

REGIONAL AMBIENT AIR QUALITY IN WESTERN PART OF INDIA - TWENTY FIVE YEAR SCENARIO**K. Haryani¹, P.S. Dubey², K.C. Sharma³**¹*Institute of Environment Management and Plant Sciences, Ujjain, India*²*MP Pollution Control Board, Bhopal, India*³*Maharshi Dayanand Saraswati University, Ajmer, India*

A large of almost 500 sq. km. region in South West of India, the industrial zone is intersected with two highways. The region experienced significant cumulative pollution load (CPL) of SPM, SO₂ & NO_x i.e. 532mg/m³ during 1986-1990 and 251.66mg/m³ during 1999-2002. The CPL in area decrease during 1999-2002, maximum at Nayagaon-Khor i.e. 75% and minimum at Nagda i.e. 11% than 19986-1990 except Pithampur where 37% increase in CPL. This may be due strong regulatory actions which is resulted in improvement of the ambient air quality. A perusal for the total cumulative pollution load picture exhibit that the total load in the RZ (1.5km against wind direction) is 100mg/m³ which increased by 3.6, 2.8 & 1.7 times at HZ (1-1.2 km), MAZ (2-2.5 km) & LAZ (4.5-5 km) in upwind direction respectively during 1999-2002. In new industrial areas like Pithampur ambient air environment quality demonstrates a rising trend especially in gaseous pollutants i.e. SO₂ & NO_x, 17.40 & 15.19 mg/m³ (during 1986-1990) to 23.66 & 34.49 mg/m³ (during 1999-2002). The ground level ozone was never estimated for the region which ranged to 13- 34mg/m³ with area average of 17.58mg/m³. In the cement-producing zone with prevalence of SPM the average cumulative pollution load was 1100 & 832 mg/m³ at Nimbaheda and Nayagoan-khor respectively during 1986-1990 got reduced by 31% & 27% during 1999-2002. Statistically during last 16-17 years the gaseous pollutant concentration increased by two times in the region while particulate increased by 1.5 times.