WEATHER OPERATIONS PLANNING, EXECUTION, AND ASSESSMENT

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The natural environment affects planning and execution across the joint force. Joint Publication (JP) 3-59, *Meteorological and Oceanographic Operations*, and the *Joint Meteorological and Oceanographic (METOC) Handbook*, are excellent references when planning, executing, and assessing weather operations. Environmental effects information should be integrated into the planning, execution, and assessment of all military operations. Environmental support is most effective when weather personnel know the mission, organization, capabilities, plans, doctrine, and procedures of the supported unit.

WEATHER OPERATIONAL PLANNING

In any planning process, weather should be considered at the earliest possible stage of planning. A combatant commander's planning staff should consider climatology, weather effects, and weather force lay-down during planning. METOC planners aid commanders by integrating their experience and knowledge of METOC conditions and effects, thereby allowing the commander to visualize adverse impacts and assess any potential risks when arranging operations. Weather operational planning includes METOC activities: identifying information gaps, prioritizing capability requirements, developing collections plans, assessing capabilities to identify shortfalls, and developing mitigation strategies to address shortfalls.

Weather forces should be co-located with key command and control elements to inject weather and weather effects information throughout the planning process. These forces should be fully integrated into supported units in order to understand the mission profiles, routes, ordinance, tactics, techniques, and procedures to be employed in an operation. With this understanding, METOC planners can better communicate where environmental effects will help or hinder operations and how best to mitigate potential negative effects.

Planners should use the guidance provided in the weather annex of the *Air Force War and Mobilization Plan, Volume One,* to request the weather capabilities required to meet the combatant commander's intent. Weather forces deployed forward should be properly trained and equipped to handle communications outages which may preclude

the transmission of weather data and products from centralized weather analysis and forecast centers. Air Force weather personnel should be assigned or attached to each Air Force, Space Force, and Army component staff and integrated into the staff functions to ensure the proper weather capabilities are requested.

During plan development, the Army should provide their requirements for weather support and services to the Department of the Air Force (DAF) for validation. In coordination with the DAF, the Army includes and synchronizes Army-provided equipment used to support Air Force weather capabilities in the time-phased force deployment database.[1]

WEATHER OPERATIONS EXECUTION

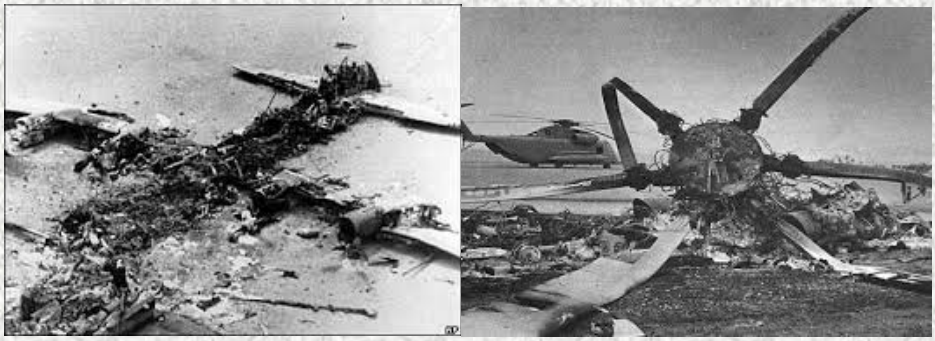
DAF weather operations help predict when weather could affect friendly and adversary operations, possibly offering friendly force commanders an exploitable asymmetric advantage. DAF weather operators persistently monitor, assess, and report weather conditions during execution.[2]

WEATHER OPERATIONS ASSESSMENT

To assess operational effectiveness and technical performance, weather personnel assess their ability to accurately predict the weather (technical performance) and its impact on operations (operational effectiveness). In general, weather personnel providing airfield weather services and staff and installation weather integration focus on evaluating analysis and forecasting products for their technical assessment while personnel providing mission weather integration evaluate the integration of products on their operational effectiveness. These assessments are used to modify or create new techniques, procedures, products, and services.

Additionally, weather personnel should reference the joint lessons learned information system during the planning process, archive weather planning and execution data, and documents weather lessons learned in accordance with the joint lessons learned program.

[1] Army Regulation 115-10, *Weather Support and Services for the US Army* (common access card required).
[2] AFDP 3-0, *Operations and Planning*.



Operation EAGLE CLAW: A Hard Lesson to Learn

Top-secret planning for what would be one of the most complicated and ambitious raids in American history, the Iranian hostage rescue attempt of 1980, lasted over five months but it fell short of fully considering an incorrigible foe: the weather.

Historical records pointed to winter as the optimal time for a mission of this type, as limited moonlight and suitable temperatures and densities represented favorable conditions for night RH-53D operations. Nevertheless, the mission was set for late April, introducing additional weather challenges such as suspended dust, which proved to be a factor in the subsequent mishap. This mission-impacting information was never briefed to JTF planners and decision makers.

Recommendations to use a WC-130 weather reconnaissance aircraft as a scout in advance of the RH-53Ds were discounted based on assumed favorable weather conditions and for security reasons. Additionally, it was determined that pilot reports from accompanying C-130s, flying the same route, could provide advance notice of unfavorable weather as needed. However, the C-130s ended up arriving at the destination, Desert One, well ahead of the helicopters and were unable to relay up-to-the-minute weather data to the RH-53D crews.

Weather operations personnel were excluded from planning and rehearsal exercises at the JTF training areas, eliminating their ability to work with the aircrews

Furthermore, mission execution weather briefings, developed by weather operations personnel, were presented by J-2 intelligence officers who had little, if any, formal weather training or experience. Aircrew feedback was provided in the same indirect way. Pilots were thus unaware of the possibility of encountering suspended dust and were unprepared to handle it. Integration of weather information, a vital contributor to mission success, never occurred.

—Paul B. Ryan
The Iranian Rescue Mission: Why It Failed