Chapter 6: Reconnaissance

This page is a section of FM 7-100.1 Opposing Forces Operations.

The OPFORÂ considers reconnaissanceÂ the mostÂ important elementÂ of combat support. All commanders and staffs organize reconnaissance to acquire information about the enemyâ reconnaissance, intelligence, surveillance, and target acquisition (RISTA) assets, precision weapons, force disposition, intentions, and terrain and weather in the area of responsibility (AOR). This information is crucial to the planning process in OPFOR command and control (C2). Reconnaissance can decisively influence the outcome of an operation or even the strategic campaign.

Mission

For the OPFOR, reconnaissance is a mission, not a force or unit. OPFOR reconnaissance is an integrated combined arms effort, not solely the business of reconnaissance troops. Besides reconnaissance units, the OPFOR will use other arms for reconnaissance missions, as necessary. It will also use para-military forces, affiliated forces, and/or friendly civilians to collect information.

Concept

Reconnaissance and intelligence collection are critical to OPFOR military operations. Commanders and planners place significant emphasis on the destruction of enemy precision weapons and on conducting high-speed, continuous, combined arms operations throughout the depth of the theater. Reconnaissance and intelligence collection has three distinct levelsâ strategic, operational, and tactical. These three categories overlap, mutually support, and differ primarily by the level of command and the commanderâ AOR.

Commanders require continuous, timely, and accurate intelligence on the enemy, terrain, and meteorological situation. Thus, the OPFOR devotes substantial effort to all forms of reconnaissance. Commanders prefer to confirm their plan only after thorough reconnaissance.

Principles

The OPFOR uses six principles to guide its reconnaissance activities: focus; continuity; aggressiveness; timeliness; camouflage, concealment, cover and deception (C3D); accuracy and reliability. For the greatest likelihood of a successful operation, OPFOR reconnaissance must satisfy all of these principles simultaneously and continuously.

Focus

The actions of reconnaissance must serve the commanderâ needs and focus on elements and objectives critical to the execution of combat operations.

Each level of command, from theater to battalion, develops a comprehensive reconnaissance plan in accordance with the organizationâ mission. Reconnaissance resources are always scarce. The commander must carefully define and limit ground reconnaissance objectives and concentrate reconnaissance assets on the critical areas of the battlefield.

To use reconnaissance assets effectively, the commander must be flexible. If the situation changes, he must redirect the reconnaissance effort, even altering the plan. The reconnaissance plan must coordinate all available assets into an integrated plan.

Continuity

The modern, fluid battlefield demands continuous reconnaissance to provide an uninterrupted flow of information under all conditions. Reconnaissance provides constant coverage of the enemy situation and helps prevent enemy operational surprise. To ensure continuity, the OPFOR employs a wide variety of redundant assets with deep overlapping coverage ranging from satellites to human agents to unmanned aerial vehicles (UAVs).

Reconnaissance attempts to maintain contact with theÂ enemy at all times. The OPFOR conducts reconnaissance in all directions and against all key enemy formations. Reconnaissance collects information during all battle phases, 24 hours a day, 7 days a week, in all weather conditions. Not only must reconnaissance answer specific requests for information; it also must continuously collect information on all aspects of the enemy, weather, and terrain to fully meet future requirements.

Units conducting reconnaissance and intelligence collection must maintain a high state of combat readiness. Reconnaissance is a critical responsibility for all commanders at all times. In the event that a specialized reconnaissance unit is destroyed or becomes combat ineffective, commanders reassign the mission to appropriate forces.

Aggressiveness

Aggressiveness is the vigorous search for information, including the willingness to fight for it if necessary. The OPFOR recognizes that reconnaissance is an offensive combat operation, requiring successful penetration or avoidance of enemy security forces to be successful. Reconnaissance must conduct intelligence collection creatively and make maximum use of assets on the battlefield to ensure success. The OPFOR vigorously employs all available collection resources and adheres carefully to the reconnaissance plan. However, it will alter the plan when its own initiatives or enemy actions dictate.

The OPFOR stresses initiative, resourcefulness, and daring in the conduct of reconnaissance. Reconnaissance attempts to penetrate enemy defenses, ambush and raid enemy forces, and as a last resort, draw fire to determine enemy positions. In short, it does what is necessary to fulfill the commanderâ intelligence needs.

