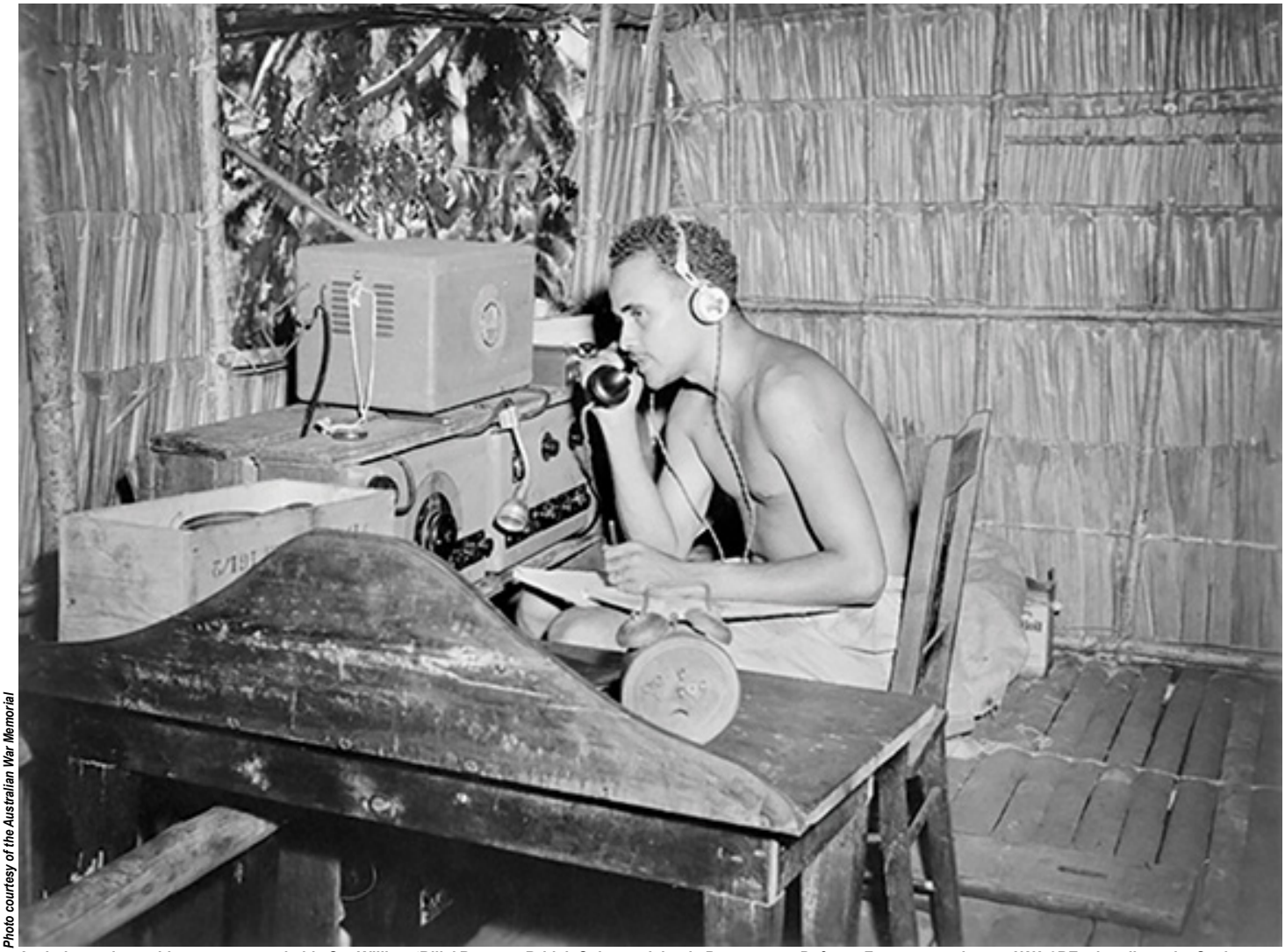

Photo courtesy of the Australian War Memorial

A wireless telegraphist operator, probably Sgt William 'Billy' Bennett, British Solomon Islands Protectorate Defence Force, operating an AWA 3BZ teleradio at the Seghe coastwatchers' station ZFJ5.

