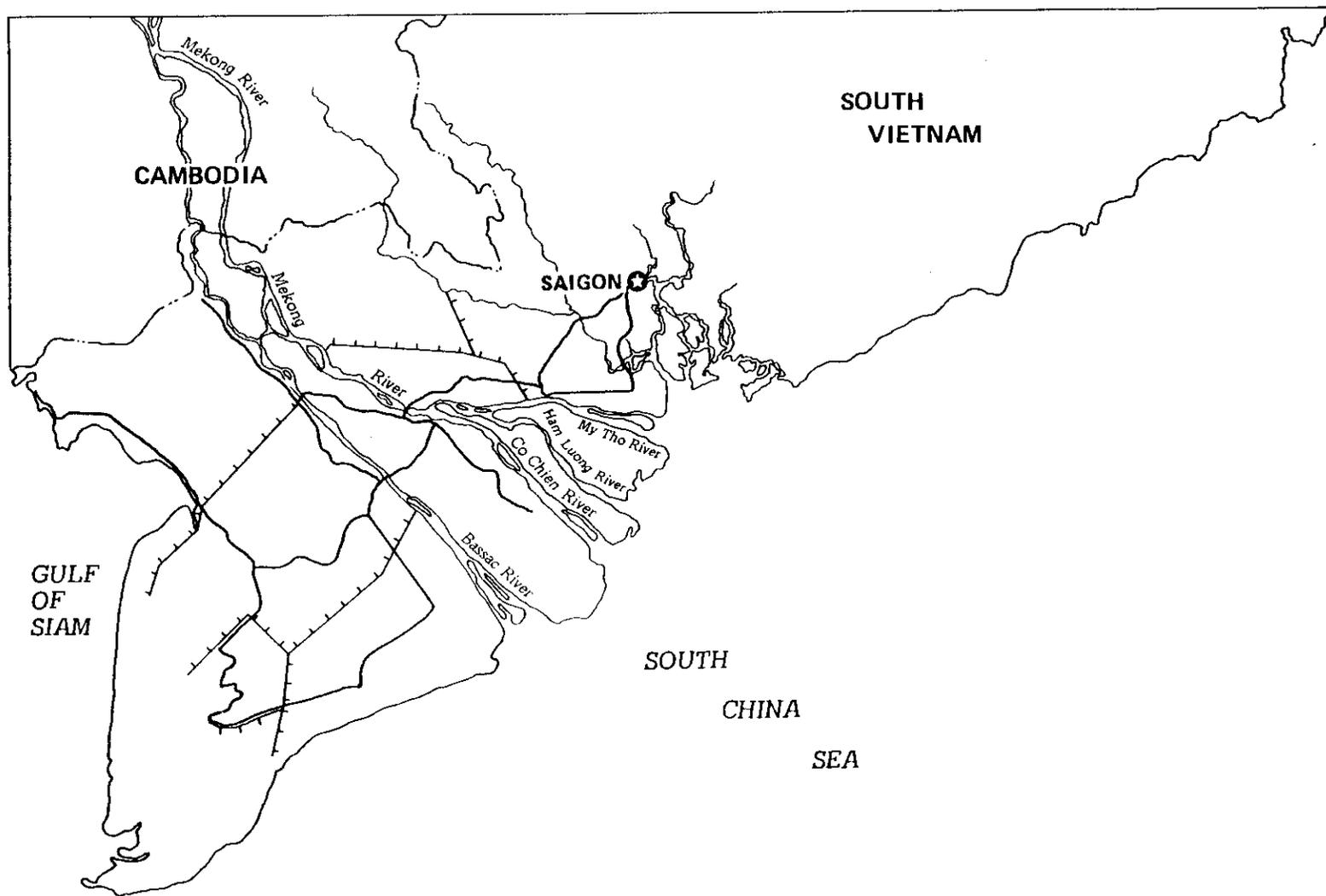


FIG. 2: MEKONG DELTA AND RUNG SAT

The enemy in SVN capitalized on this weakness. The VC, directed and supported by NVN, conducted a campaign of terror, propaganda, political subversion, economic sabotage, and military aggression. By 1964, according to DIA, VC objectives in SVN seemed to be to destroy and prevent establishment of pacified hamlets, consolidate liberated areas, and destroy government forces.

VC military successes during 1964 included gains in territory and population control as well as virtual isolation of government forces in many provincial and district capitals. Operations involving one or more battalions were carried out with relative impunity. Terrorism and propaganda efforts, particularly among the rural population, were successful in gaining either widespread cooperation with the VC or at least noncooperation with the SVN government.

NATURE OF THE THREAT

Documentation for 1965-1966 shows that the United States originally had an inadequate understanding of the intricate and detailed organization and in-country network used by the VC to transport supplies into SVN (see appendix A).

In about 1962, the Lao Dong Party in Hanoi established the Central Committee for SVN (COSVN). It was through this organization that NVN controlled the VC logistic supply system in SVN. After SVN President Diem's death in 1963, the enemy's logistic system began to evolve rapidly. The communications and liaison system (established about 1959) was virtually countrywide and furnished COSVN with a very efficient network of control down to the village level.

Through the beginning of 1965, MACV considered the sea to be the main infiltration route for VC resupply to southern SVN. Between 1963 and March 1965, up to 4,200 tons of arms and ammunition were delivered by communist trawlers to SVN. The destinations of the early trawlers were probably An Xuyen and Kien Hoa Provinces in IV Corps. By mid-1966, because of the buildup of Market Time, MACV discounted seaborne infiltration as a major VC resupply method.

Even before the major U.S. commitment in SVN during 1965, Cambodia was suspected of playing a role in the communist resupply effort to III and IV Corps. But there is some question as to the emphasis that was placed on infiltration from Cambodia in relation to the emphasis on seaborne infiltration.

Before 1963, the Mekong/Bassac River complex was the main route from Cambodia for resupply in SVN. By 1966, crossing points on the Cambodia/SVN border had been pinpointed, and there were implications of high-level Cambodian military or government complicity in the infiltration of supplies to the VC. MACV noted that Cambodia was the only area bordering SVN that could harbor communist forces with no threat of U.S. military action (see appendix A).

Supplies from Cambodia were brought into SVN by inland waterways and overland routes. They were transported by sampans, junks, ox carts, and porters. Supplies were moved in stages and handled through as many supply depots as were necessary to ensure security. No single unit carried supplies over an entire route. Supplies were shifted from one rear service area to another when needed or when a particular route and destination were not impeded by SVN or U.S. forces. Each rear-service area covered only one portion of a route.

Each communist military region had its own supply system and organization. VC base areas played an integral role in the resupply network (see appendix B). They served either as way-stations or as final destinations for supplies. The base areas on the South China Sea coast were originally the focus of major resupply efforts by sea. After 1965, rear service groups on the coast shifted their orientation to receiving supplies from Cambodia.

Game Warden had to cope with an enemy who controlled much of the RSSZ and Delta. The enemy knew the terrain and interconnecting waterways, allowing him considerable freedom of movement. The VC used the rivers overtly and covertly. They disguised themselves as civilians (with forged identification cards) or used someone with legitimate papers to smuggle for them. Smuggled goods were hidden in false bottoms, bulkheads or overheads of junks, or were buried under such hard-to-move cargo as rice, sugar cane, and fish. One smuggler of raw materials for explosives said that he concealed contraband in a false overhead of the junk's deckhouse and carried no other cargo. He discovered that junks appearing empty stood less chance of a thorough search than junks carrying an obviously full load.

In covert use of the rivers, the VC moved carefully to avoid contact with government representatives. They preferred to travel at night, usually between 2000 and 2200 hours and just before dawn. Game Warden Delta river patrols later forced the VC to attempt movements during the day.

The enemy also generally moved at or near high tide, since the tide opened areas closer to the brush for boats. When supplies were moved toward crossing points, harassing fire was used against SVN army outposts in the area. To make it more difficult for friendly forces to predict a crossing attempt, the VC did not maintain groups of watercraft at the crossing point; they procured sampans from the immediate area when needed.

The VC normally moved in groups of 4 or 5 per sampan, and the sampans traveled in pairs.

The VC transited the river as cross-stream instead of up- or downstream traffic in many areas, especially in the lower Delta provinces on the South China Sea. VC control in these provinces was extensive, and the enemy had large base areas in Go Cong, Kien Hoa, Vinh Binh, Bac Lieu, and Ba Xuyen Provinces. The lines of communication connecting these base areas ran across major rivers. In the provinces near the Cambodian border, there was more enemy along-stream traffic.

In addition to their extensive use of waterways for logistical and tactical movements, the VC frequently channeled and taxed legitimate civilian maritime traffic, especially in those areas where they had firm control along the river banks. In the SVN-controlled areas, mobile VC tax stations operated with no discernible patterns. Tax levies were usually extracted in the form of rice, salt, fish, livestock, and produce. Transportation taxes were also significant. Because tax collecting was an important source of VC revenue, it was almost a daily undertaking.

The largest VC threats to river patrols were ambushes and mines. Individual enemy craft fought PBRs with small arms and automatic weapons, and there were reports of suicide teams in sampans who had been trained to move alongside the PBRs in the best position to damage the boats with self-destruct charges.

Most mining incidents occurred when patrols were returning and security and surveillance were lax. Mining attempts were usually coordinated with small arms, automatic weapons, and, occasionally, recoilless rifle fire.

Ambushes usually took place in daylight and at low tide. They were mounted from protected firing positions along narrow parts of waterways. The enemy lured boats toward the shore or fired from one bank to drive a PBR toward the opposite bank, where the boat was ambushed.

In one incident, a PBR sighted a 1/4-inch wire leading into the brush from the river's edge just down stream from an RF/PF (Police and Regional Force and Popular Force) outpost. A platoon was dispatched to investigate and discovered a 10-kilo mine along with food and fresh water near the area. They traced the wire into the river and found a large mine, which was recovered by the explosive ordnance disposal team from Nha Be. The platoon also found a well-laid ambush site with 3 foxholes, aiming stakes,¹ a claymore mine facing the river, and 2 spools of wire.

¹Wooden stakes stuck into the bottom of the river with the tops showing, providing exact range and line-of-sight information.

