

FIELD MANUAL
NO 34-81

AIR FORCE MANUAL
NO 105-4

*FM 34-81/AFM 105-4
DEPARTMENTS OF THE ARMY AND
THE AIR FORCE
Washington, DC, 31 August 1989

WEATHER SUPPORT FOR ARMY TACTICAL OPERATIONS

Table of Contents

	Page
Preface	ii
CHAPTER 1 - Weather Support for the AirLand Battle	1-1
AirLand Battle	1-2
Battlefield Area	1-4
Echelon Responsibilities	1-6
CHAPTER 2 - Weather Resources	2-1
Weather Support	2-2
Functions and Responsibilities	2-2
Weather Information Sources	2-4
Integrated Weather Support	2-8
CHAPTER 3 - Air Weather Service Support to Army Units	3-1
Air Weather Service Centralized Support Structure	3-1
Weather Support Force	3-4
CHAPTER 4 - Weather Support by Army Elements	4-1
Intelligence Preparation of the Battlefield	4-1
Weather Data Sources	4-6
Forward Area Limited Observing Program	4-9
CHAPTER 5 - Weather Support Communications	5-1
Communications Factors	5-2
Communications Responsibilities	5-2
CHAPTER 6 - Combat Service Support	6-1
Army Support	6-1
Air Force Support	6-5
APPENDIX A - Forward Area Limited Observing Program	A-1
APPENDIX B - Weather Effects on Army Operations	B-1
APPENDIX C - Meteorological Critical Values	C-1
GLOSSARY	Glossary-1
REFERENCES	References-1
INDEX	Index-1

*This publication supersedes FM 34-81/AFM 105-4, 31 August 1984.

Preface

The AirLand Battle is an extended, integrated battle involving all air and land forces. Conventional, nuclear, chemical, and electronic weapons are integrated to attack enemy forces throughout the depth of their formations. Basic to the AirLand Battle is the fact that modern battles will be fought by air and land forces working together. Interaction and cooperation must extend into almost every function of combat.

The potential AirLand battlefield exists wherever United States forces face relatively modern, well-equipped forces using Soviet tactics and operational concepts. These forces are typified by the Warsaw Pact in Central Europe and the mechanized forces in the Middle East and Korea. The Army and Air Force must be prepared to fight and win by using all available combat power throughout every dimension of the battlefield.

Combat power depends on more than troops and weapon systems. It requires the integration of communications, intelligence, and other types of combat support (CS) and combat service support (CSS). These factors may be decisive, since commanders can manipulate and control them to achieve a tactical advantage.

Weather is the single decisive factor over which commanders have little or no control. Weather may be the most significant factor considered in all combat operations.

Many battles were won or lost due to the impact of weather. Some examples are the Spanish Armada, Operation Overlord, Battle of Trenton, Battle of Stalingrad, and the Battle of the Bulge, as well as Napoleon's and Hitler's attempts to take Moscow.

Although commanders have no control over weather, they can take advantage of it or minimize its effects through planning. To do so, they need support from meteorological elements operating from the tactical to the national and international levels.

This manual provides weather support doctrine for combat operations. FM 100-5 describes operations and FM 34-1 describes intelligence and electronic warfare operations. The target audience includes Army and Air Force commanders and staffs. It also includes those US Air Force (USAF) weather teams (WETMs) deployed in support of Army tactical commands and echelons above corps (EAC) which provide weather data to lower echelon WETMs. Publications in the references support this manual and should be consulted for more details.

Use of special operations forces (SOF) in this manual refers to both special forces groups (SFGs) and the ranger regiment.

The proponent of this publication is HQ, TRADOC. Submit changes for improving this publication on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forward it to Commander, US Army Intelligence Center and School, ATTN: ATSI-TD-PAL, Fort Huachuca, AZ 85613-7000.

CHAPTER 1

WEATHER SUPPORT FOR THE AIRLAND BATTLE

Weather is critical to Army tactical operations and operational level planning. History is filled with examples of the weather's effects on combat operations on a variety of battlefields. The AirLand battlefield of today may provide additional examples of victories and defeats attributable to skillful integration of weather in military planning and execution of combat operations. Weather, enemy, and terrain are often referred to as the wet trilogy, as shown in Figure 1-1.

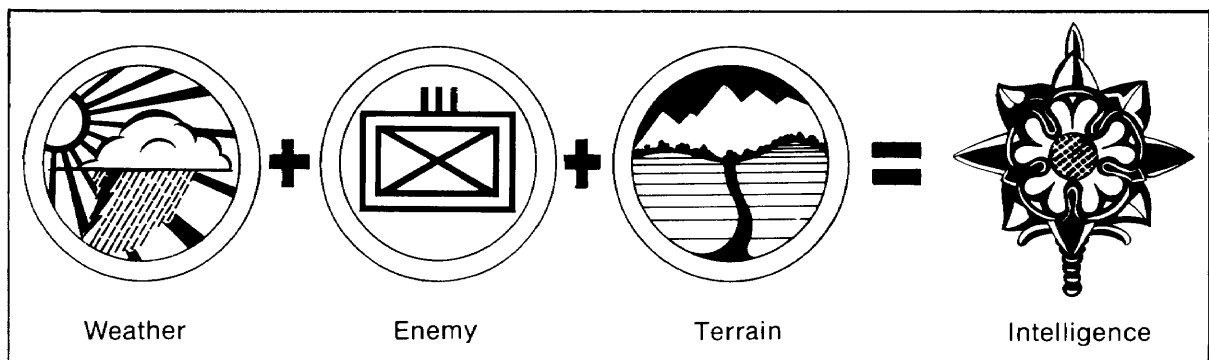


Figure 1-1. The wet trilogy.

Weather information is as much a part of combat intelligence as enemy and terrain data. It is often as significant as enemy intentions and trafficability. It affects enemy actions and the decisions of both forces. Adverse weather conditions--

- Affect mobility.
- Decrease the ability to see and attack deep.
- Degrade electro-optical (E-O) systems.
- Increase the requirement for thoroughly integrated air and ground operations.
- Slow the movement of supplies and reinforcements.

Weather is one dynamic factor on the battlefield which commanders cannot control but which has the potential to affect every combatant, piece of equipment, and operation. Weather becomes more significant to