Human Intelligence as a Deep Sensor in Multi-Domain Operations:

Australia's World War II Coastwatchers

by Colonel Justin Haynes

Introduction

The U.S. Army's concept of multi-domain operations addresses multiple problems posed by near-peer and peer adversaries in both competition and conflict. China, Russia, and other adversaries seek to leverage layered stand-off[1] to achieve their aims, employing kinetic and non-kinetic operations with increasing sophistication and effectiveness. This new environment requires the joint force to penetrate and disintegrate threat antiaccess and area denial systems in order to set conditions for the United States and our allies to exploit gains and achieve operational and strategic objectives in the close and deep maneuver areas. Layered intelligence, surveillance, and reconnaissance[2] will be vital in enabling joint force commanders to make sound and timely decisions faster than our adversaries can respond by determining enemy force composition, disposition, and intent, as well as providing an understanding of the most critical factors shaping the operational environment.

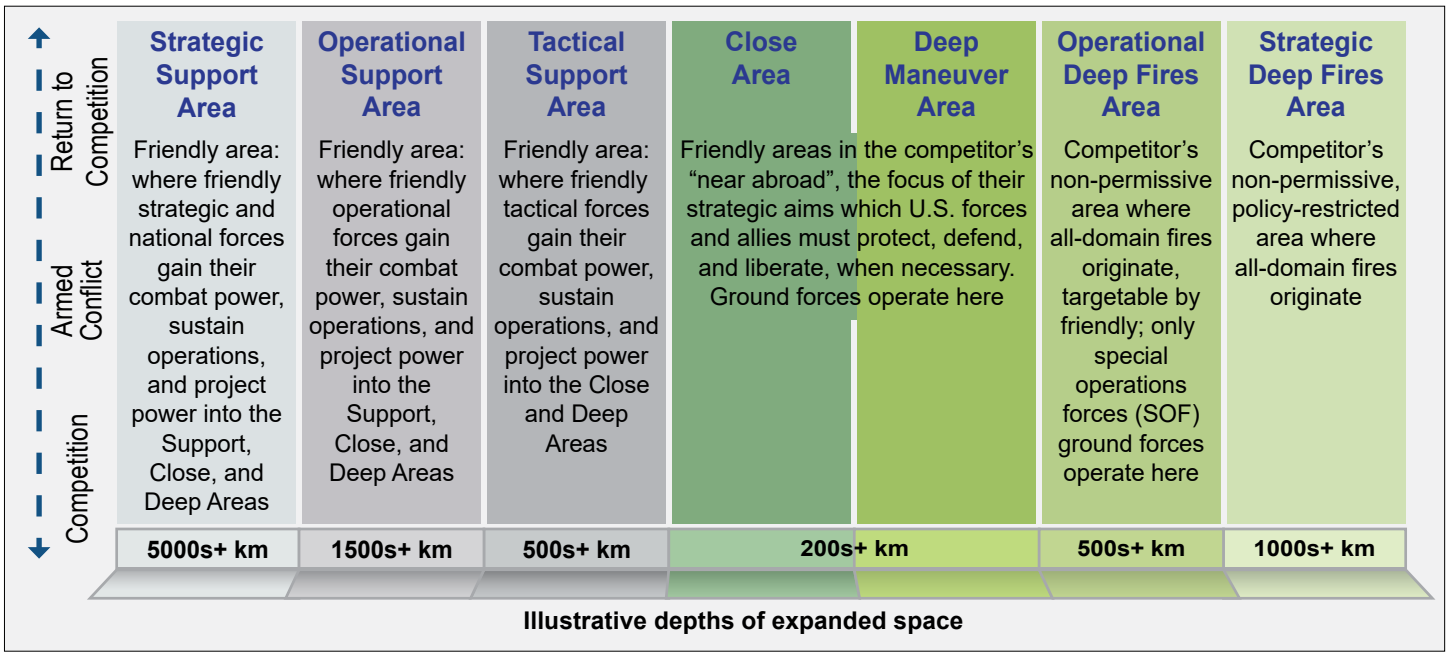

Figure 1. Multi-Domain Operations Framework[3]

As the Army looks to the multi-domain operations concept to guide how we use intelligence, surveillance, and reconnaissance resources in the future, it is essential to recall historical examples that may provide valuable lessons learned. Australia's employment of coastwatchers in the South Pacific Campaign during World War II provides an excellent example of human intelligence as a deep sensor in a multi-domain environment. The coastwatcher network provided tactical and operational information on enemy forces while also providing Allied commanders an understanding of the operational environment across the land, sea, and air domains. On multiple occasions, the coastwatcher network also served as an auxiliary unconventional warfare force that supported both direct action and personal recovery operations. Their activities within what we would now consider the close, deep maneuver and operational deep fires areas of the multi-domain operations framework proved invaluable to the Allies' efforts to penetrate the antiaccess and area denial system that the Empire of Japan established in early 1942.