The enemy often had excellent intelligence on watercraft schedules and capabilities. As with minings, the VC preferred to carry out ambushes when craft were returning from an operation because the boat's route would be more predictable; 57mm. or 75mm. recoilless rifles supported by automatic weapons were often used instead of mines during an ambush. The rifles were more accurate than mines because the target did not have to be in one position to be attacked. Moreover, the recoilless rifles were more flexible and easier to set up than were mines.

The VC were generally patient enough to wait out patrols. If they were forced to move, they would begin sniper fire upstream or downstream from their crossing point to decoy the patrol away from the area. They needed an intricate warning system against patrols, using colored lights, gongs, bells, and shots.

At the end of 1965, the U.S. did not know the extent of VC use of the Delta and RSSZ. The first Game Warden operational order identified major known VC-controlled areas adjacent to the rivers and selected suspected enemy crossing points (see figure 3).

U.S. NAVY INTERDICTION EFFORTS

MACV made a significant effort to determine the nature of the threat in the Delta and the RSSZ and how to efficiently utilize SVN forces to meet this threat. In January 1964, a team of senior U.S. Naval officers was directed to study and analyze the nature of the threat and offer recommendations for improved control and prevention of infiltration of war supplies and personnel into SVN. The conclusions reached by this study group (documented in the "Bucklew Report") indicated that there was evidence of enemy infiltration, and that this infiltration was aided by inadequate SVN military and civilian control of the land, sea, and inland waterway routes. Although the report did not initiate any immediate direct U.S. involvement, it did point out South Vietnamese deficiencies in dealing with the situation.

U.S. advisors to the VNN were aware of the ineffectiveness of the River Force in addition to what was cited in the "Bucklew Report. VNN craft were slow and noisy and their crews unenthusiastic. Since the main role of the River Force was to provide capabilities for waterborne deployments and support for SVN army operations, the VNN paid relatively little attention to river control. The urgency of denying the VC use of Delta and RSSZ waterways was not recognized; therefore, river patrol was given a very low priority. As a result, the River Force had totally inadequate resources for river patrol.

The first large-scale U.S. in-country naval commitment in SVN came in February 1965 after a North Vietnamese trawler was discovered to have delivered arms and ammunition to the VC at Vung Ro Bay in II Corps. In response, the U.S. Navy established Market Time. Ships and aircraft patrolled the 1,000 n.mi. of SVN coast to counter sea-borne infiltration.

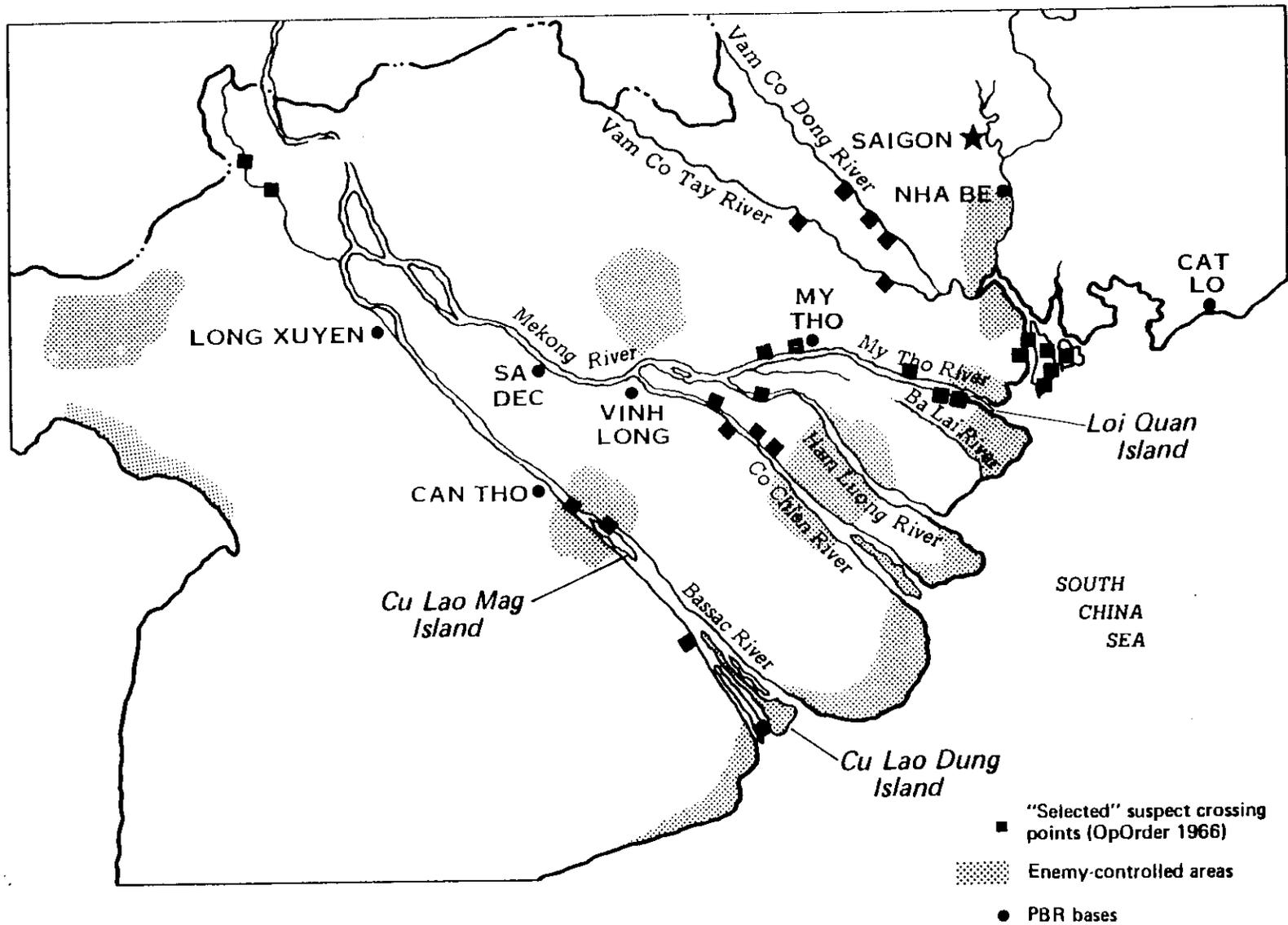


FIG. 3: KNOWN VC-CONTROLLED AREAS AND SUSPECTED ENEMY CROSSING POINTS' FEBRUARY 1966

The Chief of the Naval Advisory Group (CHNAG), MACV, who was responsible for Market Time, initiated studies to determine whether Market Time could be expanded into the Mekong Delta and the RSSZ. The possibility of assigning major rivers to the U.S. Army was discussed. It was finally decided that the U.S. Navy -- with its experienced boat personnel and close coordination with VNN River Assault Groups (RAGs, see appendix C) and Task Force (TF) 115 -- was better suited for the job.

Representatives from the Chief of Naval Operations (CNO), Commander in Chief, Pacific (CinCPac), Commander in Chief, Pacific Fleet (CinCPacFlt), MACV, and CHNAG met in Saigon in September 1965 to draft plans for the expanded Market Time force. They recommended that 120 suitable river boats be purchased for the Delta/RSSZ operation. Between September and December 1965, the Navy realized that the problem of the rivers was separate from that of the coast and warranted its own task force. On 18 December 1965, Game Warden, the river patrol force, was established as TF 116.

SETTING UP THE OPERATION--DECEMBER 1965
THROUGH SEPTEMBER 1968

ACQUISITION OF ASSETS AND BASES

From December 1965 through March 1966, the Naval Advisory Group established the basic operational and logistical framework for Game Warden. The first OpOrder was issued in February 1966. Game Warden was divided into 2 task groups: TG 116.1 for the Mekong Delta and TG 116.2 for the RSSZ (see appendix D).

Finding a river patrol boat suitable for the Delta was an urgent requirement. The boat had to be fast, lightweight, maneuverable, equipped with a propulsion system that would operate in shallow waters infested with a variety of plant and animal life, and withstand a hot and humid environment. The boat also had to be selected from existing commercial designs. The PBR finally chosen had a glass-fiber hull and was powered by what was then a new propulsion system--a jet water pump (see appendix E).

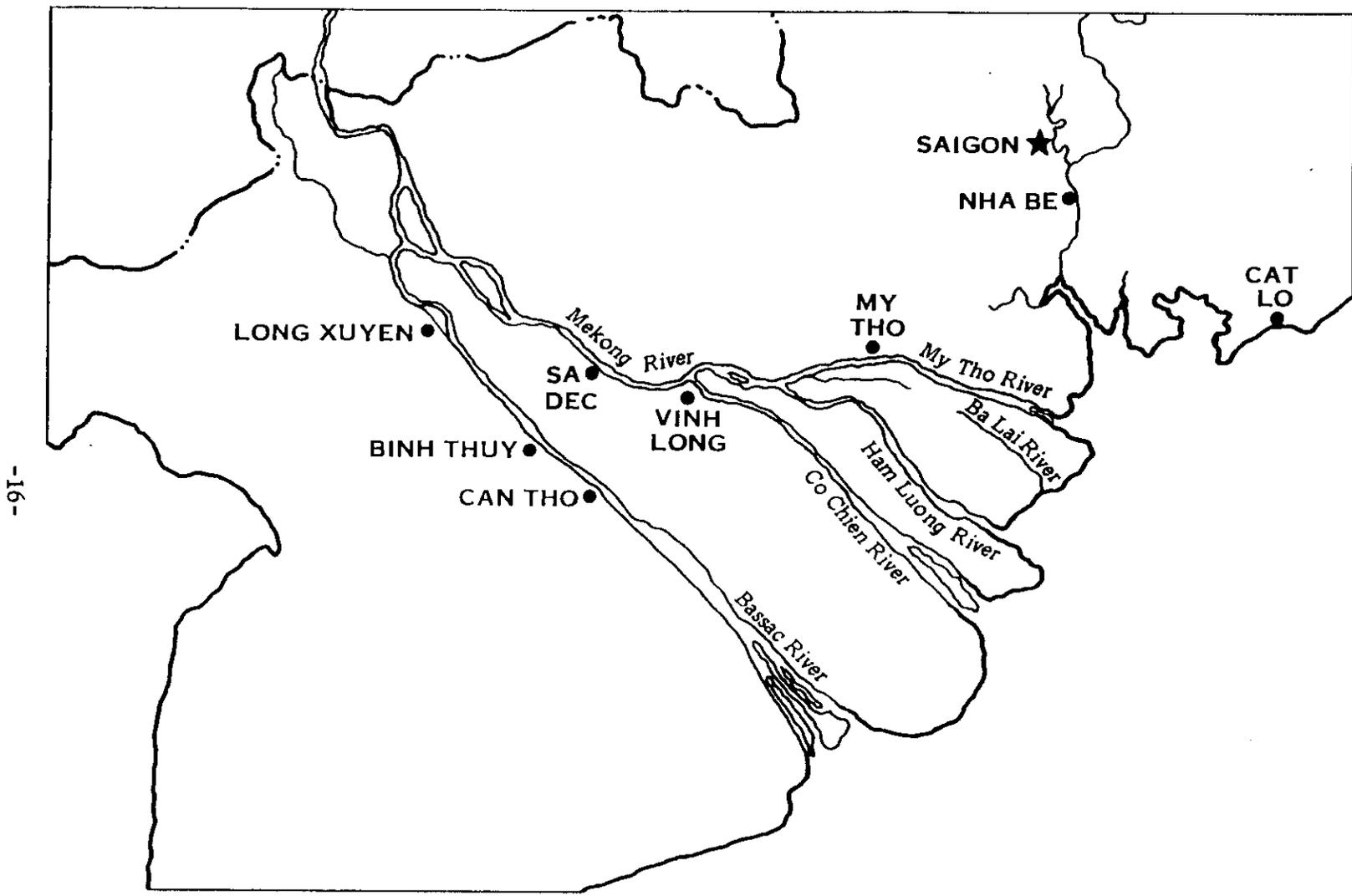
In all, 120 PBRs were scheduled to be operational by the end of the year--40 in the RSSZ and 80 in the Delta. Each river patrol area was to be covered by a group of 10 PBRs.

