Treatment (Removing greenhouse gases from the atmosphere) Develop better methods to remove CO₂ from coal-burning power and industrial plants and automobile exhaust. Remove CO₂ by planting and tending trees, creating ponds of photosynthesising algae, adding iron to stimulate marine algae growth. Prevention (Reducing greenhouse gas production) For Immediate Causes: · Shift from coal to natural gas. Use energy more efficiently to reduce CO₂ emissions. Shift from fossil fuels to non-CO₂-emitting renewable energy resources. Halt unsustainable deforestation. · Ban production and uses of CFCs and other ozone-destroying chemicals. SOLUTIONS Capture and use CH₄ released by landfills. Reduce beef production (reduces CH₄). Emphasize use of organic fertilizers (N₂O). For Root Causes: · Slow human population growth. · Reduce overconsumption. Foster earth-sustaining worldviews. Create more earth-sustaining economies and governance; develop win-win pacts between MDCs and LDCs; institute fullcost pricing.

PROBLEM Potential Global Warming **Immediate** Increases in major greenhouse gases (CO₂, CFCs, CH₄, N₂O) (mostly from burning fossil fuels, deforestation, and agriculture) CAUSES Root Rapid human population growth · High per capita resource consumption, especially by the affluent Resource waste Poverty · Earth-degrading fossil-fuel -based forms of economic growth · Excluding social and environmental costs from pricing GROUNDING Science (probabilities, uncertainties, and modeling); law of con-

servation of matter; energy efficiency; range of tolerance; climatebiome interactions; carrying capacity; sustainable yield; adaptation/

natural selection; evolution; biodiversity; limits; earth capital; sustainability; least harm; complexity; first law of human ecology; interdependence; environmental impact; pollution prevention and waste reduction; economic-ecological sustainability; full-cost pricing.

Figure 4 Tree diagram of potential global warming.

PRINCIPLES

from: Heinze-Fry, J.A. and G. T. Miller, Jr. 1996. Critical Thinking and the Environment: A Beginner's Guide for Living in the Environment. Wadsworth Publishing Co. Belmont, California.