

THE PRESSURES OF URBAN SPRAWL, ENVIRONMENTAL CONDITIONS AND THE EFFECTS ON HEALTH IN THE MUNICIPALITY OF EL SALTO, JALISCO, MEXICO

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Background and Aims: The municipality of El Salto is part of Guadalajara's Metropolitan Area. The city has grown in a disorderly manner and without tending to the welfare of new residents, who are thus exposed to various risks. The objective of this study was to identify such risks.

Methods: The methodology indicated in the environmental land-use planning of the INE-MEX was used, as were the risk and exposure assessment of NRC-USA and the development of environmental health indicators established by Corvalán-WHO.

Results: In El Salto, the factors generating risks are population growth—which has doubled three times in the last 20 years—and the presence of industrial activity.

The strains these forces have brought about are a change in land use in already fragile areas, the alteration of watersheds and pollution of surface waters which have resulted in 29 kilometers of dead rivers with a presence of heavy metals (Al,Zn,Hg,Cd,Cr), to which 56,000 persons are exposed along with cattle herds used for meat and milk, and migratory birds.

Diseases which have shown a rate of increase are tumors (stomach, bronchus and lungs, mammary and cervical) and respiratory diseases (pneumonia, chronic obstructive pulmonary disease) which together account for the death of 47 persons each year, 64% of these being considered premature deaths.

The greatest number of deaths due to tumors was registered from 2007 to 2009, the majority being women 40-64 years of age. With respect to respiratory disease, the greatest number of deaths occurred in 2005 and 2009 with most of those affected being men over 64 years of age (68%), children under 5 years of age (14%).

Conclusions: The accelerated population growth and ensuing urban sprawl along with the presence of hazardous industries, have polluted the water far beyond Nature's self-purifying capacities and this means an environmental risks.

References:

INE ,Instituto Nacional de Ecología (2006). Manual del proceso de ordenamiento ecológico. SEMARNAT, INE, México

NRC, National Research Council (1983). Risk Assessment in the Federal Government: Managing the Process. National Academy Press, Washington, DC

Corvalán, C et al (2000). Decision-making in environmental health. From evidence to action.E&FN SPON/ World Health Organization, New York