Four inactive LSTs were recommissioned during 1966 to serve as floating bases. Each LST would support 10 PBRs and a fire-support team of 2 helicopters. The LSTs provided both 24-hour-a-day support for the PBRs and 40mm. gunfire support.

The LSTs were extensively modified for Game Warden. They received new boat-handling booms, a helicopter deck equipped for day and night operations, and the newest electronic gear. Until the first of these specially configured LSTs arrived in SVN early in November 1966, 3 dock landing ships (LSDs) equipped with temporary helicopter decks provided the afloat support.

Original plans called for stationing the LSTs at the mouths of the Delta rivers, but heavy seas and changes in the focus of operations forced the LSTs inland. Earlier in 1966, an LSD had reported the loss of as much as half its operating time because of heavy winds and seas.

Game Warden shore bases in 1966 were at Cat Lo, Nha Be, My Tho, Vinh Long, Long Xuyen, Can Tho, and Sa Dec. Naval Support Activity at Saigon was responsible for base support. In mid-1966, an LSD was stationed between the mouths of the Co Chien and Bassac Rivers; and beginning in November, an LST was stationed on the Bassac. By September 1968, Game Warden forces were based at 4 shore bases at Nha Be, My Tho, Sa Dec, and Binh Thuy (figure 4); 3 on-station LSTs; and 5 other bases afloat.



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FIG. 4: PBR SHORE BASES

When the 4 Game Warden LSTs were operational, 3 remained on station on the Bassac, Co Chien, and Ham Luong Rivers; the fourth was out-of-country for maintenance. The LSTs were overcrowded and lacked the maintenance capabilities of the shore bases. Therefore, after being based on an LST for about 5 months, a PBR river section would rotate with a shore-based unit. PBRs found, however, that operating from an LST or one of the 5 other afloat bases offered much more flexibility in countering the threat.

By the end of 1966, it was obvious that more boats would be needed to respond to the growing number of enemy incidents in the Delta. On 28 February 1967, CNO approved a force level of 250 PBRs. By April 1968, the river patrol force had grown to 200 PBRs and, by late 1968, to 250 (appendix F).

Recognizing the need for increased force levels, ComNavForV recommended a second generation PBR, the Mk II, in September 1966. In March 1967, a contract to buy 80 Mk IIs was signed with United Boatbuilders; 60 of these new PBRs were to be assigned to the Delta, and 20 were to be used in a new river division in I Corps¹.

Helicopters were the most suitable aircraft for PBR gunfire support. Since the Navy had no helicopter gunships of its own, the U.S. Army 197th Aviation Company furnished the armed UH-1B Iroquois helicopters used by Game Warden forces (see appendix E). In March 1966, SecDef directed Navy crews to take over all Game Warden helicopter operations as soon as possible to free the Army of that responsibility. By the end of the year, Navy crews manned 8 Game Warden Army UH-1Bs; 6 of the helos operated in support of Game Warden while 2 were in the maintenance pool at Vung Tau.

By the end of 1967, 22 Game Warden helos were organized into 11 light helicopter fire teams. Three fire teams operated from the Game Warden LSTs, 4 teams from fixed bases at Nha Be, Dong Tam, Vinh Long, and Binh Thuy, and 8 helicopters remained in the maintenance pool at Vung Tau. By 1968, Vinh Long was also designated as a maintenance base.

Each detachment had 2 full crews so one crew could be kept on 24-hour alert. Helos could then be available to all PBRs within 20 minutes. The helicopter shore bases and the LSTs were located so that the maximum patrol distance from the base or ship was limited to 35 n.mi. or less from most incidents. Helo firepower helped PBRs carry out preplanned

¹PBRs had first operated outside the Delta and RSSZ in September 1966. They were used to protect supplies moving north from Danang to Thua Thien and Quang Tri Provinces. Ultimately, this river division evolved into a task force called Clearwater.

attacks against fixed enemy positions, especially when these positions were located in areas that were not accessible to PBRs without unreasonable risk. As part of their secondary mission, the helicopters performed aerial reconnaissance and were involved in medical evacuation.

SEALs (sea, air, land, reconnaissance teams), highly specialized in counter guerrilla warfare, were first used in the RSSZ in 1966. By 1968, there were also SEAL teams attached to each Game Warden task group in the Delta.

About 90 percent of the SEAL effort was devoted to gathering intelligence. Most often, SEALs were carried into their area of operation at night either by PBRs or fast patrol craft of their own. SEAL operations usually consisted of ambushes, establishing listening posts, or raiding in VC territory.

Coordination within TF 116 and with other Commands

CTF 116 and subordinate commanders were served by Navy Operations Centers (NOC), the equivalent of Command Information Centers ashore. All NOCs could communicate with the operations centers of other commands in their areas. Helo support was requested through the NOC, and PBR operations were coordinated by the NOC.

CTF 116 headquarters was located at Can Tho or Binh Thuy, near Can Tho, for much of the operation. Can Tho, centrally located in IV Corps and the largest city in the Delta, was the headquarters of the SVN army's commanding general and the senior U.S. advisor for that corps. It was also the headquarters of the VNN Fourth Riverine Area.

Each task group commander--CTG 116.1 and 116.2--was also an advisor to the VNN. The locations of Game Warden bases at VNN bases eased the advisory duties of CTF 116.1 and 116.2.

Vietnamese liaison personnel worked with Game Warden crews to help in junk and sampan searches and to communicate with Vietnamese craft and shore units. They also advised U.S. crews on local conditions and customs. VNN officers and enlisted men generally handled liaison. At times, Game Warden authorities requested additional help from the National RF/PF boat companies (see appendix C).

By January 1968, TF 116 was reorganized, expanding from 2 to 4 task groups. The new river task groups had commands on the Bassac River (TG 116.1), Co Chien River (TG 116.2), My Tho River (TG 116.3), and in the RSSZ (TG 116.4). Although the RSSZ patrol group commander still functioned as an advisor, the 3 new Delta task group commanders did not have that responsibility. A new advisory billet for the IV Riverine Area (the post formerly held by CTG 116.1) was set up outside Game Warden's chain of command.

Each of the 4 new task group commands was assigned about the same number of PBRs, helos, and SEALs. MSBs were assigned in the RSSZ, and an LST was assigned to each Delta task group. The LSTs could operate as far upstream as the Bassac-Mekong crossover. In June 1968, another task group (TG 116.5) was established in the upper Delta.

The river patrol force had no precedents to rely on for guidance. Operational methods and concepts developed largely from immediate experience as the force evolved. The 1966 OpOrder encouraged task group and unit commanders to exercise their initiative and act fairly autonomously. They kept their superiors informed of their actions by daily situation reports and on-the-spot reports of significant incidents. They were authorized to arrange local joint operations with other U.S. and SVN armed forces and with SVN district and province government representatives.

There was actually little coordination between U.S. Game Warden forces and the VNN River Force. In addition, the mutual distrust between the VNN River Force and the SVN army limited the former to blocking operations and patrols. The U.S. Army occasionally used VNN RAGs in amphibious operations, but coordination was poor.

PBR OPERATIONAL TACTICS AND TECHNIQUES

Game Warden forces were tasked to enforce SVN government curfews; interdict VC infiltration, movement, and resupply; and eliminate the VC insurgency in their areas of operations. To accomplish these goals, Game Warden forces performed harassment and interdiction operations, river patrols, and minesweeping operations, especially along the main Saigon shipping channels.

Game Warden forces were authorized to visit and search all river craft except foreign flag steel-hull merchant ships, warships, and military, police, or customs craft unless specifically authorized by CTF 116 (see appendix G). The Mekong River and its navigable branches were, by treaty, international waterways and open to those nations recognized diplomatically by SVN, Cambodia, and Laos.

By 1966, the Vietnamese Customs Agency enforced regulations governing transit by merchant ships (see appendix H). If merchant ships on international inland waterways offloaded cargo to watercraft, or if they dropped items overboard, Game Warden forces were supposed to make every effort to apprehend the craft upon their departure from alongside the ship and to recover items dropped overboard.

