

5-5	Cost of exploration in the natural gas industry, 1944-1963	376	6-7	Levels of radioactivity present in different species over time after application of a radioisotope to one plant in a small ecosystem	418
5-6	The flow of nonrenewable resources through the world economy	378	6-8	Concentrations of strontium-90 in various trophic levels of a small lake contaminated with low-level atomic wastes	419
5-7	The change in entropy associated with the flow of nonrenewable resources	379	6-9	Concentration of DDT in three trophic levels of a Long Island, New York, estuary	420
5-8	Electric power cost in U.S. metal industries	380	6-10	Causal-loop structure of the pollution sector	426
5-9	Possible usage rates of nonrenewable resources over time	381	6-11	DYNAMO flow diagram of the pollution sector	427
5-10	Resource conversion path	382	6-12	The relationship assumed, in Chapter 5, to exist between industrial output per capita and the annual per capita resource utilization	430
5-11	Shift over time in the fraction of capital that must be allocated to obtaining resources	384	6-13	Toxicities of DDT and four alternative insecticides	434
5-12	Causal-loop diagram of the nonrenewable resource sector	386	6-14	The relation between two persistent pollution generation rates and the persistent pollution appearance rates they would produce when the transmission delay is 20 years	436
5-13	DYNAMO flow diagram of the nonrenewable resource sector	387	6-15	An illustration of the transmission delays associated with the diffusion of DDT through the global environment	437
5-14	Per capita resource usage multiplier table	390	6-16	An illustration of the transmission delays associated with the diffusion of mercury through the global environment	438
5-15	Per capita steel consumption in the United States as a function of industrial output per capita, 1890-1969	391	6-17	The assimilation of 100 units of persistent pollution with various values assumed for the assimilation half-life	443
5-16	Per capita copper consumption in the United States as a function of industrial output per capita, 1900-1968	392	6-18	DYNAMO flow diagram of a simple model of pollution accumulation and assimilation	444
5-17	Per capita steel consumption as a function of industrial output per capita, selected countries, 1970	392	6-19	Secular shifts in the composition of total pollution in a simple two-pollution model when the half-lives of the two pollutants are unequal	445
5-18	Fraction of capital allocated to obtaining resources table	394	6-20	Alternative possible relationships between pollution level and assimilation half-life, together with the corresponding rate of pollution assimilation	446
5-19	Capital goods in the U.S. private domestic economy and in agriculture and mining, 1869-1953	395	6-21	The theoretical linear relationship between the persistent pollution assimilation half-life and the level of pollution	448
5-20	Fraction of capital allocated to obtaining mineral resources in the United States, 1870-1950	396	6-22	Maximum concentration of methylmercury produced from a given concentration of mercuric ion	449
5-21	The cost of U.S. oil exploration as a function of the fraction of oil resources remaining, 1910-1965	397	6-23	Disappearance half-lives for ten insecticides in soil	451
5-22	The cost of exploration for U.S. natural gas as a function of the fraction of natural gas resources remaining, 1944-1963	397	6-24	Half-lives of radioisotopes present in the liquid releases from a 1,000-megawatt pressurized water nuclear reactor	452
5-23	The effects of additional advances in extraction technologies on the fraction of capital that must be allocated to obtaining resources	398	6-25	Table function of the relationship between PPOLX and the multiplier on the assimilation half-life in 1970 AHLM70	453
5-24	DYNAMO flow diagram for the nonrenewable resource sector simulation runs	399	6-26	Run 6-1: behavior of the pollution sector in response to a pulse input in persistent pollution generation in 1920	455
5-25	Run 5-1: standard run for the nonrenewable resource sector	400	6-27	Run 6-2: behavior of the pollution sector in response to a step increase and decrease in persistent pollution generation	456
5-26	Run 5-2: behavior of the sector with double the initial value of nonrenewable resources	401	6-28	Inputs to Run 6-3, the historical run of the pollution sector	458
5-27	Exponential versus static resource indices as a function of annual growth rates	402	6-29	Run 6-3: historical run of the pollution sector	459
5-28	Run 5-3: the effects of cost-reducing technologies on the behavior of the nonrenewable resource sector	403	6-30	Inputs to Run 6-4 of the pollution sector when continued material growth is assumed	460
5-29	Run 5-4: the effects of resource-conserving technologies on the behavior of the nonrenewable resource sector	404	6-31	Run 6-4: behavior of the pollution sector in response to continued material growth	461
5-30	Run 5-5: the effects of zero population growth and advanced technological policies on the nonrenewable resource sector	405	6-32	Run 6-5: behavior of the pollution sector with decreased toxicity indices	463
6-1	A spectrum of environmental problems associated with demographic and material growth	411	6-33	Run 6-6: behavior of the pollution sector when the estimate of the persistent pollution transmission delay is doubled	464
6-2	Growth in the global production of six toxic heavy metals, 1945-1970	414	6-34	Run 6-7: behavior of the pollution sector when the estimate of the persistent pollution transmission delay is halved	465
6-3	Projected generation of radioactive wastes from the operation of U.S. nuclear power plants, 1970-2000	415	6-35	Run 6-8: behavior of the pollution sector when the assimilation half-life is assumed to increase twice as fast with a rising index of persistent pollution	466
6-4	Actual and projected global crude oil production and human population, 1960-1980	415	6-36	Run 6-9: behavior of the pollution sector when the assimilation half-life is assumed to be constant	467
6-5	Pesticides required to increase food production on land now under cultivation in Africa, Latin America, and Asia	416			
6-6	Yearly average strontium-90 concentrations in New York City drinking water, 1955-1970, versus number of announced atmospheric nuclear tests by the United States, the USSR, and France, 1961-1963	417			