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Conclusions and Recommendations

Although 40 years have passed since the first NAS report (NRC, 1964) on weather modification, this Committee finds itself very much in concurrence with the findings of that assessment (see Chapter 1).

We conclude that the initiation of large-scale operational weather modification programs would be premature. Many fundamental problems must be answered first. It is unlikely that these problems will be solved by the expansion of present efforts, which emphasize the a posteriori evaluation of largely uncontrolled experiments. We believe that the patient investigation of atmospheric processes coupled with an exploration of the technological applications may eventually lead to useful weather modification, but we emphasize that the time-scale required for success may be measured in decades.

CONCLUSIONS

Below is a summary of the Committee's principal conclusions, presented in response to the tasks that the Committee was asked to address.

Task 1: Review the current state of the sciences of weather modification and the role of weather prediction as it applies to weather modification, paying particular attention to the technological and methodological developments of the last decade.

Principal conclusion. Over the past 30 years, there has been significant advancement in observational and computational capabilities, providing new opportunities to address many of the outstanding questions underlying attempts to modify weather. **It is the principal conclusion of this Committee that the field of atmospheric science is now in a position to mount a concerted and sustained effort to delineate the scope and expectations of future weather modification research. Such an effort must be directed at answering fundamental scientific questions that will yield results that go well beyond application to intentional modification. The emphasis must be on understanding processes and not on modification.** Once understanding is achieved,