

## Policies and the Environment

### Macroeconomic policies and the Environment

Many macroeconomic policies have an indirect and a wide spread impact on the countries' resources and the environment'. Stabilization and structural adjustment programs aim for a stable economy over the long run. Macro economic policies may or may not be successful in generating economic growth but these policies have an indirect impact on the environment due to changes in income, taxes, subsidies, public revenue and innovative capacity. Many studies have analyzed the effect of stabilization and structural adjustment on the environment (Markandya 1994; Munasinghe and Cruz 1995; Reed 1996; Lopez et.al. 1998; Munasinghe et al. 2000).

The issues of interest are:

1. How could one assess these impacts?
2. What actions if any need to be taken to correct the negative environmental effects.

Major economic reforms that are likely to affect the environment are the short-term stabilization programmes (Fiscal policy, Monetary policy, and Exchange rate policy), medium-term structural and Sectoral Adjustment Programmes (trade liberalization, domestic pricing policies, non price incentives).

The box below summarizes the major environmental linkages.

Type	Target	Variables	Anticipated Impact	Examine Impacts through
Short-term Macro	Fiscal	Government expenditure	+/-	Drought relief, food aid, agricultural extension, environmental management.
		Taxes	+/-	Changed demand for resources, environmental charges
		Subsidies	+/-	Input effect: machinery, fertilizer, water
	Monetary	Credit	+/-	Reduced credit for inputs
		Interest rates	+/-	Reduced investment and resource demand.
	Exchange rate	Devaluation	+/-	Import effect:  Increased prices of imported inputs-energy, fertilizer.  Export Effect:  Increased crops, natural resources.
	Trade	Import/Export Control	+/-	Removal of protectionist taxes has similar effects as devaluation but for specific commodities

Medium to long term macro		Trade controls	+/-	Similar effects as trade taxes. Possibility of technological lock-in.
	Pricing policy	Price Controls	+/-	Impacts of price changes depend on crop characteristics, farming practices.
		Reduce subsidies	+/-	Reduced use of pesticides, fertilizers, energy, credit, irrigation, machinery
		Increased taxes	+	Indirect impact through reduced demand
	Institutional reform	Land	+	More on farm investment and sustainable resource management.
		Financial	+	Improved credit may promote sustainability
		Research and extension	+	Improved services promote sustainable resource management
	Investment policies	Training	+	Investment in human capital through agricultural extension, wildlife and resource management
Valuation		+	Project evaluation to include environmental costs and benefits.	
Investment policy		Technology	+	Industrial pollution abatement technologies and new agricultural technologies impact on environment
		Public infrastructure	+/-	May increase access to natural resources and encourage exploitation. May also have an impact the price responsiveness of producers.

Many macro economic policies have an impact on poverty and thereby, it is claimed, on the environment. Poverty and environmental degradation have been studied by looking at how the two are correlated over time, as well as how they are correlated across society at a given point in time. Along with the poverty, for a fuller appreciation of macro economic policy impacts it is important to look at the linkages between population and environment. This is because there is a wide spread perception that high population density and high rates of population are a direct cause of environmental degradation.

To analyze macro economic and environmental linkages, there are a number of tools. A general organizational tool used to do this is the Action Impact Matrix (AIM) (Munasinghe 1996). This helps to identify important environmental problems and the link with a change in macro economic and sectoral policy variables resulting from economy wide policy reforms. The other methods developed are the input-output analysis, general equilibrium models, and macroeconomic models. When there are conflicts between macroeconomic policies and environmental goals, they have to be resolved. The only way in which the environmental objectives can be reconciled with the macroeconomic objectives is to introduce more instruments to mitigate negative environmental impacts or sustained positive ones.

## **Sectoral policies and the Environment**

Sectoral analysis requires an assessment of the resources, inputs and outputs, demands, problems and opportunities for individual sectors within the economy. Market sector equilibrium is reached when goods and services establish market-clearing prices, through the interaction of demand and supply. The goals of the sectoral policies are to propose policies and strategies to enhance the sectors contribution to the country's sustainable development, determine investment priorities, assist in planning macro economic policies, implement policies and programmes with a goal for sustainable development. The most important sectoral policy is the pricing of the resources within the sector: fisheries, mining, timber, water and so on. The prices should cover the full cost of the resource. A proper price includes the private cost of production, the cost of various policies, the cost of external effects and the cost of failures due to institutional deficiency and the cost of external effects (externalities).