

PART I

Ecological Effects

The immediate effects of nuclear detonations would have devastating consequences for human populations. But the larger-scale, longer-term, and indirect effects of a nuclear war would present unprecedented stresses on all the biological constituents of Earth. The physical nature of those perturbations is discussed in the companion volume to this study (Volume I, Pittock et al., 1985; see Appendix C for a summary). Here we examine the consequences of those stresses on the biological systems of concern, specifically ecological, agricultural, and human systems.

Part I begins with a background discussion in Chapter 1 of those principles relevant to the ecological responses to nuclear war. Chapter 2 assesses the vulnerabilities and likely responses of ecosystems to the potential acute and chronic climatic perturbations. Chapter 3 first examines the ecological effects from other nuclear war stresses (e.g., UV-B, radiation, pollutants), then summarizes the total consequences on different ecosystems.

