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Weather: Warfare's Next Weapon?

Admiral Predicts Arsenal of Storms, Icebergs, and Fog

A startling picture of weather as a weapon of war is offered by Vice Adm. William F. Raborn, deputy chief of naval operations in charge of research and development, in the current issue of the monthly magazine, Naval Institute Proceedings.

In an article on the Navy of 1973, outlining current and future naval development projects, Admiral Raborn outlines such possibilities as diverting storms toward enemy communications, causing destructive weather phenomena, or controlling the weather to help a military assault. He placed no timetable on these developments.

Here—reprinted with permission of the United States Naval Institute, which has copyrighted the material—is the key section on weather from Admiral Raborn's article:

"The possibilities for the military employment of the 'weather weapon' may be as diverse as they are numerous. An ability to control the weather could introduce greater changes in warfare than those which occurred in 1945 with the explosion of the first nuclear weapons.

"A severe storm or hurricane striking a naval force may well inflict greater damage than could an enemy. The capability to change the direction of destructive storms and guide them toward enemy concentrations may exist in the future arsenal of the naval tactical commander.



Vice Adm. Raborn

"Ground, sea, air, and amphibious operations might be supported by the dissipating of fog or clouds, or by the production of rain or drought. Conversely, the creation of solid, low overcasts might be used to conceal troop concentrations, movements, and task force deployments. Large-scale weather control techniques might be used to cause extensive flooding in strategic areas or even to bring a new ice age upon the enemy. By in-

fluencing the ionosphere and atmosphere simultaneously, magnetic, acoustic, and pressure effects might be generated in such a way that oceanwide sweeping of mines would occur.

"Creating or dissipating atmospheric temperature/humidity ducts might modify the refractive index of the atmosphere enough to influence radar or radio transmission. Artificially induced ionospheric storms might produce a blackout of communications.

"Certain electromagnetic waves are unable to pass through an area of precipitation. A cloud-seeding generator could be employed under appropriate meteorological conditions to produce precipitation that would interfere with the operation of radio-guided or remotely controlled devices or vehicles.

"We already have taken our first steps toward developing an environmental warfare capability. We are using satellite weather data from Tiros II for current, tactical operations and more accurate long-range weather predictions. Some experiments in fog dissipation have shown promise, and some exploratory research has been conducted on ways to change the heading of major storms.

"For these reasons—and because our advances in science make it reasonable—we are now engaged in planning a 10-year, comprehensive study of the atmosphere, a study which we will designate ATMO."

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