Game Warden PBRs noted one such incident. In July 1966, 2 PBRs on random patrol established radar contact with a ship that had 3 smaller boats alongside. When the PBRs approached them, the small craft headed for the river banks and the ship weighed anchor. The ship was identified as a tanker, the Mekong Phnom Penh of Cambodian registry, flying only a South Vietnamese flag aft. It was impossible to determine whether the tanker had been offloading contraband for VC forces in the area. But the ship's activity and the fact that it was anchored in a prohibited area made this a strong possibility.

PBR operations were based on 2-boat patrols, each boat within radar range of the other and normally in midstream. Each patrol lasted about 12 hours. The PBRs had neither the armor nor the firepower to attack the river banks. The OpOrder emphasized the need for random patrols to avoid mining and ambushes and the need to be alert against booby traps. It also pointed out that silence was crucial, especially at night, and recommended patrolling on a single engine when possible.

When a task unit began patrolling a new area, the commander gave an area indoctrination and familiarization for his men. Initial patrols in an area were made with local RAGs.

Before starting their patrols, PBR crews were briefed on any pertinent intelligence. Briefings also covered the scope and duration of the patrol, friendly forces in the area, recognition signals, available support, communications procedures, and special circumstances. Debriefs after a patrol included intelligence, results, and unusual activities noted by the participants.

Precautionary measures were taken to prevent the VC from determining the exact location of PBR patrols. There were the random midstream patrols; in addition, radio communications were restricted to a minimum. The enemy had captured U.S. equipment, and it was assumed that he could and would monitor U.S. circuits. If the PBRs were the victims of sniping by small-caliber, nonautomatic weapons, they would be warned against using automatic weapon fire in return unless they had pinpointed the source of the sniping to avoid disclosing the exact location and armament of the PBR.

All river traffic was considered suspect, especially during the nighttime curfew. During daytime, PBRs randomly searched watercraft when there were too many for all to be searched. About 60 percent of all junks and sampans detected were inspected or boarded, according to CinCPac in July 1967. This included a check of identification papers for all persons aboard. A South Vietnamese national policeman was usually on board one of the PBRs to provide an SVN "presence." He expedited the checking of papers and the questioning.

When suspects were detained during searches, U.S. forces maintained custody until the suspect was classified as prisoner of war (POW), returnee, civil defendant, or innocent. POWs were placed in camps by military police. Returnees were turned over to the nearest Chieu Hoi center.¹ Civil defendants were delivered to the national police or military units; and innocent Vietnamese were released and returned to where they were captured.

PBRs were warned to approach contacts at an angle that allowed the most weapons to bear on the target. Approach to a contact at night was made at high speed with the PBR darkened. The contact was illuminated at close range. When a PBR was within optimum range for illumination of a contact, it called for the boat to pull alongside. All occupants of the suspicious boat were ordered to make themselves visible before coming alongside the PBR. All searches were to be done in midstream if possible, and PBRs were instructed not to moor themselves to the boat being searched.

When a contact came alongside the PBR, the latter was vulnerable to hand grenades or mines. PBR crews were warned to be cautious of VC decoy tactics. The VC would station a boat with legitimate papers and no contraband in a position to be searched while another boat carrying contraband would evade search. The VC also took advantage of PBR medical aid by using a sampan to hail a PBR to evacuate a wounded person while a VC boat escaped detection.

¹ Chieu Hoi was the "open-arms" program in which VC who defected were rehabilitated and allowed to reenter South Vietnamese society.

While one PBR searched a contact, a second PBR covered the shore and positioned itself to have a clear line of fire to both sides of the river. The boat conducting the search was instructed to maintain a 50-caliber weapon and lookout covering the shore to the unengaged side of the boat.

Enforcing the curfews was a continuing problem. Curfews generally lasted from 2000 or 2100 hours to 0600 hours. Civilians in a patrol section were informed of the restrictions through leaflet drops and loudspeaker announcements. Curfew effectiveness depended largely on promulgation at the village and district level, and it varied from area to area.

For example, in April 1966, a fire team spotted 7 sampans in a restricted zone near Can Gio village in the RSSZ. The fire team requested permission to strike. Permission was granted after the VNN watch officer at Nha Be checked with Can Gio district headquarters. The helo strike was a success. But it was later discovered through the Can Gio advisors that the sampans held friendly fishermen fully aware of the curfew regulations. The village chief had granted the people permission to fish.

Curfew restrictions imposed financial hardship on the people by limiting their fishing time. Curfews were necessary, however, to successfully combat nighttime infiltration. In 1967, CinCPac determined that the curfew had not stopped VC river crossings, but it was being observed by the local people. This made the task of detecting VC river crossing attempts much simpler.

After PBR crews developed a familiarity with their patrol areas and the nature of the enemy, they developed several new tactics. One of these was a planned ambush to intercept a possible VC river crossing. Ambushes were based on intelligence reports or on the judgment of the boat commander.

The tactic was tested in one incident when Commander, River Patrol Section 531, reacted to intelligence reports of a probable enemy crossing. He took 4 PBRs to the suspected crossing to interdict enemy movements. The VNN RAG commander at My Tho sent 3 additional river patrol craft. The PBRs drifted silently into the crossing area and detected the enemy after about an hour. Although no large supply of weapons was detected, the enemy action was evaluated as an attempt by a tax collector to move under the protection of guerrilla troops.

PBRs at Can Tho used a new technique for sampan surveillance after receiving intelligence concerning a possible VC river crossing southeast of Can Tho. In addition to centering normal PBR patrols in the suspected area, Game Warden forces established an observation post on a sampan manned by one U.S. Naval officer and 3 enlisted men. The sampan was a former VC craft overhauled by Naval Support Activity Detachment at Can Tho. Communications to the PBRs on patrol and to Can Tho was by radio. This tactic

provided continuous surveillance of the entire suspicious area. This kind of surveillance was considered valuable when used with discretion periodically in areas where the river was wide enough to provide security for the sampan.

Because PBRs had been allowed to fire only warning shots to stop sampans and junks for visits or searches, many suspicious craft had evaded Game Warden searches. In October 1966, the rules of engagement (appendix G) were changed to permit PBRs to direct fire against evading junks or sampans after all other methods to stop them failed.

To counter the movement of contraband in small quantities, a new search procedure, code-named Ferret, was established in 1967 throughout the Delta. Ferret entailed randomly stationing PBRs twice a week in known VC crossing areas during the peak traffic hours of 0700, 1200, and 1700 hours. A South Vietnamese policeman and policewoman were embarked.

The patrols stopped and searched all river traffic. Inspections included a thorough probing of cargo, the passing of lines or poles under hulls to check for contraband suspended beneath keels, and the checking of passengers against lists of known VC. Each effort was coupled with civic action and psychological operations to ease the inconvenience to innocent travelers.

To frustrate and discredit PBR patrol methods, the VC confiscated identification cards of innocent civilians. This resulted in delays in searching and inconvenience to the civilians and local authorities.

By the end of 1967, the VC were using heavier weapons--recoilless rifles, mortars, rockets, and heavy machine guns. The upsurge in enemy activity culminated in the Tet offensive of January 1968. After that, CTF 116 noted that the enemy was using firing bunkers, which provided relative security from PBR suppressive fire. Continuous ground sweeps in enemy areas rarely returned significant results. To deal with increasing enemy capabilities, TF 116 used quick-reaction forces combining U.S. Navy, VNN, and RF/PF units. These forces were called on short notice.

Originally, it was standard procedure for PBRs when fired upon to return the fire and call for help while leaving the area of contact. After Tet, it was obvious that the PBRs were able to suppress enemy fire, and the procedure was changed to allow PBRs (at the discretion of the boat commanders) to remain and fight.

Improved intelligence became available to CTF 116 during 1968. A new and very quiet surveillance aircraft, the QT-2PC, proved its effectiveness in providing intelligence to Game Warden units by detecting 8 large junks at night near the mouth of the Bassac River. Two PBRs and a helicopter fire team responded and destroyed or heavily damaged all the junks.

From April to June 1968, TF 116 collected intelligence information on VC cadre in the Can Tho area for use in a blacklist. The names, ages, heights, weights, and activities of various VC cadre were compiled alphabetically. The first blacklist was published and distributed to River Division 51 during late June. After one month, the list had helped in capturing 4 confirmed VC in the Can Tho area.

PSYCHOLOGICAL OPERATIONS

As a secondary mission, PBR crews participated in psychological operations to involve the people of the Delta in their own protection and to encourage potential sources of intelligence for Game Warden.

The psychological operations took many forms. PBRs and RAGs dropped leaflets and played taped broadcasts designed to meet situations in specific areas. The local population received, along with information distributed by the SVN government, items such as grain, salad oil, cigarettes, soap, cloth, needles, and thread. Distribution was from boats or, in VC-dominated regions, was air-dropped or packaged to float in with the tide.

One type of broadcast was directed against VC exploitation of South Vietnamese youth. (Game Warden forces had captured VC as young as 11 years old who had been in combat.) In their broadcasts, Game Warden crews stated that although the VC had promised South Vietnamese parents not to place their children into the front lines, the enemy had failed to honor his pledge. The effectiveness of surface broadcasts was best evidenced by the increased VC attacks on the broadcasting vehicles during spring 1968.

Game Warden psychological operations involved more than merely distributing goods and government propaganda. In flood and refugee relief operations, Game Warden crews helped build and repair bridges, schools, houses, and dispensaries. They also made deliveries of rice seed.

Psychological operations included dispensing medical aid and evacuating local Delta inhabitants and South Vietnamese military personnel. The South Vietnamese were helped to maintain individual and communal hygiene.

Local projects were undertaken by Game Warden crews. River Section 542 in the RSSZ "adopted" a village. Sailors visited the village with medical assistance, clothes, shoes, and toys. In the Can Tho area in the Delta, following the Tet offensive, Game Warden personnel built a school and bought classroom equipment and supplies for refugee children.

Special psychological campaigns were undertaken on important days of the Vietnamese calendar. During Tet 1967, special leaflet and broadcast appeals were made to the Delta population, stressing the traditional family nature of Tet. For the national election in September 1967, security was provided for voters. A campaign was begun a month before Tet 1968 to develop a sense of loyalty to the government. PBR crews gave parties and presented Vietnamese children with toys.