The Coastwatchers and "Ferdinand"

Australia formed its initial coast watching organization shortly after the end of World War I in order to provide early warning of threats and activity on its northern coast. The military first established outposts in the region in September 1914, when it seized German possessions in the South Pacific and included civilian settlements in order to expand the breadth and depth of its network.[4] In 1939, Australia's entry into World War II, as part of the British Commonwealth, increased emphasis on the importance of this network.[5] The Royal Australian Navy's intelligence department focused on preparing the network's more than 800 personnel for combat operations. This network came to be known by its call sign "Ferdinand," drawing its moniker from the story of Ferdinand the Bull, as a reminder that its members were best suited for quietly observing their surroundings as opposed to engaging in direct fighting.[6]

The Story of Ferdinand

LCDR Eric Feldt, Royal Australian Navy, decided the coastwatcher organization needed a codename. He chose *Ferdinand*, from the children's classic, *The Story of Ferdinand*, about a bull who would rather smell flowers than fight in bullfights. LCDR Feldt later explained: "I chose Ferdinand…who did not fight but sat under a tree and just smelled the flowers. It was meant as a reminder to Coastwatchers that it was not their duty to fight and so draw attention to themselves, but to sit circumspectly and unobtrusively, gathering information. Of course, like their titular prototype, they could fight if they were stung."[7]

The Ferdinand network succeeded primarily because of three fundamental factors:

- First, Australia successfully identified significant intelligence gaps following the conclusion of World War I when German colonial forces had threatened Northern Australia and its interests in the archipelagos throughout the South Pacific.
- Second, the Australian Navy then took action to establish a broad human intelligence network well before hostilities to cover these gaps with overlapping coverage and secure communications.

- Third, the coastwatchers leveraged sources who were intimately familiar with the harsh conditions found in the South Pacific and uniquely suited to survive deep behind enemy lines.

These efforts resulted in a robust and resilient system, which enabled Allied commanders to take action within Japanese decision cycles.

The operational environment encompassed a vast geographic expanse spanning from the mountainous jungles of Papua New Guinea in the west to the thousands of islands found in the Bismarck Archipelago and the Solomon Islands to the east. More than 1,200 nautical miles separated the westernmost coastwatcher in the coastal town of Aitape, on the northern coast of Papua New Guinea, and the station on San Cristobal Island located at the southeastern extent of the Solomon Islands.[8] In order to cover this immense expanse, Australian naval intelligence established more than 85 remote locations to observe and report enemy activity and support Allied military operations.

LCDR E.A. Feldt, Royal Australian Navy, takes over from CDR E.H. Kincaid, U.S. Navy, as Naval Officer in Charge, Torokina, Solomon Islands.

Native islanders made up the majority of the civilian population throughout this region. These indigenous people were organized primarily as tribal cultures with widely dispersed villages of 100 to 200 people. The natives used simple tools in order to maintain a primitive, subsistence lifestyle based on fishing, hunting, and gathering, supplemented by limited crops. The islanders' primary contact with the outside world was through interaction with western men who sought the adventure of living in remote, tropical climes—men who saw profit in the natural resources found there and on occasion Chinese traders who traversed the region to barter for resources.[9]

The westerners living among the native peoples consisted of a diverse group of military personnel and civilians. These individuals, primarily white Australian men, formed the core of the group. They would report for duty as coastwatchers under the Australian naval intelligence service in the interwar years.[10] Civilians greatly outnumbered military personnel and consisted of local government officials, planters, miners, tradesmen, and sailors on small ships and boats.[11] Western missionaries also settled across this wide expanse to bring Christianity to the animist native population.