Commanders use all available means to seek information. The information requirement determines the techniques to use, such as clandestine infiltration by Special-Purpose Forces (SPF) or quick mechanized reconnaissance. Ambushes and raids are fruitful means of gathering intelligence from prisoners of war, captured documents, and equipment. Such information-gathering actions are generally more important than any associated damage, but there are exceptions. Reconnaissance must sometimes destroy high-value targets they find. Elements of enemy long-range fire systems, precision weapons, multiple rocket launchers, and forward operating sites for attack helicopters or ground-attack aviation are some high-priority targets.

Timeliness

Timely information is critical on the modern battlefield. Because of the high mobility of modern armies, there are frequent and sharp changes in the battlefield situation. As a result, information quickly becomes outdated. Timely reporting enables the commander to exploit temporary enemy vulnerabilities and windows of opportunity. He can adjust plans, using increased data automation to fit a dynamic battlefield.

Camouflage, Concealment, Cover and Deception

The OPFOR is aware that the enemy may learn a great deal about its intentions by discovering its reconnaissance plan. Therefore, OPFOR commanders try to conceal the scale, missions, targets, and nature of reconnaissance efforts. They understand it is not possible to hide the fact that reconnaissance is being conducted. However, they do strive to prevent the enemy from

discovering where they are concentrating their main strength in the defense or where they are preparing to launch their main attack.

The OPFOR can also use C3D to â paint a picture â that confirms the enemyâ s stereotyped views of how the OPFOR fights. By showing the enemy what he wants to see, the reconnaissance effort can help to establish the conditions for success during ensuing operations.

Accuracy and Reliability

The OPFOR uses every available means to verify the accuracy and reliability of reported information. A commander must base his decisions on accurate and timely reconnaissance information. Reconnaissance must reliably clarify the true enemy situation in spite of enemy C3D and counterreconnaissance activities. Multiple means of acquisition help defeat enemy counterreconnaissance. To maximize results, the commanderâ s plan requires accurate information on the enemyâ s size, location, equipment, and combat readiness. Accuracy is crucial to destroying high-value targets such as enemy precision weapons, C2, and communications.

Characteristics

OPFOR reconnaissance operations are characterized byâ

- Flexibility. The OPFOR must be able to switch priorities from one target to another without degrading the overall mission.
- Sustainability. Reconnaissance forces must be able to sustain themselves wherever they are operating, without relying on others for transport or subsistence.
- Security. A reconnaissance asset should be as secure as possible during operations. This means operating in a manner that conceals activities and areas of interest at all times. Reconnaissance activity should not reveal the parent unitâ s plan of action.
- Communications. Reconnaissance forces must have reliable communications. An intelligence organization may successfully gather all necessary information, but if it cannot transmit this information to the user (such as the maneuver commander or an artillery unit), the entire effort is useless.
- Reserves. All levels should maintain a reconnaissance reserve to take on unforeseen tasks or redeem failure on key missions.

Priorities

Reconnaissance activities must support the information requirements of the commander. Therefore, priorities vary at different levels of command: strategic, operational and tactical.

Strategic

The highest priority of strategic reconnaissance is to provide indications and warning of impending hostilities, as well as targeting information for weapons of mass destruction (WMD). However, strategic intelligence can also gather information useful to operational and even tactical commanders. In this case, the information must pass down through reconnaissance staff channels to the potential user.

Operational

The operational commander conducts reconnaissance to locate the most critical enemy targets, including the following:

- Precision weapons.
- Nuclear, biological, and chemical (NBC) systems.
- Air defenses.

- Intelligence-collection assets.
- Higher headquarters and communications centers.
- General support artillery.
- Operational maneuver formations and their movements.
- Contents of airfields and army aviation forward operating bases.
- Major concentration areas of reserves.
- Unit boundaries.
- Location and extent of defended areas.
- The enemyâ combat capabilities and intentions.

Tactical

Tactical groups also address more local threats, including the following:

- Location of direct support artillery and mortars and attack helicopters.
- Disposition of tanks and medium- and long-range antitank systems.
- Deployment of air defense weapons.
- Location of brigade and battalion command posts.
- Nature and extent of natural and manmade obstacles.
- Locations of field defenses.

Strategic Assets

Strategic reconnaissance acquires and analyzes information about the military-political situation in individual countries and coalitions of probable or actual enemy nations; their armed forces; and their military, industrial, and economic potential. Strategic reconnaissance provides the information required by the highest military-political leadership. Needed information concerning a potential enemy includes the following:

- Intentions and capabilities.
- Preparation and disposition of forces in various theaters.
- NBC capability.
- Diplomatic initiatives.
- Strength and weaknesses of alliances and coalitions.