The VC were increasing emphasis on countering friendly psychological operations before Tet 1968. The enemy was reported to have ordered Delta inhabitants to destroy allied leaflets distributed in VC-controlled areas. Guerrillas had been ordered to fire on aircraft engaged in airdrops. The VC effort to counter psychological operations indicated the program was adversely affecting the enemy's ability to maintain control of the population.

Each PBR was considered to be a Chieu Hoi station. Many VC turned themselves into these stations, and some of them even taped broadcasts for the PBRs to play when patrolling areas where their former VC comrades would hear the broadcasts. Game Warden task unit commanders, district chiefs, and U.S. Navy psychological operations officers visited RF/PF outposts to explain PBR operations and win local acceptance of them.

Game Warden psychological operations convinced the population in some areas to help SVN government representatives fight the VC by providing information on enemy activities. An outstanding example of the kind of effect these operations often had on Delta inhabitants was a letter of appreciation received by the commander of the My Tho-based River Division 53 in August 1967. The letter was signed by members of a water taxi association in Kien Hoa Province.

The boatmen, who traveled daily on the Ham Luong River, used to have to pay the VC at check points established on the river. Payment was in money, rice, medicine (especially antibiotics), and occasionally sampan motors. Those who refused to pay the VC were often killed. The boatmen felt that the PBR crews were polite when they searched the watercraft, and Game Warden sailors were respected because they did not take bribes. The boatmen stated that the river was secured by the PBR patrols, and they promised to give PBR crews information on VC individuals and concentrations along the river banks.

Local inhabitants who had benefited from the humanitarian efforts of the PBRs provided intelligence that served as a basis for some Game Warden operations. The operations succeeded in thwarting VC mining and ambush attempts, destroying VC concentrations, and gaining defectors.

GAME WARDEN IN THE RSSZ

Game Warden's early emphasis was on the RSSZ because of fears that the enemy would cut off the shipping lanes to Saigon. The first PBRs to become operational were assigned to the RSSZ in April 1966. By June, PBRs had replaced all the Market Time units there. Those units took part in operation Jackstay, which was directed against an estimated 1,000 VC in the RSSZ who frequently attacked military outposts and threatened the sea channel to Saigon. The operation, also supported by the VNN, lasted 12 days and resulted in 63 VC killed. More importantly, it disrupted a major base area consisting of an arms factory, a training area used to assemble river mines, and a large medical facility. This facility was so well built, special underwater demolition teams had to be flown in to destroy it.

Ten river patrol stations were established during Jackstay. When the operation ended, the stations were maintained by Game Warden PBRs to ensure that the VC would not re-infiltrate the area. As the Game Warden force expanded, more stations were added to the RSSZ patrol (figure 5).

MSBs that had served in Danang harbor since October 1965 sailed for the RSSZ on 2 March 1966. By June, there were 12 MSBs operating from Nha Be tasked with keeping the vital Saigon shipping channel open (see appendix F). The MSBs were from Mine Squadron 11's detachment Alpha, which operated as a task unit of the Game Warden force.

Before Game Warden reached its planned strength, one of the earliest problems was the need to reshuffle forces to meet emergencies. In April 1966, for example, there were several mining incidents at Nha Be. To help antiswimmer security patrols, 8 PBRs were transferred from Vung Tau to the Game Warden base at Nha Be. The PBRs remained at Nha Be assisting the U.S. Army patrol units through June.

Many times during the early months of the RSSZ patrols, the boats came under moderate to heavy small-arms and automatic-weapons fire from the banks. The Soirap River patrols noted stepped-up harassment through June and again in December. Most of the harassing fire was received near the Vam Sat River, a known infiltration route terminal.

The intense tempo of operations in the RSSZ taxed both the crews and their boats. And most river patrol sections were required to do their own maintenance. Most boats were used daily, allowing little time for preventive maintenance. This condition improved as more boats and crews became available and as the support bases developed better facilities.

In June, a NavForV assessment of the RSSZ indicated that patrols on the Long Tau and Soirap Rivers had effectively curtailed night movements. The VC were now **crossing** at sunrise or sunset, using seemingly innocent sampans stationed in midstream at river bends to notify other VC sampans of passing patrol units. To counter this activity, Game Warden forces established special daytime patrols.

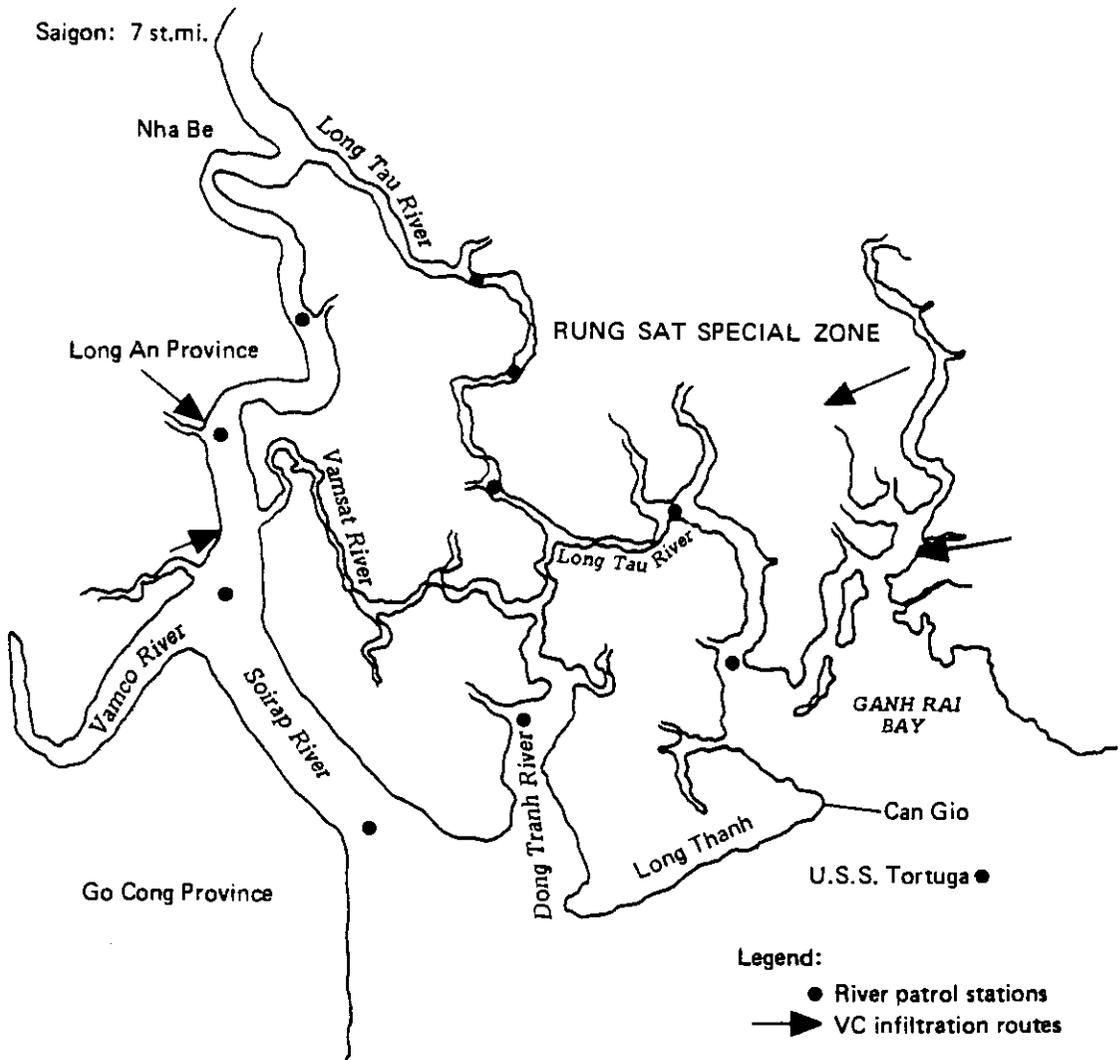


FIG. 5: RSSZ OPERATIONS

Previous studies had reported that the VC took advantage of dark phases of the moon to move supplies. The NavForV assessment noted, however, that a VC incident had taken place at low tide under full moon. This suggested the VC were flexible in adapting to hindrances imposed by Game Warden patrols.

In reaction to increased enemy activity, the USS Tortuga (LSD 26) was transferred to the mouth of the Long Tau River in August 1966 to provide an extra patrol section of 10 PBRs and 2 helos. Enemy activity in the RSSZ increased substantially toward the end of the year. Enemy documents discovered in November elaborated on the communist re-organization in the RSSZ; 3 scattered VC platoons reformed into one company-size element to attack RSSZ shipping in "quick-and-clean" operations. River minings and ambushes were emphasized.

The year 1966 ended on an ominous note with the 31 December discovery of a Soviet-type contact mine in Saigon's main shipping channel. It was the first time a contact mine had been detected on inland waterways.

At the beginning of 1967, enemy activity was especially heavy in the RSSZ. By the end of January, a reinforced U.S. Army battalion was assigned to the RSSZ to help deal with the increasing VC activity.

In March 1967, Game Warden units were faced with improved accuracy of VC sniper fire. An enemy document captured on 21 February in the RSSZ indicated that the VC RSSZ command received 5 sniper rifles the previous week. One participant stated that the VC were generally very poor shots.

There were indications by April 1967 that increased river patrols, additional armament for MSBs, and ground operations in the RSSZ were affecting VC ability to mount attacks against shipping in the Saigon channel. MSB armament was bolstered with 40mm. grenade launchers, enabling high-trajectory fire against VC positions on the river banks.

Despite daily channel sweeps by U.S. Navy and VNN craft by the end of 1967, enemy mining attempts continued. Investigation of one successful mining disclosed a new technique used by the VC to protect the electrical wires leading from the firing station to the mine. To prevent their being cut by minesweepers, the wires were enclosed in 2 sections of beetlenut logs, each about 6 inches in diameter and 15 feet long with about 10 feet of unprotected wire between the 2 sections. The effectiveness of this simple technique was proven. The area had been swept 15 minutes before the mining incident. The dual chain being used by the VNN minesweepers apparently passed over the logs without disturbing the command wire. A subsequent experimental sweep using the protective log coverings demonstrated that a conventional U.S. chain drag was effective.

