CHAPTER 1

ENGR 202

Table 1.1 Some examples of environmental change from human activities.

Human Activity	Physical Changes	Chemical Changes	Biological Changes
Land and water use for housing, agriculture, industry, transportation, and recreation	Deforestation and other alterations of landscapes (e.g., changes in terrain slope, vegetation coverage, pavement); alteration of waterways (e.g., flooding, dams, changes in river channels, drainage of wetlands)	Changes to chemical constituents of soils and sediments (e.g., increased acidity and turbidity of waters, removal of nutrients from soils)	Changes in the viability of plants, fish, animals, and microorganisms due to altered habitat and chemical constituents or concentrations, possibly leading to species succession, extinction, migration, or disease
Emissions or discharge of chemical substances to air, land, and water	Changes to the built environment (structures such as buildings, bridges, monuments, etc.) from deposition and chemical attack caused by emissions such as soot deposits, acid gases, and liquid chemicals	Increases in the concentration of emitted substances in the air, water, and soil; other chemical changes resulting from secondary reactions (e.g., ozone buildup in urban areas)	Injury or illness to people, plants, and animals from exposure to and/or accumulation of chemicals and their derivatives

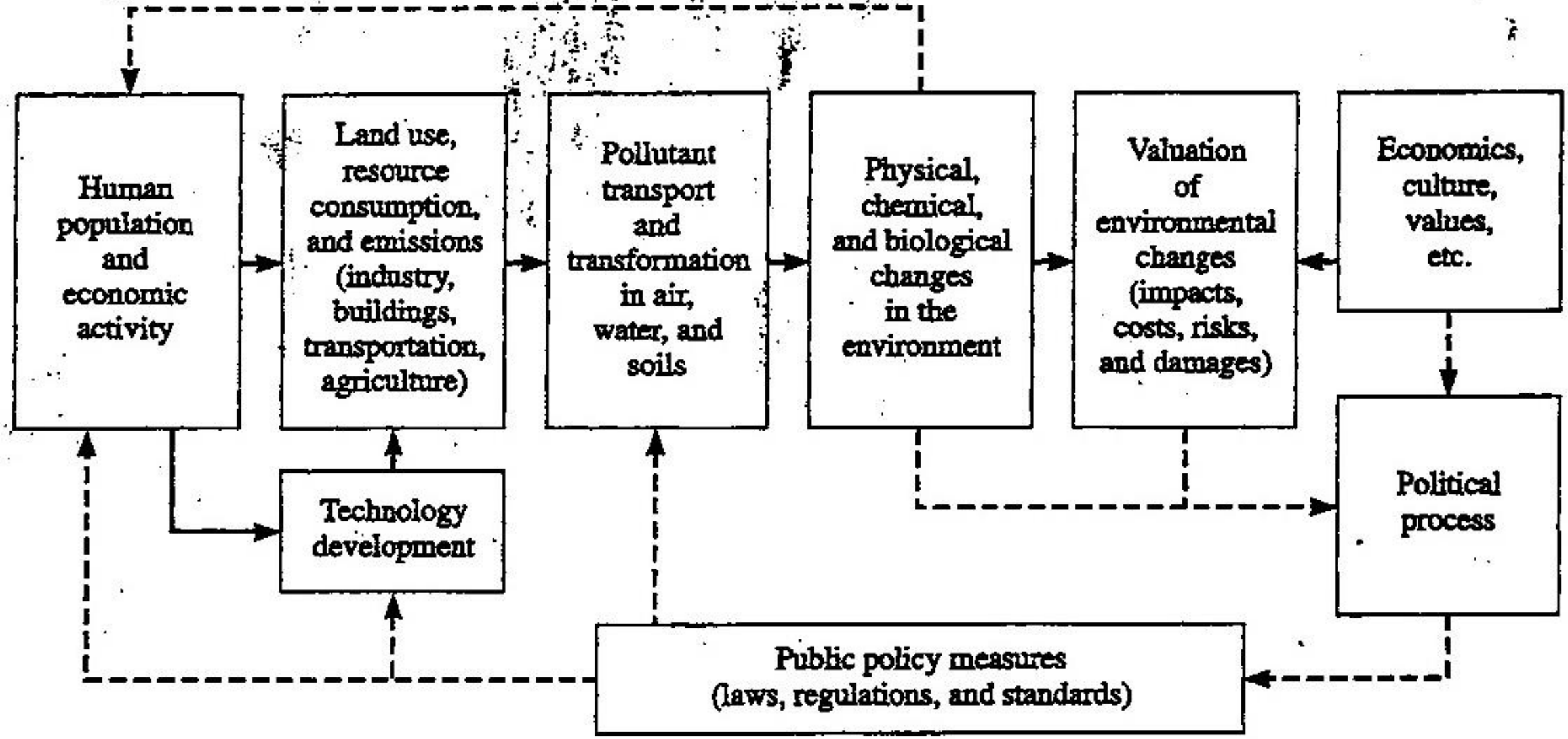

Figure 1.1 A framework for environmental impact assessments. Solid lines show the path of primary or initial impacts; dashed lines show the major feedbacks and responses to these impacts.