Special-Purpose Forces

The General Staff normally reserves some units of the SPF Command under its own control for reconnaissance missions supporting national-level intelligence requirements. It may control these units either through the SPF Command or by placing them directly under the control of its own Intelligence Directorate. SPF units of the Army, Navy, Air Force, or Internal Security Forces could temporarily come under the control of the SPF Command or the General Staff when they become part of joint SPF operations in support of national-level requirements. If the General Staff creates a theater headquarters, it may dedicate one or more SPF units to it. Even SPF units allocated to an operational- strategic command (OSC) may conduct strategic missions, if required.

The SPF represent an important element in the total integrated reconnaissance network planners try to achieve. These elite troops are a major source of human intelligence (HUMINT). They provide reconnaissance and combat capabilities for strategic and operational employment. They gather information to satisfy strategic and operational requirements at extended distances (sometimes more than 100 km) or close to tactical reconnaissance, in nonlinear situations. For more information on SPF, see Chapter 13.

Signals Reconnaissance Units

Signals reconnaissance is an integral part of information warfare (IW). The overall scope of

signals reconnaissance includes the interception, analysis, and exploitation of electromagnetic (radio and radar) emissions, coupled with measures to disrupt or destroy the enemyâ radio and radar assets. Signals reconnaissance assets are found in two types of organizations. The majority are organic to signals reconnaissance units at all echelons and provide significant support to the chief of reconnaissance. Additional assets are organic to jamming units, where they provide targeting support.

Air Assets

Aerial reconnaissance includes visual observation, aerial imagery, UAV reconnaissance, and signals reconnaissance. Since most reconnaissance aircraft must penetrate enemy airspace, many of these missions are possible for manned aircraft only when the OPFOR has established air superiority. However, UAVs do not necessarily require air superiority. They are generally harder to detect because they are smaller and fly at lower altitudes than manned aircraft. Also, they are relatively low-cost and may be considered expendable.

Fixed-Wing

The Air Force has varying reconnaissance assets to meet specific needs. These units use high-performance aircraft to conduct aerial reconnaissance, including visual, photographic, radar, and signals reconnaissance missions. Aircraft on photographic reconnaissance missions normally fly at high speed and may fly at high or low altitudes. They fly in pairs or singly, out to about 600 km from their operating base. Aircraft with side-looking airborne radar (SLAR) normally work at high altitude and may not need to cross the battle line to achieve their objectives. Similarly, signals reconnaissance aircraft may not need to cross the battle line to identify and locate enemy radar emissions.

Rotary-Wing

Helicopters are a primary means to transport and insert reconnaissance units behind enemy lines. They can emplace observation posts or reconnaissance patrols rather than perform air reconnaissance, especially when the OPFOR does not have air superiority.

Unmanned Aerial Vehicles

There are two types of UAV: drones and remotely-piloted vehicles (RPVs). A drone flies a set course programmed into its onboard flight control system prior to launch. An RPV, on the other hand, can be flown by remote control from a ground station, over a flight path of the controllerâ choosing. Flight patterns can vary according to the mission. For surveillance missions, the UAV typically uses a figure-eight or racetrack pattern to maintain it over the assigned surveillance area. For reconnaissance, intelligence collection, target acquisition, and battle damage assessment missions, a loop or zigzag pattern allows thorough coverage over a specific target area. RPV operators can vary these basic flight patterns by taking control of the RPV and changing its altitude, speed, or direction of flight. This allows RPVs to search for high-priority targets or to collect more detailed information on such targets once it locates them. While the radio command link gives an RPV greater flexibility, it also limits the range of the RPV to the line-of-sight transmission range from its control station. However, many RPVs can also operate in a preprogrammed mode at longer ranges. UAV operations are also described in greater detail in FM 7-100.2.

Satellites

The Intelligence Directorate controls satellite reconnaissance to support the OPFOR. These satellites provide unique capabilities of noninvasive reconnaissance (not violating enemy airspace), â freeâ access, and continuous communications or surveillance from their orbits.

The OPFOR can use three basic types of reconnaissance satellites: photographic, early warning, and signals reconnaissance.

Photographic

Satellite reconnaissance is not as flexible as other types of reconnaissance, because a satellite only reconnoiters an area when its orbit takes it into range. As a result, the OPFOR uses specialized photographic reconnaissance satellites to record designated enemy activity. Satellites may photograph an area 40 to 50 km wide from an altitude of 200 to 250 km.

