

Table 4.2: Externalities, analysis and policy measures

EXTERNALITY AND SOURCE OF IMPACTS	IMPACTS OF EXTERNALITY ON HEALTH, ENVIRONMENT	ANALYSIS AND VALUATION APPROACH	TYPICAL POLICY RESPONSES
Air pollution (-)	Respiratory ailments, acid rain damage to historical works and structures	Medical treatment costs and days of lost work, repair costs to damaged buildings and art	Emission standards or taxes, restricted licences to pollute, subsidise control measures
Water pollution (-)	Diverse health effects such as poisoning, genetic damage, destruction of fish	Medical treatment costs, and days of lost work, reduced fish production, costs of treating water	As above
Soil erosion (-)	Siltation and sediment in reservoirs, rivers and irrigation channels, increased flood damage, reduced ground water recharge, reduced reliability of river flows	Cost of reduced hydro-electric and irrigation capacity and useful life for dams, reduced economic activity because of less water and power generation, reduced fish production, dredging cost, flood damage costs, higher water supply costs	Increase land rent or taxes to encourage better management, increase timber cutting charges to conserve trees, subsidise soil and water conservation projects
Watershed protection (+)	Protection of above	Avoidance of above costs	Modify relative returns to perennial crops versus annual crops through a tax or subsidy, subsidise watershed protection
Water regulation (+)	Natural waste recycling and water purification, maintenance of water flows, protection of damage from storm surges	Avoidance of above costs	Remove subsidies for draining and filling wetlands, subsidise conservation

From Bishop *et.al.* (1991).