Early in 1968, Game Warden forces noted increased use of enemy rockets, rifle grenades, recoilless rifles, and heavy automatic-weapons fire from ambush sites. In April, MSBs again noted a step-up in enemy mining efforts on the Long Tau shipping channel, as evidenced by many recoveries of electrical wires during sweep operations. In May and August, there were increased numbers of mining attacks against free-world shipping; 10 attacks occurred in May and 8 in August.

In June, the VNN assumed responsibility for clearing command-detonated mines out of the Long Tau shipping channel to Saigon; this was the type of mine most often used by the enemy on the Long Tau. U. S. MSBs retain responsibility for mine countermeasures against moored mines.

GAME WARDEN IN THE MEKONG DELTA

The first river patrol units began operating in the Delta on 8 May 1966, when 10 PBRs moved up the Bassac River to Can Tho. Delta river patrol bases and support ships were established at locations that offered the requisite security and facilities while limiting the maximum patrol distance to be covered from a base or ship to about 35 n.mi. or less (figure 6).

Since there was inadequate intelligence during 1966, boat deployment was based on the availability of facilities. It turned out, though, that the first patrol areas covered--the lower Bassac and Co Chien, Ham Luong, and My Tho Rivers--were directly within VC supply corridors and probably caused the enemy serious resupply problems. At the end of 1966, Game Warden units in the Delta increased to 80 PBRs; they also patrolled the upper Bassac and Mekong Rivers.

River patrol units were repositioned to meet the elusive enemy throughout Game Warden. VC activity in the Mekong Delta rose sharply during November 1966, and 1967 began with a NavForV assessment that the enemy was seeking a major victory before the Vietnamese New Year truce (6 to 12 February). During January and February, VC activity was especially intense in the Delta west of the My Tho and Ham Luong Rivers.

Instead of spreading boats uniformly around the Delta, CTF 116 concentrated them in active VC areas during early 1967. Because the lower Bassac, Co Chien, and My Tho Rivers were active enemy areas, Game Warden boats assigned to the upper Delta were repositioned for high-density patrols on the lower Delta rivers, where intelligence indicated extensive enemy troop movements.

PBRs had been based at Long Xuyen, but contact with the enemy was lighter than had been expected. In response to an intelligence report that the enemy would try to concentrate forces in the Dong Tam area, 16 boats from Long Xuyen were deployed on 15 January to the lower Bassac and Co Chien Rivers. Meanwhile, Sa Dec-based PBRs concentrated their patrols in the lower portions of their assigned areas.

In April, the PBRs remaining at Long Xuyen were transferred to a floating base at Tan Chau near the Cambodian border. Because PBRs at Tan Chau had experienced only light contact with the enemy in mid-1967, the boats were transferred with the floating base to Binh Thuy, where there was considerable enemy activity. A few months later, the base and the PBRs were shifted closer to the coast at Ben Tre.

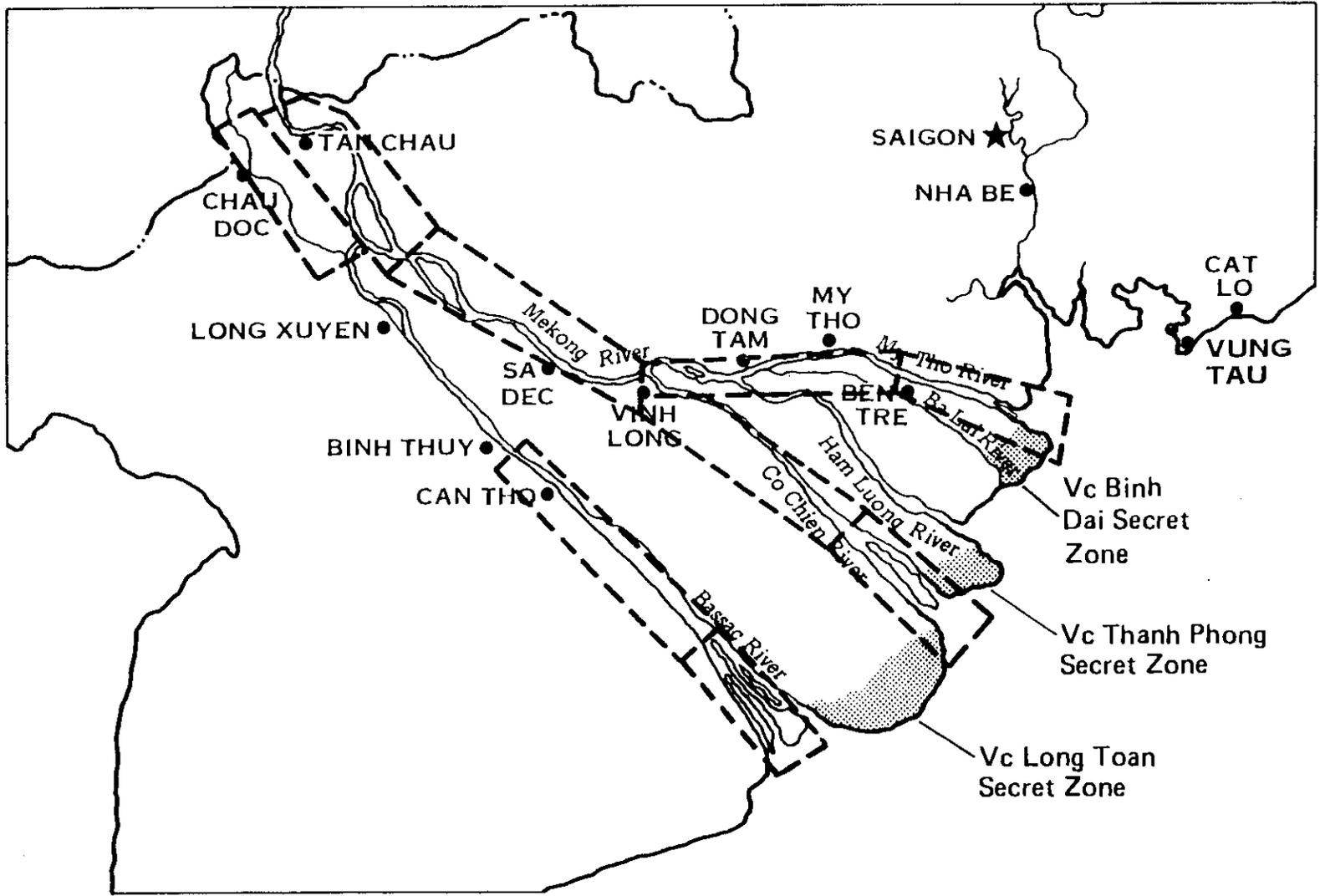


FIG. 6: PBR BASES AND RIVER SECTIONS, 1966

Upper Delta operations were eliminated by the end of 1967, since PBR contacts with the enemy had been so light (figure 7). There are some possible explanations for this lack of contact. Chau Doc and An Giang Provinces were under the control of the Hoa Hao, a religious sect. The VC erred in 1962 when they assassinated the head of the Hoa Hao. The Hoa Hao kept tight control over their own area, keeping the VC out; Game Warden forces found the area pacified. It may be, however, that the VC had simply found routes around the PBR patrols in the upper Delta. In any event, CTF 116 saw a need to concentrate forces in the lower Delta, drawing on assets patrolling the upper Delta.

CTF 116 redeployed some units to meet the growing threat in Kien Hoa Province, where parts of 3 VC battalions had been reported. By 6 May, about 3,000 main-force VC troops were in Kien Hoa. To interdict enemy lines of communication within that and adjacent provinces, Game Warden forces were again repositioned. PBRs made incursions into the Ham Luong River in Kien Hoa Province.

During the Ham Luong River operations, PBRs found increasing amounts of medicine on boat river traffic bound for Thanh Phu (a coastal district in Kien Hoa Province), where intelligence reports indicated a recent VC buildup. Large amounts of penicillin and streptomycin were discovered concealed on otherwise legitimate river traffic. To pave the way for incursions into the Ba Lai River in Kien Hoa Province, an LST was moved from the mouth of the Long Tau channel in the RSSZ to Dong Tam.

Random PBR patrols into canals and waterways off the major rivers began at the end of 1967. Incursions into the lesser waterways were left to the discretion of PBR commanders.

The boat commander in a patrol area would usually request information on enemy activity from the district chief. When the district chief felt that enemy troops were massing in some area, the PBR would investigate.

In April 1968, a new ComNavForV operational plan was promulgated. This plan emphasized the need for U.S. Navy/VNN reaction to infiltration of enemy supplies from Cambodia. Under the plan, when more boats became available, they would be assigned to the upper Mekong. (This official recognition of infiltration from Cambodia tends to discredit earlier assessments that little enemy activity was occurring in the upper Delta rivers.)

In May, PBRs began Game Warden operations on the upper Bassac and Mekong Rivers. These PBRs were assigned on a rotating basis from TG 116.1 (Bassac) and 116.2 (Co Chien) until June, when the Upper Delta River Patrol Group was established (figure 8). In July, PBRs from the afloat base at Tan Chau were experiencing only light contact with the enemy, reminiscent of their previous operations in the upper Delta in early 1967.

