CHAPTER II

ESSAY

POOR SANITATION PRACTICES OF HOUSEHOLDS AT RURAL AREAS IN NORTHERN VIETNAM

2.1 Introduction

On the map Vietnam is shaped as the letter S, Vietnam is located on the East side of the Indochinese peninsula in Southeast Asia and is bordering China in the North, Lao in the West, Cambodia in the West, and South and the Pacific Ocean in the South and East. Vietnam is a long and narrow country of about 331,000 square kilometers. It widens in the North and the South, between the North and the South is Central Vietnam. Vietnam is the 13th most populous and one of the poorest countries in the world with a population of 78 million and GDP per capita of 374 US$ in 2000.

Despite recent development and urbanization, Vietnam remains predominantly agricultural with nearly 80% of the population living in rural areas. In terms of the human development, Vietnam performs better than many countries with similar income

level. In 1997, the infant mortality rate was 32 per 1000 live births, the under five mortality rate was 43 per 1000 and the adult literacy rate was 92% (UNDP.1999).

Agriculture accounts for half of the national income and nearly three-quarters of the national employment. Rice is the main agricultural product. Vietnam is a tropical country with climatic condition that are suitable for the development of diseases caused by parasites in men, animals, and plants. Over the last 30 years the health, veterinary, animal breeding and biological sectors have made significant progress .We must realize, however that much remains to be done regarding the situation of serious gastrointestinal parasites, diarrhea, and malnutrition in children at households in the rural areas. The major cause of this problem is the pollution of the living environment, and this pollution cause by poor sanitation practices of the community.

2.1.1 Diseases due to poor sanitation practices in rural Vietnam

Today in Vietnam, only 18% of rural households have access to proper sanitation facilities and 39% of rural households have access to safe drinking water sources while the original national program of action target for rural sanitation and safe water access by the year 2000 was 60% (UNICEF.1999). Many communicable diseases cause by inadequate sanitation facilities. Poor sanitation practices and the ingestion of contaminated drinking water are the main causes of parasitic diseases that is one of the five leading causes of morbidity in hospitals and accounting for 23% of all cases (MoH.1999). Parasitic diseases can lead to intestinal infection, diarrhea and malnutrition. These diseases are the causes of almost half of the deaths and diseases

among Vietnam's youngest children and are the main cause of child malnutrition in Vietnam today.

Worm infection is at very high rate, it is more than 90% (MoH.1999) and more than any other parasitic diseases worm infection is a result of human carelessness and lack of appropriate personal hygiene and sanitation measure. Human feces in the roads, fields and yards provide s a major source of infective eggs in heavily populated areas. The worm infection is more common in warm climates. The worm eggs are not infective for human when first excreted. They are very resistant to extremes of temperature and humidity. They usually are transmitted by hand to mouth, although the use of human feces as fertilizer may also permit transmission of infective eggs by food that is grown in the soil and eaten without being thoroughly washed. The eggs require several weeks to embryonate and become infective. The complication of worm infection may vary from mild such as abdominal pains, vomiting, restlessness, and disturbed sleep to partial or complete blockage of the intestine and malnutrition in children.

As mentioned above, diarrhea is one of consequences of parasitic diseases. Diarrhea is one of the leading causes of annual children mortality. The current rate of diarrhea in Vietnam is 1.227 per 100,000 population (MoH.1999)

The high-risk group of worm infection and diarrhea are children under five years of age as their immune systems are not fully developed and may be further impaired by malnutrition.

Table 2.1: Morbidity and mortality associated with various excreta related diseases in the world

Diseases	**Morbidity**	**Mortality** (No of deaths per year)	**Population at risk**
Diarrhea	1,500 million episodes in children under 5 years	4 million in children under 5 years	More than 2000 million
Round worm	800-1000 million infections	20,000	
Hook worm	900 million infections	50,000	

(R.Franceys,1992)

Another complication caused by parasitic infection is malnutrition. Malnutrition in children currently affects 36.7% of all Vietnamese children under five years of age. Beyond contributing to general malnutrition, diarrhea and parasitic diseases also impair children's physical development cognitive function and ability to learn . Heavy infection can even result in complication leading to acute or chronic disability (MoH.1999).

