

**A STRATEGY FOR IMPROVING SANITATION PROGRAM IN
SUB-DISTRICT NAMSON, SOCSO IN NORTHERN VIETNAM**

Hai Minh Tran

A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Public Health

Health Systems Development Programme

College of Public Health

Chulalongkorn University

Academic Year 2001

ISBN: 974-17-0543-3

©College of Public Health, Chulalongkorn University

Bangkok, Thailand


Thesis Title : A Recommended Strategy for Improving Sanitation Program
In Sub-District (Commune) Namson, Socson in Northern
Vietnam

By : Hai Minh Tran


Program : Master of Public Health (Health Systems Development)
College of Public Health


Thesis Advisor : Assistant Professor Nuntavarn Vichit-Vadakan, MS., M.P.H.,
Dr.P.H.


Accepted by the College of Public Health, Chulalongkorn University,
Bangkok Thailand in Partial Fulfillment of the Requirements for the Master's Degree

....., Dean of the College of Public Health
(Samlee Plianbangchang, M.D., Dr.P.H.)

THESIS COMMITTEE

....., Chairman
(Marc Van der Putten, M.P.H.)

....., Thesis Advisor
(Assistant Professor Nuntavarn Vichit-Vadakan, MS., M.P.H., Dr.P.H.)

....., Member
(Professor Edgar J. Love, M.D., Ph.D.)

Abstract

This thesis has two main goals. The first one aims to represent a cumulative integrated application of MPH course contents to a public health issue of concern to an individual student. The second goal aims to provide the student a chance to create a Proposal Project by himself so this project is in order to solve the problem that was identified such as the most serious in his country or community.

There were many sanitation programs have been conducted in rural Vietnam. Unfortunately, the health of rural communities in Vietnam is still very low and the high rates of diarrhea, worm infection and malnutrition in children are the clearest evidences of diseases related to poor sanitation practices in rural areas.

Like mentioned above Poor Sanitation Practices at households in rural areas are the direct reasons that leading to sanitation related diseases. Consequently, the most effective way to improve household's health is to help households to move from poor sanitation practices toward living with proper sanitation practices.

The study is an intervention performed in Sub-district Namson, Socson Northern Vietnam, this intervention aims to improve the Sanitation Practices at rural households in Sub-district Namson Socson Northern Vietnam by conducting Improving Sanitation Program. The program is a comprehensive program that consist of three components. These are Providing Sanitation Education, Introduction and Promotion of

suitable hygienic sanitation facilities and Mass-treatment of worm infection by deworming yearly. The pretest-posttest design will be applied to evaluate the effectiveness of an intervention, the same randomly-selected households are observed prospectively, before as well as after the intervention to test if the intervention has made any difference.

Data exercise in this thesis has a very closed link to the Proposal Project of an intervention that would be conducted in the future. By conducting a cross-sectional survey in the location of an intervention, the results come from this survey may provide some suggestion and recommendation to the Proposal Project.

An annotated bibliography in this paper aims to support the thesis on two main aspects. First, it supports student on the problem solving process from identification the problem through prioritizing and selecting the appropriate approach to evaluation the effectiveness of an approach. Second, on the technical aspect an annotated bibliography provides knowledge, practices and skills that should be useful in creating and implementing the project.

Acknowledgements

I would like to express my profound appreciation to the Dean, Samlee Plianbangchang, M.D., Dr.P.H., for his creative guidance and encouragement throughout the period of this MPH study.

I specially wish to acknowledge my gratitude and appreciation to my thesis advisor, Prof. Dr Nuntavarn Vichit- Vatakarn for her valuable practical and accurate advice. Although she is very busy but she devoted and tried to share the time with me as much as possible.

I wish to acknowledge Professor Edgar J. Love, MD.,Ph.D, Ajarn Marc Van der Putten, Ajarn Wacharin Tanyanont, Ajarn Ratana Somrongthong, Ajarn Tanawat Likitkererat, Dr.Sauwakon Ratanawijitrasin for their kindness and guidance throughout the study.

I would like to thank other academic and administrative staffs of the College of Public Health who assisted me in various ways.

I would like to express my heartfelt and deepest gratitude to the Faculty of Public Health, Hanoi Medical University, and Netherlands Project for granting me the scholarship to study in this program.

I wish to express my gratitude and thanks to the Head of Faculty of Public Health Hanoi Medical University Professor Dao Ngoc Phong MD., Ph.D. for his support and guidance to my study.

Lastly, to my dear friends, colleagues, my respectful mother and father, my family I would like to thank them for their encouragement and support to my study.

Table of Contents

	Page
Abstract	iii
Acknowledgements	v
Table of Contents	vii
List of Tables	xi
List of Figures	xiii
List of Acronyms	xiv
Chapter I Introduction	1
References.....	5
Chapter II Essay : Poor sanitation Practices in rural areas of Vietnam	6
2.1 Introduction.....	6
2.1.1 Diseases due to poor sanitation practices in rural Vietnam.....	7
2.1.2 Poor sanitation practice at households and its causes.....	10
2.2 Factors affecting sanitation program.....	14
2.2.1 Factors affect to sanitation program.....	14
2.2.2 Sanitation program at Vietnam rural areas.....	16
2.3 An approach to sanitation in Vietnam.....	17
2.3.1 Improving Sanitation Program (ISP).....	17
2.3.2 Expected outcomes of Improving Sanitation Program.....	18
2.3.3 Conclusion.....	18