Early Warning

Early warning satellite orbits cross over foreign countries and the oceans. The satellites might be used to detect infrared signatures from intercontinental ballistic missile (ICBM) launches or the deployment of enemy troops.

Signals Reconnaissance

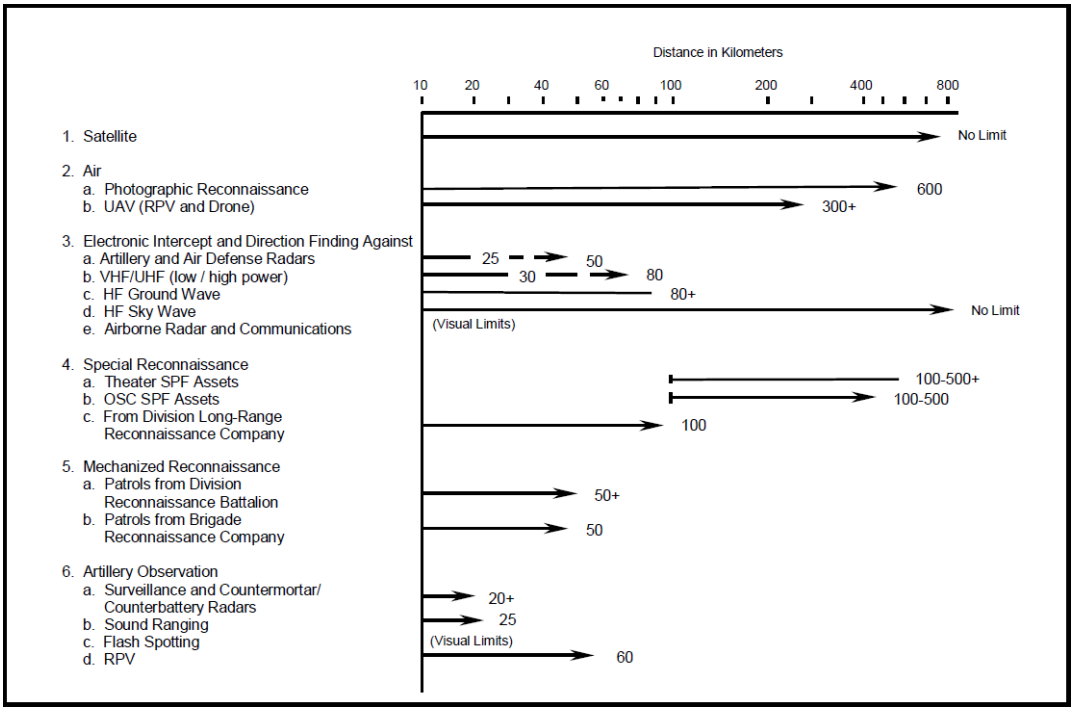

Figure 6-1. Effective Ranges of Reconnaissance Assets

The OPFOR could use several classes of signals reconnaissance satellites to gather information on the electronic order of battle. Signals reconnaissance satellites locate C2 nodes, battlefield radars, and forward units. Some might also monitor transoceanic shipping and air traffic. Another function could be to detect unknown electronic signatures that might indicate the presence of new equipment.

Operational Assets

Operational reconnaissance forces support OSC commanders. They acquire and analyze information about an actual or probable enemy, to prepare for the successful conduct of combat operations. Operational reconnaissance forces usually collect information throughout the entire depth of an enemy corps area (300 to 600 km). Operational reconnaissance collection assets include signals reconnaissance, aerial reconnaissance, and SPF. OSCs conduct operational reconnaissance using their own resources, plus those of their subordinate tactical groups. Figure 6-1 illustrates the effective ranges of various reconnaissance means that may support OSC operations.

Special-Purpose Forces

The General Staff often allocates SPF units to support the operations of an OSC or to become part of the OSC in a constituent or dedicated command relationship. Such units have SPF troops specially trained to insert by parachute, helicopter, light aircraft, or infiltration to conduct reconnaissance. Of course, commanders do not insert all of the assets at the outset to operate simultaneously; they might retain some in the reconnaissance reserve to be inserted against new targets or original ones left uncovered by the compromise or destruction of a team inserting in the first group.

Signal Reconnaissance Assets

The OPFOR typically allocates radio and radar intercept and direction finding units to OSC level. These assets report gathered informationÂ to higher and lower levels.

Air Assets

The theater commander normally controls aerial reconnaissance but may allocate aircraft to lower headquarters to support a particular operation or battle. The number and composition of units, and the types of fixed- and rotary-wing aircraft can vary greatly. The OPFOR also employs UAVs to conduct aerial reconnaissance.