2.1.2 Poor sanitation practice at rural households and its causes

Much effort has been made by the Vietnamese government and another NGO organization in order to improve the sanitation practices in rural Vietnam. However, present situation of sanitation practices in rural areas is still very poor .One of the most serious problem that leading to this situation is "Lack of proper sanitation practices of households in rural Vietnam" (UNICEF Vietnam.2001).

Thus, why proper sanitation practices of households in rural Vietnam are still very poor. Many researcher and related ministries have paid a great concern to determine the causes of poor sanitation practices. Possible causes include:

1. Low socio-economic status
2. Lack of community awareness and comprehensive knowledge and information on sanitation
3. Cultural factor and poor habit
4. Unabling of suitable sanitation facilities
5. Insufficient safe water supply
6. Lack of Health care Services Support and Government Commitment

The detail descriptions of these possible causes are presented below

1. Low community socio-economic status. The annual GDP in Vietnam is 374$ (GSO, 2000) but it is not equally distributed all over country. The rural areas of Vietnam contain 80% of the country's population and most of them are at low-

socioeconomic status. Their incomes mainly depend on the agricultural crops. Rural areas in Vietnam contribute with significant shares of the national economic output (26%) and exports (36%). However, the rural areas are also home to a disproportional high share of the country poor (94%) and despite of the Doi moi (Innovation) policy, the gap in living standard between the rural and urban population has increased substantially in recent years. The gap is seen, particularly, in the access to safe water and hygienic sanitation. During the 1990s the majority of the population in cities and towns benefited from increased Government investment in improved water supply, while investment in rural areas remained low. (Tran thi Que., Vo Tri Thanh.2001).

The gap between the rich and the poor has tended to be widened nationwide. In 1996 the average per capita income of 20% of the richest people in the richest province was 34 times higher than of 20% of the poorest people in the poorest province. (World Bank,1999). The characteristics of the poor in Vietnam are not different from other poor around the world. A typical poor household is less educated, less skilled, having more children but less land, less access to credit but having to pay a little bit more, spending less on education and less covered by hygienic sanitation facilities, lacking opportunities to learn.

2. Lack of community awareness and comprehensive knowledge and information on sanitation. Most people in rural Vietnam remain unaware of the real impact of unsanitary surroundings and poor sanitation practice have on their lives and their children and continue to live in unsanitary conditions. These individuals need to be informed of the benefit that improved sanitary practices and facilities can bring to their families. Even when people are properly informed about proper household

sanitation and personal hygiene practice they often fail to incorporate these lessons in their daily routine. This is partially due to the fact that many adults have a difficult time fundamentally changing their living habits. Even when people do change their behaviors, many continue to live in homes with unsanitary conditions. They often lack the resources they need to effectively remedy major sanitary problems, such as, unsanitary latrines, which ultimately makes behavioral changes less effective.

3. Cultural factors and poor habit still exist among rural community, in many part of rural Vietnam, farmers still use human excreta for fertilizer. This customary practice dates back many centuries, and beliefs about the benefit of this practice are strong. The fundamental problem with this practice is that, an excreta is the biggest cause of diseases in Vietnam. A direct contact with excreta, as well as, contamination of food and water sources, result in parasite infection rates in excess of 90% in many rural areas. The severe effect this practice has on children 's health makes it a great cause of concern. Unfortunately, many families continue to adhere to their long-held belief and practice, despite the fact, that it is scientifically established that these practices have little agriculture benefit, while placing children health at substantial risk (Feachem.1983). Great efforts are, therefore, needed to educate these families and to encourage them to change their farming practices for the benefit of their children.

4. Unsuitable sanitation facilities, sanitation facilities that are socially unacceptable. For instance, the households of the first demonstration unit constructed in Kumasi, Ghana, refuse to use the latrine because they were Moslem and the latrine

faced in the direction of Mecca (Cotton and others.1995). In Vietnam in the early 1980s many simple pits and water seal pour-flush latrines were introduced and constructed in rural areas. But as soon as rural people used it they refused just because these types of latrine are not suitable for rural people, where solid anal cleaning material is used, water for flushing is not available all year and farmers still use feces as fertilizer or soil conditioner (Dao Ngoc Phong et al.1989).

