A RADIO PROGRAM TO REDUCE AIR POLLUTION IN KATHMANDU: A HEALTH PROMOTION STRATEGY TARGETING THE TAXI DRIVERS AND TAXI OWNERS

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A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Public Health
Health System Development Program
College of Public Health
Chulalongkorn University
Academic Year 1998

ISBN: 974-333-337-1

Thesis Title:	A Radio Program to Reduce Air Pollution in Kathmandu: A Health Promotion Strategy Targeting the Taxi Drivers and Taxi owners
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ABSTRACT

Kathmandu Valley's population grew by 44 percent in the last decade and during the same period, the number of vehicles doubled and the number of registered brick kilns tripled. As the result of this growth, ambient air quality of Kathmandu is deteriorating. The World Health Organization air quality guidelines for Total Suspended Particle and PM_{10} are often exceeded pointing to a serious particulate pollution. Impacts of particulate pollution result in 84 excess deaths and 475,298 restricted activities days every year. The monetary value attached to these impacts totaled 4 million US$.

The brick industry, Himal Cement Plant, domestic fuel combustion, resuspension of road dust and vehicle emissions is the main sources of particulate pollution. Among these sources, reducing vehicle emission is the most cost-effective strategy. This thesis proposes a radio program targeted at the taxi drivers and taxi owners of Kathmandu Valley to change their vehicle maintenance behavior in order to reduce particulate pollution, thus reducing the adverse health affects of particulate pollution.

ACKNOWLEDGEMENTS

I would like to express my profound appreciation to the Dean, Professor Chitr Sitthi-amorn for his creative guidance and encouragement throughout the period of this MPH Study. I would also like to express my thanks to Associate Dean, Associate Professor Wattana S. Janjaroen for her Support.

My humble and sincere thanks to Dr. Nuntavarn Vichit-Vadakn, my advisor, for her time, energy and constant attention. Without her guidance, it would be beyond any stretch of imagination to complete this thesis. I would like to express my thanks also to Professor Caryl Abrahms, Professor Edgar. J. Love, Dr. Stephen King, Dr. Sathirakorn Pongpanich, Ajarn Marc Van der Putten, Ajarn Tanawat Likitkerat and Ajarn Wacharin Tanynont for their assistance. I would like to thanks Mr. Herbert Har for his kind cooperation.

I acknowledge The World Bank, NESS Pvt., Kathmandu; Radio Sagarmatha, Kathmandu; Royal Nepal Academy of Science and Technology (RONAST) for their valuable documents they provided. Mr. David Shaman, The World Bank; Mr. Ian Pringle, Radio Sagarmatha; and Mr. Pramod Ram Pyakuryal, (RONAST) also deserve my sincere appreciation for their support.

Finally, for their practical support, I thank my friends, Mr. Ram P. Kandel and Mr. Suresh Tiwari.

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ABBREVIATION AND ACRONYMS

AQG	air quality guidelines
CO	Carbon monoxide
DHM	Department of Hydrology and Meteorology
dl	deciliter
ENPHO	Environment and Public Health Organization
HMG	His Majesty's Government
KVVEPC	Kathmandu Valley Vehicle Emission Control Project
mg	milligram (10^{-3} grams)
MHPP	Ministry of Housing and Physical Planning
NILU	Norwegian Institute of Air Research, Kjeller, Norway
NGO	Nongovernmental Organization
NO_X	Nitrogen Dioxide
Pb	Lead
PM_{10}	Particulate matter of 10 microns or less
ppm	parts per million
RONAST	Royal Nepal Academy of Science and Technology
WHO	World Health Organization
ug	microgram (10^{-6} grams)
ug/m^3	particulate concentration in micrograms per cubic meter