References.....	20
-----------------	----

**Chapter III Proposal : A strategy for Improving Sanitation
Program in Sub-district Namson, Socson
in Northern Vietnam.....**

23	
3.1	Introduction..... 23
3.2	Objectives..... 27
3.2.1	General objective..... 27
3.2.2	Specific objectives..... 27
3.3	Project description..... 28
3.3.1	Education course to housewives..... 30
3.3.2	Construction of hygienic latrine..... 33
3.3.3	Construction of safe water supply facility..... 38
3.3.4	Curative intervention..... 43
3.4	Implementation of the project..... 44
3.4.1	Phase 1: Baseline survey..... 44
3.4.2	Phase 2: Demonstration period - Pilot project..... 46
3.4.3	Phase 3:Expansion of project..... 48
3.4.4	Phase 4:Project evaluation..... 52
3.5	Responsibility of Faculty of Public Health, Hanoi Medical University..... 54
3.6	Work plan and schedule..... 56
3.7	Estimated budget required..... 57
3.8	Limitation..... 60
3.9	Discussion..... 62
3.10	Ethical consideration..... 63

References.....	64
-----------------	----

**Chapter IV Data Exercise : A Descriptive Study on Factors Affecting
the Sanitation Program in Dong Ha Village,
Sub-District Namson, Socson, Northern Vietnam.....**

4.1	Introduction.....	66
4.2	Objectives.....	67
4.3	Description of Data Exercise process.....	68
4.3.1	Methodology.....	68
4.3.2	Sample size.....	68
4.3.3	Sampling.....	68
4.3.4	Data collection.....	68
4.4	Results.....	69
4.4.1	Findings in general information of households.....	70
4.4.2	Findings on the socio-economic status of households.....	70
4.4.3	Findings on Knowledge, Awareness and Practices of households about latrine.....	72
4.4.4	Finding on KAP of households about diseases related to human excreta disposal.....	74
4.4.5	Finding on KAP of households about water supply sources.....	77
4.4.6	Findings on Local Health Care Services and Local Sanitation Program.....	78
4.4.7	Finding on the household's health situation.....	78
4.4.8	Finding from observation and assessment of interviewers.....	79
4.5	Summary of findings.....	84

4.6	Lessons learned.....	85
	References.....	88
Chapter V	Presentation	89
Chapter VI	Annotated Bibliography.....	98
	Appendices.....	101
	Appendix A: A survey questionnaire.....	102
	Appendix B: Check list for the household latrine.....	111
	Appendix C: Check list for water supply sources (Fir rainwater storage system).....	112
	Appendix D: Check list for water supply sources (For the dug well).....	113
	Appendix E: The double-vaults latrine (dry compost latrine).....	114
	Appendix F: Selecting the right latrine in rural areas.....	115
	Appendix G: Technical Options of Sanitation facilities.....	116
	Curriculum Vitae.....	117

List of Tables

	Page
Table 2.1: Morbidity and mortality associated with various excreta related diseases in the world.....	9
Table 4.1: Education and occupation of housewives.....	70
Table 4.2: Household income.....	71
Table 4.3: Households' commodities of 34 households.....	72
Table 4.4: Latrine and type of latrine at households.....	72
Table 4.5: Knowledge of households about hygienic latrine.....	73
Table 4.6: Feces as fertilizer at households who have latrine.....	74
Table 4.7: Improper disposal of human excreta can cause diseases.....	74
Table 4.8: De-worming at households in the last six month.....	75
Table 4.9: Knowledge on prevention of worm infection.....	76
Table 4.10: Practice of washing hands after defecation and drinking boiled water.....	76
Table 4.11: A usual drinking water supply sources of households.....	77
Table 4.12: The most serious illness that the households have during the last year.....	79
Table 4.13: Observation of latrine.....	80
Table 4.14: Crosstabulation of knowledge of households about criteria of hygienic latrine and hygiene of households latrine.....	81
Table 4.15: Crosstabulation of knowledge of households about improper disposal of human excreta can cause diseases and hygiene of households' latrines.....	81

Table 4.16:	Crosstabulation of knowledge of households about improper disposal of human excreta can cause diseases and having latrine or not at households	82
Table 4.17	Crosstabulation of diarrhea at households during last two weeks and hygiene of households latrine	83
Table 4.18:	Crosstabulation of washing hands after defecation and hygiene of latrine among 20 households who have diarrhea during last two weeks	83

List of Figures

	Page
Figure 2.1: Conceptual frame work of factors affecting to sanitation program.....	15
Figure 3.1: Schematic diagram of sanitation barrier.....	25
Figure 3.2: Diagram of an intervention's evaluation design.....	54

List of Acronyms

CI	Confidential Interval
FOPHMU	Faculty of Public Health Hanoi Medical University
FPH	Faculty of Public Health
GDP	Gross Domestic Product
GSO	General Statistics Office
ISP	Improving Sanitation Program
MD	Medical Doctor
MOH	Ministry of Health
NGO	Non Government Organization
NSRWSS	National Strategy for Rural Water Supply and Sanitation
SPSS	Statistical Package for Social Science
UNESCO	United Nation Educational Scientific and Cultural Organization
UNICEF	United Nation Children's Fund
US\$	United State Dollar
VND	Vietnamese Dong
WHO	World Health Organization