5. Insufficient safe water supplies. Today in Vietnam, only 39% of rural households have access to safe drinking water. Although, the country is abundant of water resources, the collection of water for domestic use represent a large workload for rural women and children, in some rural and particularly mountainous areas it takes 3 to 4 hours a day for collecting water. This tend to limit the households' accessibility to proper sanitation practices. At the same time, effort in obtaining water combine with other household tasks activities, which results in less income for the family. Therefore, collecting water limits to essential usage only which may not include human waste disposal purposes.

6. Lacks of Health care Services Support and Government Commitment. Although preventive medicine is embraced by Vietnam Health sector, the Government continues to treat the sanitation issue as an individual household's matter rather than one that is the responsibility of the state. The Government's action in this area is limited to curative measures rather than preventive action and doesn't include rural sanitation program that could dramatically improve the health of Vietnam's children In

other aspect the Government is not alone in its reluctance to address the issue of environmental sanitation. Many international donors have focused on water resource and supply issues while eschewing the sanitation problem. This may be because sanitation is a more complex issue requiring a great amount of resources or because effective sanitation initiatives ultimately depend on behavioral changes. Clearly though, Vietnam's sanitation problem will need great efforts and contributions from all concerned parties in the future.

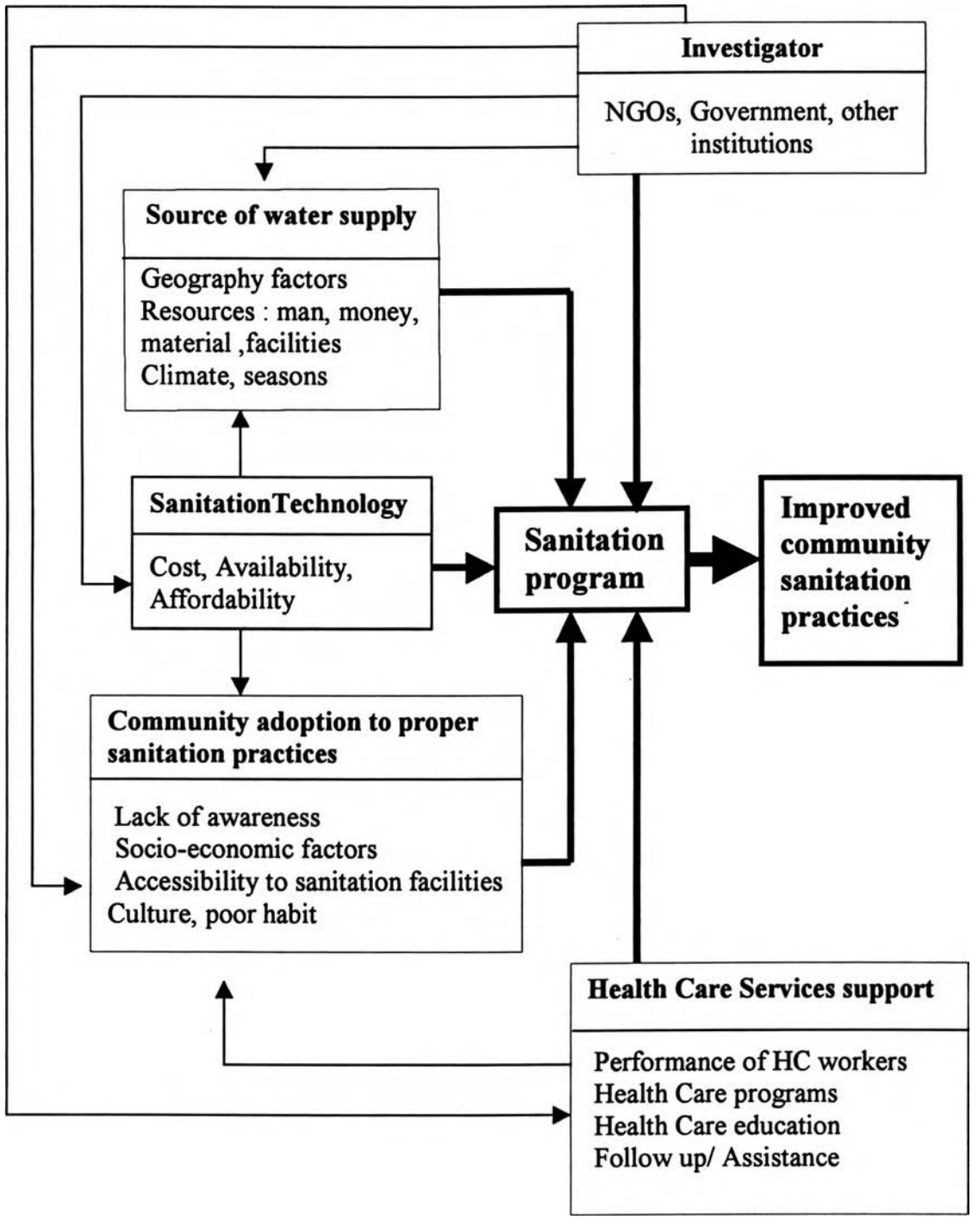
2.2 Factors Affecting Sanitation Program

