

XI.A.2. Cost Benefit Analysis of Industrial Development in Angul-Talcher Region of Orissa

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This paper undertakes a case study of the Angul-Talcher industrial area in Orissa to assess the economic value of the environmental damage borne by the people and to determine the pollution abatement cost incurred by the industries of the region, and compare the same with the damage cost. The paper collates primary and secondary materials. Primary information are collected through different surveys from the industries, doctors, veterinary surgeons and farmers. Secondary data have been gathered from the government offices, NGOs and pollution control board. Human health damage is assessed through output accounting or human capital valuation method. We have measured actual resource foregone and output lost because of morbidity and mortality caused by 16 types of diseases with bear dose response relationship with the pollutants. Cattle health damage is also calculated through cost of illness method. The loss of agricultural output is assessed from people's articulation through participatory rural appraisal (PRA). Economic value of forest and biodiversity depletion is adopted from available secondary sources. The inconvenience caused by non-availability of safe drinking water is imputed a money value from the women's labour lost for fetching water. Under pollution abatement we have considered the costs borne by the industries, government, NGOs and the people of the region. The depreciation of the capital cost and the maintenance cost of the pollution devices are taken for determining the annualised abatement cost commitment of the industries. The annual damage and abatement costs are calibrated for one year i.e. for 1994-95 for comparison and analysis.

It is found from the social cost benefit exercise that on an average the industries produce output worth Rs. 11595 million per annum. The industrial production process imposes damage cost to the tune of Rs. 2170 million as damage cost on the people of region while bearing pollution abatement of cost about Rs.317 million. On comparison it is observed that for each rupee of output people bear a social cost of 19 paise whereas the industries bear abatement responsibility of 3 paise. The industries injure the environment to the extent of about Rs.15 per each rupee spent on abatement effort. Every person in the region sustains damage to the tune of Rs.2258 per annum. The findings of this study show that only a small portion of the negative externality is being internalised. It is important to note here that the damage occurs in spite of command control supervision and abatement expenditure. Unless the abatement efforts is geared up at least by five to seven times the environmental damage will not come down. Since the command and control region has failed to shoulder and claim the full abatement responsibility, market based instalment

should be tried. Environment taxation has to be chiselled at the national level with a provision for using the revenue for local environmental promotion. Till that time when we have an environmental tax regime in the country, it is important to introduce a flexible refundable environmental assurance bond scheme for the Angul - Talcher region.