The Ferdinand network's preparation for conflict included training coastwatchers to use radios, basic codes, and reporting procedures. Between September and December 1939, LCDR Eric Feldt, staff director for intelligence in Port Moresby, New Guinea, visited nearly every outpost to ensure the coastwatcher network was ready for war.[12] Feldt had extensive pre-war experience in Papua and the Solomon Islands, which gave him great credibility with the members of the organization. He would remain a vital leader in running the coastwatcher organization and linking it to the Combined Operational Intelligence Center in Townsville on Australia's northeast coast.

Small numbers of military personnel and civilian volunteers operated Feldt's coastwatcher stations; normally no more than three individuals manned each location. Frequently, local natives supported the coastwatchers, leveraging long-term relationships built before the war. Those relationships would come under significant strain as Japanese forces invaded New Guinea in early 1942, and extended their reach throughout the Bismarck Archipelago and the Solomon Islands in the following months. On multiple occasions, the westerners found themselves isolated and harried by natives who either had turned to support the Japanese invaders or had seen opportunities to attack the coastwatchers now that they were vulnerable.[13]

The coastwatcher station's radio was its most critical item of equipment ensuring reliable reporting on Japanese activity. Radio operators sent reports on a common frequency, which stations throughout the network monitored, in order to share combat information. The stations also served as relays to distant receivers. Broad reporting criteria that Feldt had set included sightings of ships, aircraft, and floating mines; composition and disposition of ground forces; and information related to the operational environment.[14]

The Effectiveness of the Ferdinand Network

The coastwatchers immediately demonstrated the effectiveness of the Ferdinand network when the Japanese launched their offensive throughout the South Pacific in January 1942. The Japanese rapidly moved to secure airfields, ports, and sea lines of communication while the United States Navy was still reeling from the attack on Pearl Harbor. Tokyo's seizure of critical land features, coupled with control of both the air and maritime domains, established an antiaccess and area denial system that threatened to isolate Australia from the United States at a time when the majority of her armed forces were fighting the Germans in North Africa. The coastwatchers were vital in providing intelligence on Japanese air, naval, and ground operations, allowing the Allies to focus finite resources to defend against Japanese attacks while also enabling them to exploit windows of opportunity and surprise the Japanese when they were most vulnerable.

Coastwatcher Jack Read's exploits on Bougainville Island serve as an excellent example of how the Ferdinand network provided actionable intelligence to the Allies. Read's station was located on the north end of Bougainville Island, which had the fortuitous position of being on the direct flight path between the major Japanese airbases at Rabaul and Guadalcanal.

The United States 1st Marine Division landed on Guadalcanal and several neighboring islands on 7 August 1942, initiating the Solomon Islands campaign. The following day, Read observed 45 Japanese dive bombers flying southeast from Rabaul toward the United States fleet still engaged in supporting the Marine landings more than 400 miles away. Read relayed a flash message to Port Moresby, which in turn sent the message through the Allied intelligence center in Townsville to the American fleet within 10 minutes of observing the Japanese bombers.[16] This message provided the United States Navy more than 2 hours of early warning, which enabled the Navy to disperse ships, man antiaircraft weapons, and launch fighter aircraft in time to intercept the Japanese bombers. Read's rapid, accurate, and relevant intelligence reporting resulted in at least 16 Japanese aircraft shot down and prevented the disruption of United States landing operations on Guadalcanal.[17]