Artillery Assets

OSCs often have constituent target acquisition units to obtain and transmit meteorological, topographic, and targeting information. This can include sound-ranging systems, battlefield surveillance and countermortar/counterbattery radars.

NBC Assets

OSCs operating in potential NBC environments typically have chemical defense units and chemical reconnaissance units allocated to them.[1]Â These units perform decontamination and detect, report, and mark all contaminated areas.

Engineer Assets

Engineer units have reconnaissance specialists to accompany maneuver unit reconnaissance forces. There are specialized engineer reconnaissance patrols that assess routes, reporting on obstacles, road conditions, and the general nature of the terrain. These engineer assets help units maintain a rapid rate of advance or prepare for effective defense.

Airborne Forces

Airborne forces are elite troops whose primary purpose is to conduct active combat operations in the enemyâ rear area. Airborne forces might conduct reconnaissance operations and relay information directly to the main command post or headquarters as they operate against targets in the enemyâ rear. See Chapter 13.

Unmanned Aerial Vehicles

At OSC level, UAVs provide aerial reconnaissance support. An OSC often is assigned one or more UAV units.

Ground Forces Tactical Reconnaissance

Reconnaissance is a combined arms responsibility. Thus, ordinary mechanized infantry and tank

units perform two functions: they perform their own close reconnaissance tasks with organic resources, and they provide reconnaissance detachments of up to battalion strength. Leading units may also conduct reconnaissance attacks (see FM 7-100.2). OSCs and tactical groups may also form task-oriented reconnaissance detachments based on a combat arms battalion, augmented by engineer and chemical reconnaissance and, often, by mechanized infantry and tank units. Generally, these groups try to avoid combat in fulfilling their tasks, although they may direct artillery fire or air attacks. Typical missions might includeâ

- Locating, identifying, and reporting enemy precision weapons and nuclear delivery means, headquarters, communications centers, troop concentrations, and movements of enemy units.
- Determining the strength and disposition of the enemyâ s defenses and locating his boundaries.
- Providing topographical information concerning routes to, or bypasses around, enemy positions as well as concerning lateral routes.
- Identifying the extent and depth of minefields and the types of mines employed (assessing obstacles and possible crossing points).
- Establishing the extent of zones of NBC contamination.
- Identifying potential communications facilities and other sites for use by their own forces.

The chief of reconnaissance, with input from other staff elements, must prepare a detailed reconnaissance plan, specifyingâ

- The organization of reconnaissance activities for a specific time.
- Goals and mission for each reconnaissance activity.
- Completion times.
- Reporting procedures.

Strategic Context

Reconnaissance plays a critical role in all OPFOR strategic courses of action. Targets of reconnaissance actions may be the same during different strategic courses of action, but for different reasons.

Regional Operations

Military operations during regional operations attempt to achieve strategic political or military decision by destroying the enemyâ s will and capability to fight. This is often brought about by destroying the C2Â and logistics systems the enemy needs for continued operations. Reconnaissance actions during this period are therefore focused on locating and tracking enemy C2Â nodes and logistics centers.

Other targets of OPFOR RISTA during regional operations include the enemyâ sâ

- Precision weapons delivery means.
- Long-range fire systems.
- WMD.
- RISTA assets.

Transition Operations

A key reconnaissance task during transition operations is to support the requirements of access-control operations. RISTA assets can gather information on likely enemy aerial and sea ports of debarkation and other targets of access-control activities, such as potential operating or staging bases.

Reconnaissance efforts are directed against vulnerable early-entry forces before the enemy can bring his technological overmatch to bear. They can also support sophisticated ambushes to destroy high-visibility enemy systems or cause mass casualties.

Adaptive Operations

In adaptive operations, RISTA assets support the creation of windows of opportunity that permit OPFOR units to move out of sanctuary and attack. OPFOR RISTA can do this by locating and tracking key elements of the enemyâ C2, RISTA, air defense, and long-range fires systems for attack.

RISTA assets can also play a direct role in supporting counterreconnaissance operations. Extraregional powers rely heavily on situational awareness, both to employ standoff weapons and to preclude being deceived by OPFOR IW efforts.

References

1. Although the OPFOR calls these units are â chemical defenseâ or â chemical reconnaissance,â their functions actually encompass nuclear, biological, and chemical (NBC) defense or reconnaissance. (See Chapter 11.)