

A COMPARISON OF AIR QUALITY AT PALESTINIAN AND ISRAELI RECEPTOR SITES**G. Darwish¹, A. Safar¹, D. Pedersen², J. Isaac¹, M. Luria²**¹*Applied Research Institute, Jerusalem & Bethlehem, West Bank, Israel*²*Institute of Earth Sciences, Hebrew University of Jerusalem, Jerusalem, Israel*

Air quality is affected by many factors which are not limited to individual political entities, and therefore any attempt to understand its causes and control its effects on public health must be based on a regional approach. The political situation in the Middle East poses a particular challenge to obtain comparative data and to develop a comprehensive approach to the research of air quality problems and their solution. Our research objective was to establish a network of identical stations for long-term monitoring at Palestinian and Israeli receptor sites, in order to characterize air quality on both sides of the Green Line and track the evolution of air pollutants as they are transported through the region. An important accomplishment is the initiation of joint measurements and data analyses among Israeli and Arab air quality scientists, in order to create a consistent database of results. Concentrations of photochemical pollutants were measured simultaneously during August 2003 in Bethlehem and at a site 20 km due west, using similar monitoring equipment. Winds were primarily from the northwest, with some southern and northern components. Average concentrations and time-of-day patterns were similar at both sites, with the ozone peak occurring later in Bethlehem. However, differences were observed in nitrogen oxide concentrations and patterns. Day-of-week patterns showed some dis-similarities, reflecting cultural differences among the Christian, Muslim, and Jewish populations. These results are the initial steps towards an overall understanding of air quality in the region and cooperative measures for air pollution control.