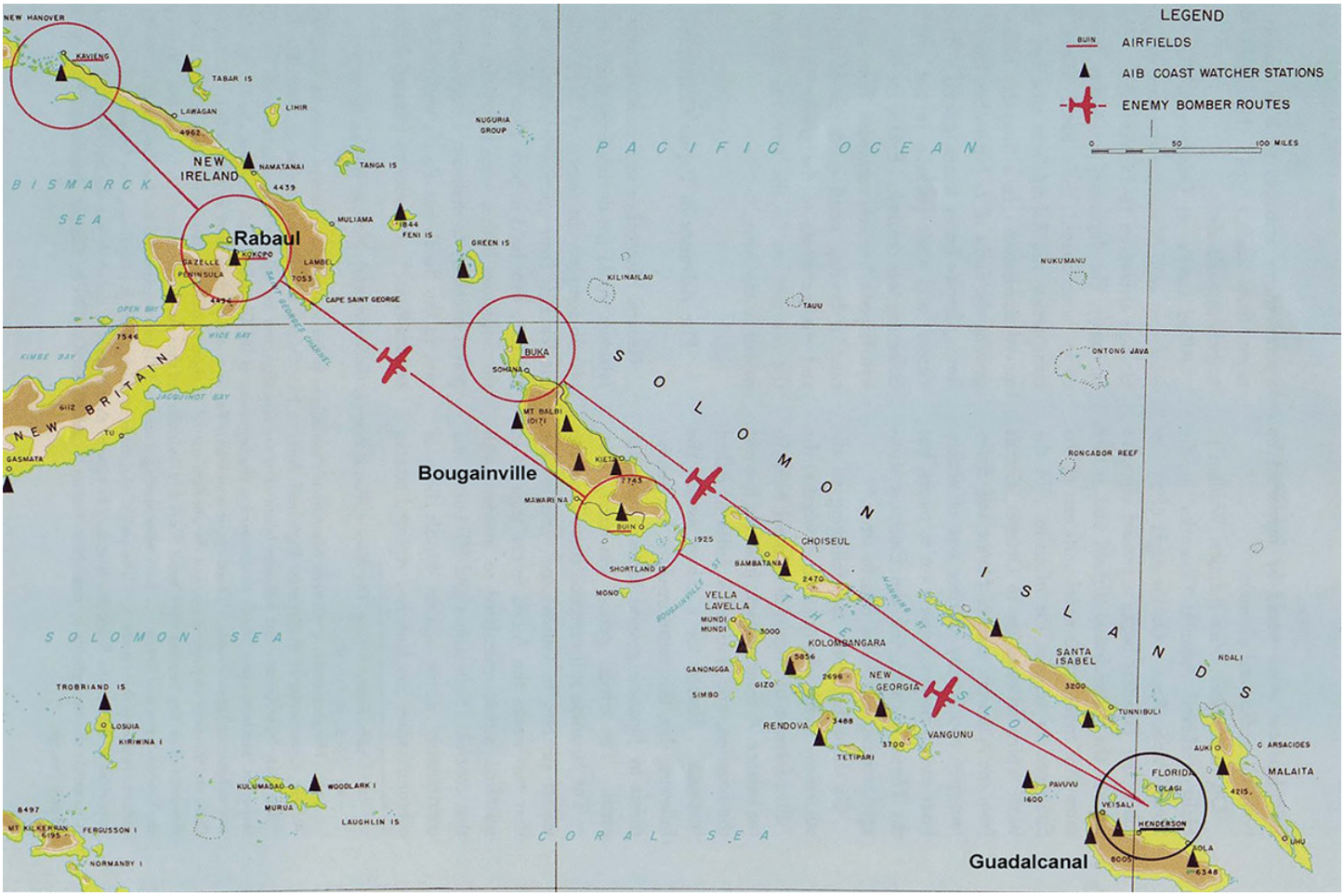

Figure 2. Coastwatchers in the Solomon Islands[15]

Read and other members of Ferdinand would repeat this feat on numerous occasions, providing Allied forces

critical intelligence on Japanese air, naval, and ground forces throughout the war. In addition to providing air raid warning, coastwatchers alerted Allied forces of Japanese ship movements and ground forces on the numerous islands and rugged jungles of the South Pacific. Human source networks among the local native populations and a limited number of westerners in the region provided extensive information on the enemy in addition to direct observation on Japanese forces.

Coastwatcher Keith McCarthy, located on New Britain Island, provided the Australians the first intelligence on the composition and disposition of Japanese forces at Rabaul, while also supporting the recovery of numerous Australian Soldiers who had fled into the jungle after the Japanese invasion.[18] Other coastwatchers used local native sources to provide battle damage assessments of Japanese airfields after Allied air raids.[19] Furthermore, Ferdinand saved the lives of more than 110 Allied fliers by either recovering or reporting the location of Allied pilots who had crashed in the region.[20]

Photo courtesy of the Australian War Memorial

LCDR W. J. (Jack) Read, Naval Intelligence Division, Royal Australian Navy, with his native scouts and other personnel at the Australian Intelligence Bureau camp, Lunga, Guadalcanal, British Solomon Islands Protectorate, March 27, 1945. Read is the European on the left.