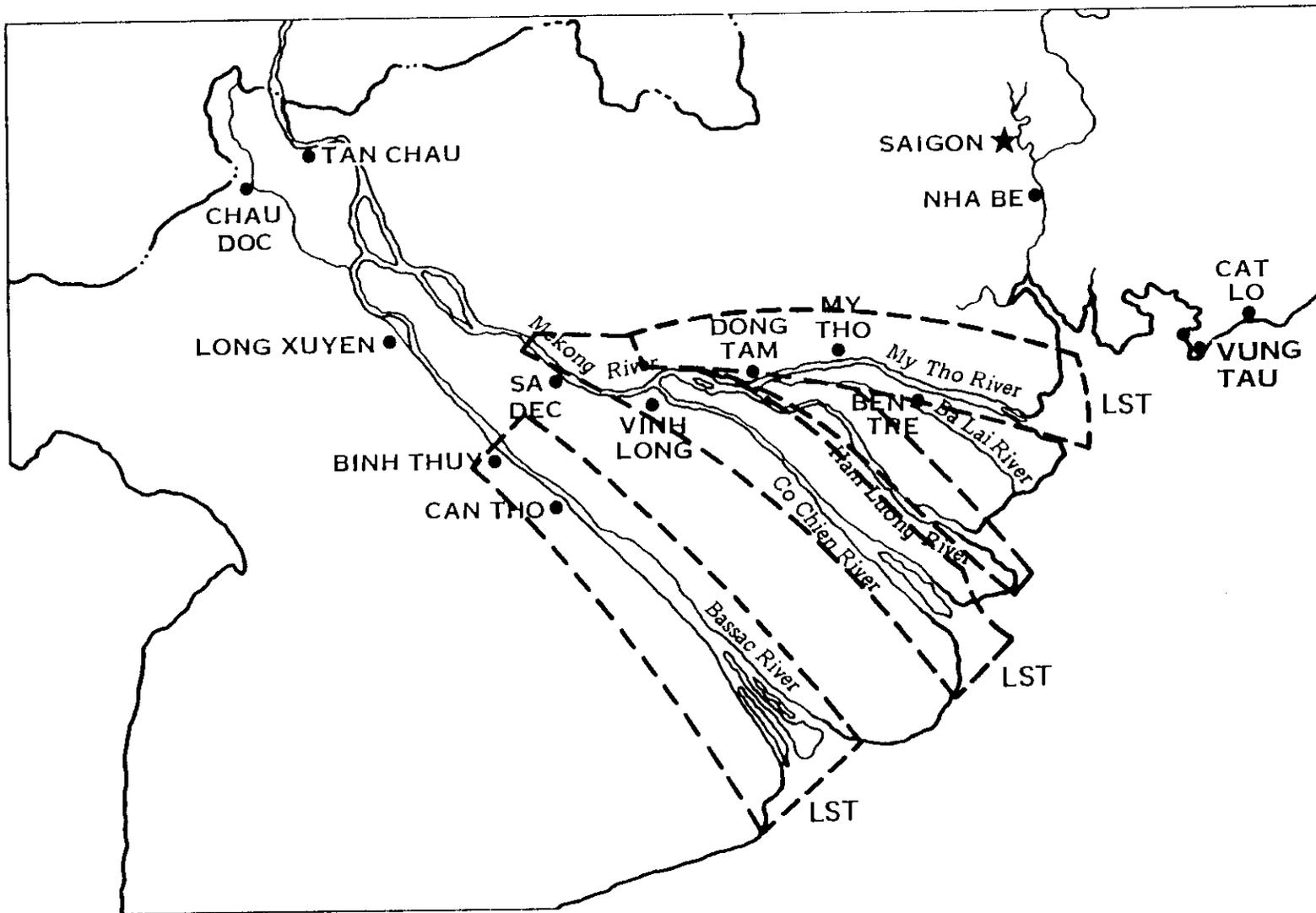
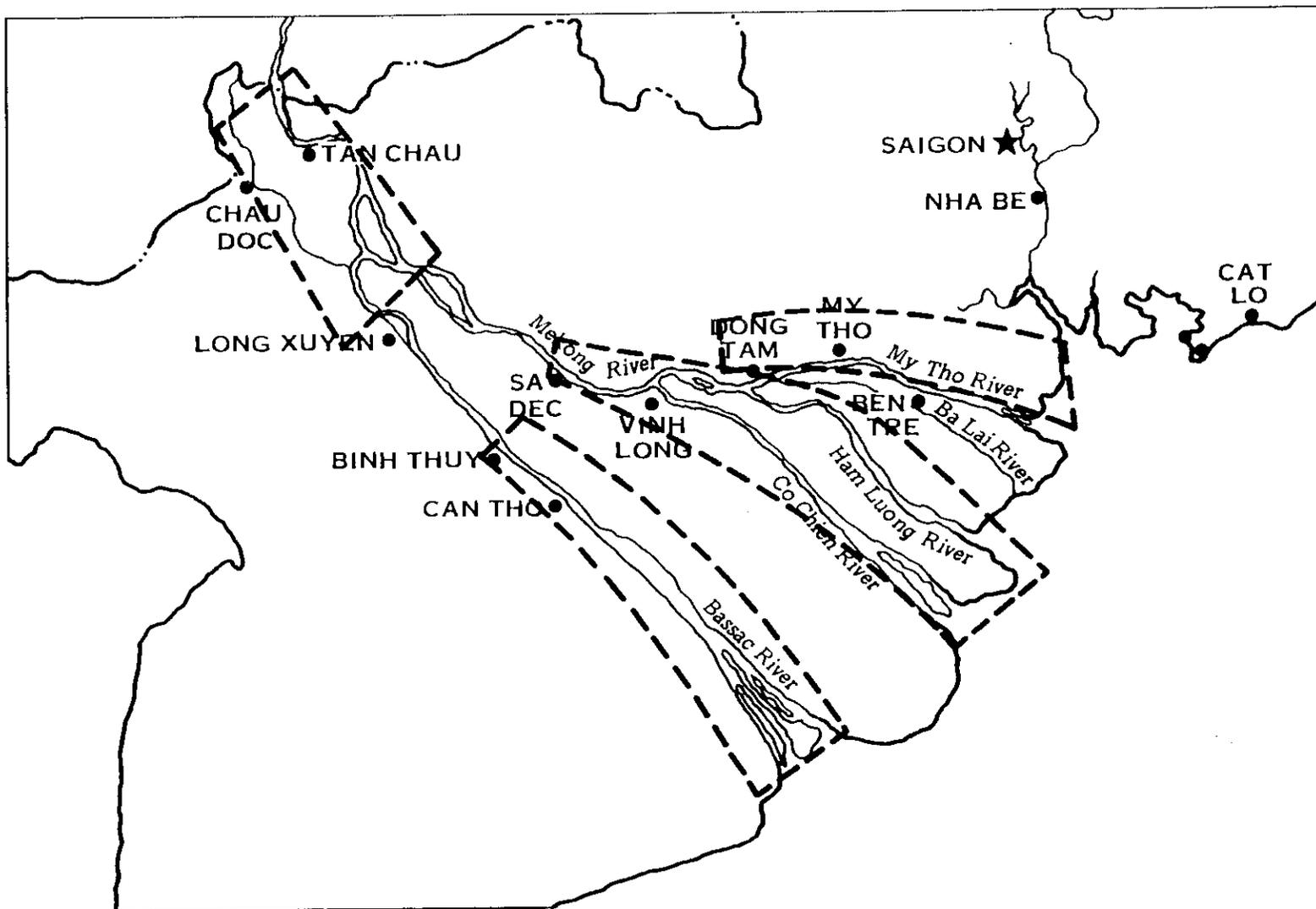


FIG. 7: GAME WARDEN AREA PATROLLED IN THE DELTA AT THE END OF 1967



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FIG. 8: 1968 GAME WARDEN AREAS PATROLLED IN DELTA

Evidence used in planning Sea Lords later in 1968 revealed that the enemy generally crossed the border by canals or overland routes between the Bassac River and the Gulf of Thailand or to the north of the Mekong. Although he may have used the major rivers to cross the border in the past, the enemy probably altered his route to avoid PBR patrols.

The 1968 Tet offensive saw simultaneous attacks on provincial capitals throughout the Delta. A study of enemy vulnerabilities, submitted by CTF 116 to ComNavForV on 18 February, included this assessment of Tet:

"The offensive...cost the enemy a high price in lives lost, but has not diminished his capability to continue the insurgency at pre-campaign intensity for an indeterminate period. SVN forces have been severely hampered by the necessity to defend the population centers. ...resources have been spread thin, thus permitting the VC a wide selection of targets. If the enemy objective was to demonstrate that (SVN and U.S. forces) could not effectively defend the people of the Delta, he must be judged successful.... There is no evidence, however, of the Vietnamese people rallying to the VC cause."

Game Warden forces saved Chau Doc and Ben Tre from falling to the VC during Tet, but the Game Warden base at Vinh Long had to be abandoned after the VC overran Vinh Long and PBR crews were cut off from their boats. An afloat base was established near Vinh Long.

An incident in March 1968 illustrates the effect Game Warden forces had on the enemy in the lower Delta. A Hoi Chanh¹ led a SEAL platoon to a large weapons cache and arms factory in Kien Hoa Province. This former enemy soldier related how he had been forced to go without food for 2 to 3 days at a time because PBRs prevented the VC from moving food supplies on the river. He added that river patrols had made it impossible for the VC to cross the river for the preceding 2 weeks.

In April 1968, a CNA analyst noted that the enemy appeared to be limiting his movements to lesser Delta waterways inaccessible to PBRs. The VC also continued to take advantage of the islands in the Bassac and My Tho Rivers to conceal their movement while minimizing exposure to PBR surveillance.

Intelligence reports in June indicated that the VC planned to move segments of their existing forces in IV Corps to support their continuing pressure and harassment on the Capital Military District of Saigon and its environs. Game Warden operations were

¹A VC who has returned to government control.

extended to provide one river section of PBRs to patrol the Dong Nai River between Nha Be and a point about 2.4 st.mi. south of the Long Binh Bridge northeast of Saigon.

On 17 July 1968, Army LCU 1577 inadvertently crossed the SVN/Cambodia border on the upper Mekong. On 18 July, TF 116 assumed the responsibility for ensuring that all U.S./Allied shipping would be alerted as it approached the border. U.S. ships were not allowed to pass a point 4 n.mi. from the border, and all ships stopping at Tan Chau for customs inspection were alerted that U.S. personnel were not to cross the border. Liaison with the National Maritime Police was also established to prevent further inadvertent border crossings.

THE SITUATION IN OCTOBER 1968

By October 1968, Game Warden forces had secured many sections of the major Delta and RSSZ rivers for commercial use. Routine VC tax collections had been interrupted along these major rivers. SVN government curfews were being enforced, and became effective weapons against the VC.

While it is probable that Game Warden denied the enemy overt control of the major rivers, it is far from clear whether Game Warden significantly denied the enemy use of the rivers as supply routes. ComNavForV, in October 1968, felt that Game Warden had effectively denied the VC use of the rivers for logistic movements. An intelligence analyst concerned with the period noted that, from 1966 to 1968, Game Warden failed to capture a single important shipment of war material. This did not imply the enemy was not making large shipments, however, since he had accumulated enough to mount the Tet offensive.

