Scenario Matrix - Environmentally Challenged

Scenarios / Drivers	Environmentally Challenged
World Economy and Market Environment	Global recession; entire industry segments at risk, some segments doing quite well; lots of environmental rules; high unemployment, high inflation, high cost of capital; stock markets have tumbled, bankruptcies high among energy dependent companies; financial stability imposed by international government coordination.
International Trade Environment	Intra-regional trade agreements prevail; cooperation within trading groups; global harmonization on environmental issues; landing rights and air space highly regulated and tied to emissions credits; environmental crisis forces international cooperation.
Political Instability	High political and economic instability; tension over hydrocarbon limits; trade tensions; civil instability in disrupted economies; the future contains very high levels of uncertainty; some rearmament (significant in some cases).
U. S. Military Requirements	Need to be able to threaten military sanctions for states not cooperating with CO_2 reduction protocols; cooperative actions; tendency to want to find non-military solutions to problems; DOD pursues hydrocarbon free power systems; moderate relatively high-tech world arms market.
Global Distribution of Power & Technology	Japan, China, US, and the European Union are key powers; key to global leadership is intellectual capital (especially in science and research) - European Union may be leader in global science and research activity.
Fuels & Fuel Sources	Stable oil supplies; wholesale cost is stable and maintained through negotiated international agreement on fair price for suppliers; rationing of CO_2 emission limits the use of hydrocarbon fuels; huge global effort searching for alternative fuels.
US Policy	Global environmental crisis results in bifurcated US policy responses including international scientific and environmental cooperation on the one hand and economic protectionism on the other; labor issues are highly politicized; in response to Europe's leadership in the reduction of CO_2 emissions, pragmatic US cooperation emerges; no tort reform (possible reversal of earlier reforms); very US centric and populist policies tempered by strong regional (NAFTA +) links; lenient anti-trust interpretation and enforcement to buttress US industries; mixed pressures on bankruptcy decisions related to environmental issues, job retention, and existence of national industries; very high deficit spending and national debt; low humanitarian consensus even regarding Latin America (just trade, not aid).
Corporate Structure and Operations	Corporations are competitive if their markets are contiguous with manufacturing location but are not competitive if they rely on long range transportation; there are incentives for the proliferation of technologies impacting products or services that reduce CO_2 emissions; developing countries leverage for requiring offsets is primarily limited to CO_2 emission credits; environmental regulations result in high production costs and high unemployment; US job retention policies burden firms with high labor costs; inter-firm alliances across geographic regions to optimize CO_2 credits.
Environment	High sensitivity to all pollution issues, but spending focus is on CO_2; long term effects of all products and activities are scrutinized; alternatives to hydro-carbons will have high threshold of acceptance.
Public Health	Carriers for many diseases have greater range with warmer climate; health problems from mass migration away from climate impacted areas; climatic shifts have huge impacts on public health globally; public health funding becomes serious competitor for public resources.
Public Attitude to Technology	Technology is the problem!; technology is the savior!; this debate may form the locus of political discourse; general anti-(new) technology bias.
Education	US public education is under-funded; the funding that is available flows into focused university research and global work in environmental science; independent and private funding is in applied science and technology; non-science education gets very little support; virtual education is finally being supported.

Scenarios / Drivers	Environmentally Challenged
Geographic (Living) Dispersion	Bicycle world; huge disincentives to disperse; clustering near work/stores.
Communications and Information Technology	For about the first decade, strong global growth in communication, but US growth in communications and information systems tended to lag even as US companies helped drive global development; in last years communication is leveraged in all ways possible to substitute for transportation; significant computer-controlled energy management.
Production Cost Performance	Cost of manufacturing goes up as policies to reduce CO_2 are implemented, driven by pollution credits; alternative fuels crucial; manufacturing location decisions must consider local pollution credits and transport costs.
Technology development and Application	Very unidimensional technology development - focused on detecting, modeling, and forecasting CO_2 plus energy conservation (demand and supply side), alternate fuels and sources of energy, technology to "absorb" carbon and store in benign forms; science is done globally and technology is done locally.
Time Poverty Leisure Time, Entertainment	Time poverty is not a serious problem for most people; very local leisure and entertainment; home entertainment is very important; town picnics, county fairs, and tree planting outings.
Global Transportation Infrastructure	Integrated infrastructure designed to reduce CO_2 emissions; regulated access to infrastructure; trend toward smart infrastructure (e.g., metered auto access to highways).
Safety and Security	Other issues overshadow safety; security threat (including data security) is moderate, disbursed, and comes from nations and groups dissatisfied with limits to growth and development.
Access to space	Very hard to justify unless attached to solution to CO_2 problem, such as space based sensors or energy source.