Ferdinand reporting on enemy ship movements throughout the Solomon Islands also enabled the Allies to interdict the "Tokyo Express" running reinforcements to Guadalcanal, resulting in the isolation of Japanese troops there. Jack Read, while evading Japanese patrols on the northern end of Bougainville Island, observed a major buildup of Japanese vessels on 6 November 1942. Understanding that this group of ships could rapidly deliver an additional division of Japanese troops to fight the United States Marines on Guadalcanal, Read took a risk by breaking from his evasion to report. On 14 November, 11 Japanese transports accompanied by 12 destroyers as escorts sailed from Bougainville to land their cargo of 15,000 Japanese soldiers on Guadalcanal, only to be interdicted by American aircraft that were ready to strike because of the intelligence that Read had provided. Only four Japanese troop transports survived, delivering just a fraction of the troops and supplies that the Japanese desperately needed on Guadalcanal, dooming a planned offensive.[21]

A Harsh Environment

Despite their numerous successes, the Ferdinand network was a costly endeavor, resulting in the loss of more than 35 coastwatcher lives.[22] Jack Read, Keith McCarthy, and other coastwatchers operated deep behind enemy lines with limited resources and minimal opportunities for external support. These factors increased the risk to both personnel and their vital intelligence-gathering mission. Coastwatcher vulnerabilities included three primary threats: Japanese signals intelligence operations, human compromise, and the hostile nature of the environment itself.

Japan fielded extensive signals intelligence capabilities by leveraging naval platforms, aircraft, and ground collection systems to intercept and locate the source of coastwatchers' transmissions. The Japanese Imperial Navy was responsible for collection in the Solomon Islands, while the Army focused on New Guinea. Naval radio direction finding units established at Rabaul and Guadalcanal provided anchor points for a collection baseline, posing the greatest threat to Australian coastwatchers.[23] The Japanese rapidly hunted down coastwatchers who did not practice disciplined communications and forced many off the air as they moved away to avoid capture and likely execution.

Despite their remote operating locations, Ferdinand's coastwatchers were in frequent contact with native islanders. These islanders provided opportunities for sources of enemy information and logistical support, but they were also formidable adversaries when they cooperated with the Japanese. Jack Read noted that Japanese search parties were not effective in hunting for him and his compatriots

by themselves, yet when paired with a native tracker they became formidable threats.[24] Maintaining positive relations with the islanders became an imperative, as they provided a measure of force protection and early warning against Japanese ground movements, as well as food and other supplies to the coastwatchers when needed. Even with good relations, support of the local populace could rapidly change because of threats from the Japanese forces or in the event islanders sought to aid them through personal motivations.[25]

The environment in which the coastwatchers lived and survived posed just as much a threat to their lives as to their Japanese enemies. Malarial fevers, dysentery, and typhus were common among the coastwatchers with limited to no medical support available.[26] Even small cuts and abrasions were vulnerable to infection and gangrene. Because of these conditions, only men with detailed knowledge of how to live in the jungle and survive in extreme isolation were able to remain in their posts. Medical evacuation was difficult to coordinate and exposed the extraction platform, usually a submarine, patrol torpedo boat, or amphibious plane to Japanese attack.

Applying Lessons Learned to Contemporary Environments

Studying the Australian coastwatching network provides multiple lessons learned that we might apply to contemporary environments found in numerous combatant command areas of responsibility today. This case study highlights how an operational-level human intelligence network in a coastal environment effectively supported operations in multiple domains, spanning throughout the depth and breadth of the multi-domain operations battlefield framework. Following World War I, Australia identified a significant vulnerability in its ability to maintain overwatch of the great expanse of islands and seas to its north. The Australian naval intelligence service's foresight allowed it to develop the coastwatcher network in peacetime, well before anticipated hostilities, ensuring the success of the organization. This decision ensured Ferdinand's coastwatchers were well trained, properly positioned deep within the enemy's battlespace, and experienced in their operating environment before Japan's invasion of the South Pacific. Once the Japanese seized terrain and controlled air and sea space, it would have been incredibly difficult to establish an extensive source network behind enemy lines. Additionally, Ferdinand's simple yet effective communications network ensured rapid reporting of relevant combat information in time for the Allies to counter Japanese moves. Finally, the Ferdinand network was built around individuals with an intimate understanding of their harsh operating environment, which enabled them to operate with minimal external support for long periods of time.