Intelligence in 1967 indicated there were other VC crossing points in addition to those covered by Game Warden patrols. These were located to the north and south of the Mekong/Bassac Rivers. (They later would be interdicted by Sea Lords barriers.)

It was clear by 1968 that the concept of a static barrier on the major rivers was inadequate. Evidence showed that the enemy was infiltrating supplies with impunity over the Cambodian border. In March 1968, NavForV analysts felt that massive infiltration over the Cambodian border was taking place, especially between Ha Tien on the Gulf of Thailand and Chau Phu on the Bassac River.

The Market Time task group commander in the Gulf of Thailand agreed with this assessment. He noted that enemy transshipment in the Gulf of Thailand from Cambodia to SVN had stopped, partly because of Market Time and partly because the VC could use the inland waterways without fear of disruption.

The SVN army, which should have been able to control IV Corps south of the Bassac, was ineffective. Not only were there not enough troops to interdict the enemy, but there were reports of SVN soldiers collaborating in VC smuggling across the border.

CTF 116 had earlier deployed PBRs to the upper Mekong and Bassac Rivers and had withdrawn them because of light contact with the enemy and the critical need for more support in the lower Delta. It is likely that if infiltration from Cambodia had been occurring across the entire border, the enemy could have successfully infiltrated supplies without using the upper Delta rivers. Another possibility is that there were never enough PBRs to effectively patrol the upper Mekong and Bassac Rivers.

Early in 1968, ComNavForV discussed the interdiction dilemma in a new OpOrder. He determined that the interdiction of resupply routes and river crossing points within SVN presented a more immediate problem to the VC than did interdiction of border crossing points. But the long-term effect would be far less significant, since the VC were known to alter their routes to adapt to hindrances. Interdiction of border crossing points would eventually exhaust the enemy's caches of modern weapons and would force him to use his older weapons. There were probably many caches of these weapons still available, especially in the older secret zones in An Xuyen Province.

Since it would obviously be more advantageous to interdict infiltration at the Cambodian border than to capture or destroy enemy material already within SVN, Game Warden was expanded into Sea Lords in October 1968. Sea Lords was a Delta-wide operation coordinating the combined assets of TF 115 (Market Time), TF 116, TF 117 (Mobile Riverine Force), and U.S. and Vietnamese ground forces. Sea Lords would continually harass VC strongholds and interdict supplies infiltrated from Cambodia.

The most logical place to set up a barrier against supplies entering SVN from Cambodia would have been on the canal that ran along the border. Because of the sensitive political situation, U.S. forces were not willing to risk border incidents. The first Sea Lords barriers were established on canals 35 to 40 n.mi. from and parallel to the Cambodian border.

The ultimate objective of in-country naval task forces was to support the extension of South Vietnamese control over the people and territory of the country. To reach this goal, naval operations had to complement the pacification programs. Sea Lords would extend SVN government influence into VC-controlled areas in conjunction with the accelerated pacification program begun in October 1968.

BIBLIOGRAPHY

- MACV, Ser. 0076, "Report of Recommendations Pertaining to Infiltration into South Vietnam of VC Personnel, Supporting Materials, Weapons and Ammunition (U)," Secret 15 Feb 1964 (Bucklew Report)
- CinCPac Command History, Top Secret, published annually from 1964 through 1972
- MACV Command History, Top Secret, published annually from 1964 through 1972 (the last volume covers Jan 1972 through Mar 1973)
- Naval Advisory Group, MACV, Historical Review, Secret, monthly, Mar 1965-Mar 1966
- Stanford Research Institute, "Special Study of Mobility in the Mekong Delta Area of South Vietnam (U)," Secret, Mar 1965
- United States Intelligence Board, USIB Memorandum, "Infiltration and Logistics -- South Vietnam (U)," Secret, 28 Oct 1965
- Defense Intelligence Agency, Southeast Asia Military Factbook, Secret, Oct 1965 through Sep 1970
- Commander River Patrol Force (CTF 116), Operation Order No. 11-66, DTG: 111046H Feb 1966, Confidential, downgraded to **Unclassified**
- U.S. Naval Ordnance Laboratory, NOLTR 66-25, "Small Craft Catalog (U)," Confidential, 1 Mar 1966
- JCS, NASVA Data Base, Confidential, Mar 1966 through Jul 1971
- Smith, H.H., Bernier, D.W., et al., "Area Handbook for South Vietnam," **Unclassified**, Apr 1966
- U.S. Naval Forces, Vietnam, Monthly Historical Summaries and Supplements, Secret to Confidential, Apr 1966 through Dec 1971
- Central Intelligence Agency, Intelligence Memorandum, CIA/RR EM 66-23, "Use of Cambodian Territory by the Viet Cong and North Vietnamese Army (U)," Secret, Jun 1966
- ComNavForV, Assistant Chief of Staff for Intelligence, enclosure to Ser. 00194-66, "Sea Infiltration into South Vietnam (U)," Secret, 12 Oct 1966

Westwood Research Inc., draft report, "Mekong Delta River Patrol: An Analysis of River Patrol Operations in Counterinsurgency Warfare (U)," Secret Dec 1966

Jane's Fighting Ships, 1966-1967

Commander River Patrol Force (CTF 116), Game Warden Operation Order 201 YR (U), DTG: 01001H Feb 1967, Confidential downgraded to Declassified

ComNavForV, Enclosure to Memorandum for Assistant Chief of Staff for Plans, "Extension of PBR Patrols, Intelligence Estimate for (U)," Secret, 16 Mar 1967

ComNavForV, Ser. 00139-67, "Reply to President's Foreign Intelligence Advisory Board (PFIAB) on VC/NVA Infiltration Activities (U)," Secret, 3 Jul 1967

CinCPac, "Infiltration Study in Support of Infiltration/Interdiction Conference (U)," Secret, 24 Jul 1967

Briefing for the CinCPac Infiltration and Interdiction Conference, Pearl Harbor, Hawaii, 24-26 July 1967: Market Time and Game Warden Operations, Confidential, Jul 1967

OEG, Enclosure to Internal Memorandum 55-68, "The SEACAD Program (U)," Confidential, 25 Jan 1968

Commander River Patrol Force (CTF 116), Game Warden Operation Order 201 YR (U), DTG: 281020Z Feb 1968, Confidential

ComNavForV Operations Analyst, enclosure to "Informal Staff Study on Delta Infiltration (U)," Confidential Mar 1968

Center for Naval Analyses Memorandum, OEG-146-68, "The Effectiveness of Helicopters in Game Warden Operations (U)," Secret, downgraded to Confidential, 9 Apr 1968

ComNavForV, ComNavForV Operation Plan No. 105-68, DTG: 282341Z Apr 1968, Secret, downgraded to Confidential

ComNavForV, Report No. 6 028 3647 68, "Viet Cong Use of Cambodia for Arms Infiltration into IV Corps (U)," Confidential, 18 May 1968

CinCPac, "Infiltration Study (U)," Secret, 29 May 1968

Central Intelligence Agency, Intelligence Memorandum ER IM 68-84, "Cambodia's Role in the Movement of Arms and Ammunition to the Vietnamese Communists (U)," Secret, Jul 1968

VAdm. E. R. Zumwalt, Jr., USN, ltr. to VAdm. F. J. Blouin, USN, Secret, 3 Jan 1969

Venzke, Cdr. N.C. USCG, Interview with, conducted at the Coast Guard Headquarters in Washington, D.C. by the Vietnam Writing Section, Secret, 28 Feb 1969

Center for Naval Analyses, Research Contribution 26, "Game Warden, Mobile Riverine Force and Revolutionary Development Operations in the Delta (U)," Secret, downgraded to Confidential, 17 Mar 1969

Weapons Systems Evaluation Group 143, "An Indicator System for the Conflict in Southeast Asia (U)," Top Secret, Apr 1969

Westwood Research, Inc., "A Review of U.S. Navy Experience in Establishment and Conduct of Mekong Delta River Patrol: Operation Game Warden (U)," Confidential, May 1969

Nicholson, Capt. R. E., End-of-tour Report, enclosure to ComNavForV Ser 00256-69, Secret, downgraded to Confidential 7 Nov 1969

Wells, Capt W. C., USN, "The Riverine Force in Action 1966-1967," U.S. Naval Institute Proceedings, Naval Review, 1969

Center for Naval Analyses, Memorandum, OEG-54-70, "Analysis of Mobile Riverine Force Effect on Pacification (U)," Confidential, 20 Mar 1970

ComNavForV, "Drop Cargo for the VC Possibly Transitting the Mekong (U)," Secret, 20 Apr 1970

Interview with Cdr. Dave Wright, USN, conducted in the Operational Archives by Dr. Oscar Fitzgerald, Secret, 2 Jun 1970

Central Intelligence Agency, Intelligence Memorandum ER IM 70-188, "Communist Deliveries to Cambodia for the VC/NVA forces in SVN, December 1966 - April 1969 (U)," Secret, Dec 1970

Swartztrauber, Cdr. S.A., USN, "River Patrol Relearned," U.S. Naval Institute Proceedings, Naval Review, 1970

Office of the Chief of Naval Operations, Naval History Division (Op-90BH), "History of Naval Operations, Vietnam, draft, Volume III -- 1965-1967 (U)," Secret, Feb 1971

Assistant Chief of Staff for Intelligence, U.S. Army, "The Role of Cambodia in the NVN-VC War Effort -- 1964-1970, Volume I (U)," Top Secret, 13 Apr 1971

Central Intelligence Agency, Intelligence Memorandum ER IM 71-156, "North Vietnamese Sea Infiltration of Military Supplies into South Vietnam (U)," Secret/NoForn, Aug 1971

Schreadley, Cdr. R. L., "The Naval War in Vietnam, 1950-1970," U.S. Naval Institute Proceedings, Naval Review, 1971

Albrecht, G., "Weyer's Warships of the World," Unclassified 1973

Center for Naval Analyses, Research Contribution 280, "Market Time (U)," in preparation.

APPENDIX A
DISTRIBUTION OF ENEMY SUPPLIES TO III AND IV CORPS