



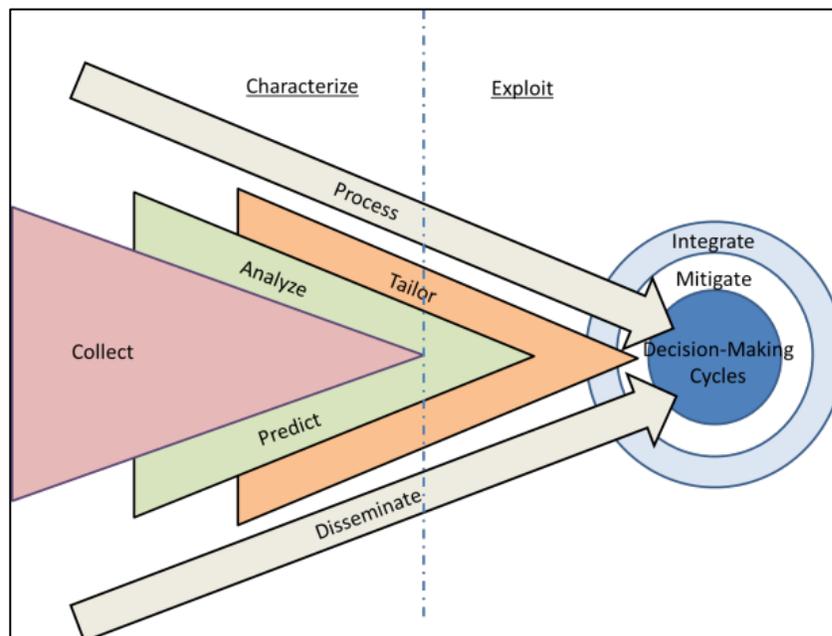
ANNEX 3-59 WEATHER OPERATIONS

WEATHER FUNDAMENTALS

Last Updated: 27 May 2015

For the purposes of Air Force doctrine, weather is defined as **all meteorological and space environmental factors as provided by Services, support agencies, and other sources. These factors include the whole range of atmospheric phenomena, from Earth's surface up to and including the space environment.**¹

Effective weather operations are executed through the overarching principles, functions, and processes depicted on the Conceptual Model of Air Force Weather Operations graphic below. The left half of the figure shows how weather forces **characterize** the environment through the **collection, analysis, prediction, and tailoring** of atmospheric and space weather data from both Department of Defense (DOD) and non-DOD sources. This weather data and information, used to predict the future state of the environment, are stored in a net-centric data repository that is accessible through end-user systems and web-based interfaces.



Conceptual Model of Air Force Weather Operations

The right half of the graphic depicts how the weather community **exploits** the information from the net-centric data repository to **tailor** and **integrate** weather

¹ Adapted from meteorological and oceanographic definition in JP 3-59, [Meteorological and Oceanographic Operations](#).

information for use in decision-making processes at the strategic, operational, and tactical levels. Weather personnel, either through reachback or embedded with operational units, command and control facilities, and intelligence centers, use tailored weather information to advise decision-makers, enabling them to **mitigate** and **exploit** the effects of weather. Throughout the characterization and exploitation functions, weather data and information undergoes processing and dissemination. All of these processes culminate in decision-making cycles, allowing leaders to make effective decisions to exploit the effects of weather.

The enduring principles of weather operations are **accuracy**, **consistency**, **timeliness**, and **relevance**.