The Australian Navy employed the Ferdinand network as a deep sensor to provide early warning intelligence in support of land and maritime operations in the Solomon Islands and enable targeting for air and naval operations. Similar and successful employment of Army human intelligence as a deep sensor in multi-domain operations—through identification of sources with appropriate placement and access in advance of need—will enable setting the theater through more refined intelligence preparation of the battlefield and deliver enhanced battlefield awareness to commanders. The reporting of adversary unit identifications, locations, and activity will enable effective cross-cueing of all intelligence disciplines to tip, cue, confirm, and target threat forces across all operational domains in both competition and conflict.

Endnotes

1. Stand-off is "the physical, cognitive, and informational separation that enables freedom of action in any, some, or all domains, the electromagnetic spectrum, and information environment to achieve strategic and/or operational objectives before an adversary can adequately respond." Department of the Army, Training and Doctrine Command (TRADOC) Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028* (Fort Eustis, VA: TRADOC, 6 December 2018), GL-8.

2. Ibid., 33.

3. Ibid., 8.

4. "Operations against German Pacific Territories," Australian War Memorial, accessed 5 March 2019, https://www.awm.gov.au/collection/E84777.

5. Peter Dunn, "Coast Watch Organisation or Combined Field Intelligence Service Section "C" of the Allied Intelligence Bureau," Australia@War, accessed 5 March 2019, http://www.ozatwar.com/sigint/coastwatchers.htm.

6. Eric Feldt, *The Coast Watchers* (New York: Oxford University Press, 1946), 4.

7. Feldt, *The Coastwatchers*, 95, quoted in "Australia and the Second World War: The Coastwatchers 1941-1945," The Anzac Portal, Australian Government, Department of Veterans' Affairs, accessed 8 March 2019, https://anzacportal.dva.gov.au/history/conflicts/australia-and-second-world-war/resources/coastwatchers-19411945.

8. A. B. Feuer, ed., "Introduction: The South Pacific Coast Watching Network," in *Coast Watching in World War II* (Mechanicsburg, PA: Stackpole Books, 1992), xvii.

9. Feldt, *The Coastwatchers*, 27-33.

10. Ibid.

11. John Brown, "Coastwatchers on New Britain," *World War II* 13, no. 1 (May 1998): 8.

12. Ibid., 6.

13. Feldt, *The Coast Watchers,* 36.

14. Dunn, *Coast Watch Organisation*.

15. Mark Tempest, "Sunday Ship History: Coast Watchers in the South Pacific," *EagleSpeak* (blog), July 27, 2008, http://www.eaglespeak.us/2008/07/sunday-ship-history-coast-watchers-in.html.

16. Jack Read, "Air Battles at Guadalcanal, August 8, 1942-January 1, 1943," in *Coast Watching*, 63-64.

17. Walter Lord, *Lonely Vigil* (New York: Viking Press, 1977), 46.

18. Feldt, *The Coast Watchers*, 36.

19. Feuer, *Coast Watching*, 69.

20. Lord, *Lonely Vigil*, 292-293.

21. Ibid., 105-106.

22. "The Role of Australian Coastwatchers in the Pacific War," Battle for Australia, accessed 4 March 2019, http://www.battleforaustralia.org/Theyalsoserved/Coastwatchers/CoastwatcherRole.html.

23. John Prados, "Neglected Intelligence: The Japanese in the Solomons Campaign," *U.S. Naval Institute Proceedings* (August 2013): 66-71.

24. Jack Read, "Porapora Days and the U.S.S. *Nautilius* Rescue, November 4, 1942-January 1, 1943," in *Coast Watching*, 77.

25. Brown, "Coastwatchers on New Britain": 8.

26. Feldt, *The Coast Watchers*, 27.

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Photo courtesy of the Australian War Memorial

British Capt W. F. Martin Clemens (left, with beard), Coastwatcher and District Officer on Guadalcanal, Solomon Islands, being debriefed by LTC Buckley (second from left), Commanding Officer Division 2 (Intelligence), United States 1st Marine Division on August 18, 1942. Other identified personnel are: Lieutenant F. Kidd (third from left), Division 2, United States 1st Marine Corps; Flight Lieutenant Charles Widdy (right), Royal Australian Air Force, a guide with the 1st Marine Division. Obscured on the right is a sergeant of the Division 2 staff taking notes.