It is 2025. An enemy unknown to 20th-century Americans has massed its army at the border of a friendly country in a remote part of the world. High above them flies a single, unmanned stealth aircraft. A faint wisp of black dust sprays from its tail, spurring the creation of the only weapon capable of stopping the threatening horde.

The weapon the dust engenders is mud--old-fashioned, sink-up-to-your-knees, spin-your-tires mud. There's nothing unusual about this slippery mixture of soil and water. It's the same sloppy goo that forced the Roman legions to build Britain's first real roads. What is different, in this futuristic scenario, is the way it's delivered. Like a meal at a fancy Japanese restaurant, it is being created on the spot and to order. The "chef" is an isolated downpour that swirls only above the heads of the aggressors.

In much the same way that infrared and low-light viewing equipment has made it possible for 20th-century soldiers to own the night, U.S. Air Force planners hope to give 21st-century warriors advanced technologies that will enable them to own the weather. A declassified version of a 2-year study prepared by the Air War College and obtained by PM reveals that this is no dreamland scenario. The Pentagon's top meteorologists believe the United States will be ready to fight--and win--a weather war early in the next century.
The study, titled "Weather As A Force Multiplier: Owning The Weather In 2025," envisions future generals having at their disposal an impressive weather-control arsenal for tactical operations. These weapons would include unmanned stealth aircraft that could seed clouds above massing troops with fine particles of heat-absorbing carbon. This next-generation cloud-seeding technique would, in turn, produce localized flooding and create mud, which has been the bane of all of history's armies. Airborne lasers would cause lightning to discharge over the airframes of attack and surveillance aircraft. Other lasers would fire at fog banks, clearing a temporary flight path to high-value targets, such as command posts. In addition, still more powerful microwave transmitters would heat the ionosphere, altering its reflective properties in ways that would disrupt communications among enemy field commanders.

To reach this future battlefield, the military is planning to piggyback on weather-prediction and weather-modification technologies being developed by the private sector. They estimate that by 2015 supercomputer and atmosphere-monitoring technologies will have advanced to the point where military planners will know exactly what sort of weather to expect over an operations area throughout the course of a campaign lasting several weeks.

The great leap forward, however, is expected to occur between 2015 and 2025, spurred on largely by a growing global population that will put increasing pressure on the worldwide food and drinkable water supplies. "These pressures [will] prompt governments and/or other organizations who are able to capitalize on the technological advances of the previous 20 years to pursue a highly accurate and reasonably precise weather-modification capability," the report states.

"Our vision is that by 2025 the military could influence the weather on a mesoscale [theater-wide] or microscale [immediate local area] to achieve operational capabilities."

The report makes the limitations of the military's current weather-predicting abilities distressingly
clear: "During Operation Desert Storm, Gen. Buster C. Glosson asked his weather officer to tell him which targets would be clear in 48 hours for inclusion in the air tasking order (ATO). But current forecasting capability is only 85% accurate for no more than 24 hours, which doesn't adequately meet the needs of the ATO planning cycle. Over 50% of the F-117 sorties weather aborted over their targets and A-10s only flew 75 of 200 scheduled close air support missions due to low cloud cover during the first two days of the campaign."

If weather modification can actually turn the tide of battle remains an open question. The American military's only acknowledged recent experience in using weather as a weapon occurred with Project Popeye, which began in 1966. The experiment's objective was to extend the monsoon season, thereby increasing the amount of mud that formed on the Ho Chi Minh trail, a supply route that wound from what was then North Vietnam through Laos and Cambodia into South Vietnam. To produce the rain, a silver iodide rainmaking agent--dubbed "Olive Oil"--was dispersed from WC-130, F4 and A-1E aircraft into the clouds over the trail.

Positive results during the initial program led to its continued operation until 1972. But to this day, analysts remain divided over whether the rain created enough extra mud to significantly reduce the delivery of supplies. When you're slogging through ankle-deep mud, another inch of it probably doesn't make that much of a difference.
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