2.2.1 Factors affect to sanitation program

Sanitation program is not new in Vietnam, many sanitation programs have been implemented in Vietnam, there are many factors that can affect to sanitation program but the main factors are described in the conceptual framework below.

Base on this conceptual framework, it is very clear that for the success of every sanitation program, the intersectional collaboration is always needed. Depend on the limitation of the resources, sanitation program can be conducted at all level but the most effective requires participation of many organizations from the Government, i.e., the health care authorities, the providers of sanitation facilities and water supply facilities to the users.

Figure 2.1: Conceptual frame work of factors affecting to sanitation program



2.2.2 Sanitation program at Vietnam rural areas

The Vietnamese Government now increasingly gives attention to water and sanitation issue. The establishment of a national program for rural water supply and environmental sanitation and the finalization of the national strategy in 1998 were recent positive steps in strengthening the framework for institutional reform in this sector. National Strategy for Rural Water Supply and Sanitation (NSRWSS) came into effect in 1999. The immediate objective is universal coverage by 2020 of clean water and hygienic sanitation facilities through the active promotion of community participation and a demand responsive approach (GSO.2000). NSRWSS use the following general approach:

- A demand responsive approach will be introduced as soon as possible so that users are the main decision maker and organizers of implementation
- Most users will pay the majors proportion of construction cost themselves and all users will pay all operating costs
- Competitive tendering shall be the basics for future construction

However, while political commitment in development of water supply and sanitation facilities for rural community continue to grow, Government financial allocation still focus more on the urban water and sanitation. In the otherhands many international donors such as Danish International Development Agency, UNICEF Vietnam, Netherlands National Committee, have conducted many sanitation programs but most of them have focused on water resource and supply issue while eschewing the sanitation problem (UNICEF Vietnam.2001).

2.3 An approach to Sanitation in Vietnam

2.3.1 Improving sanitation program (ISP)

The provision of sanitary facilities for excreta disposal and their proper use are necessary components of any program aimed at controlling intestinal parasites. In many areas, sanitation is the most urgent health need and those concerned with the control of intestinal parasitic infections are urged to promote intersectional collaboration between health care authorities and those responsible for the provision of sanitation facilities and water supply at the community level (WHO.1987). To follow the above guide of WHO and lesson learned from the other sanitation projects we intend to create an Improving Sanitation Program (ISP) by giving a strategy and intervention program to improve sanitation practices at household .Two main programs in ISP are:

2.3.1.1 Promotion program, we will provide a comprehensive knowledge and information on proper sanitation practices for women group, just because women and children are considered for a high-risk group of sanitation related diseases (WHO.1999). On the otherhands, we will introduce and mobilize the households to construct hygienic latrine and safe water supply facilities and to provide them financial support for the construction. During the program, the household's participation should extend from the initial collection of baseline data and identification of preferences, through design and construction, to the continued operation and maintenance of facilities.

2.3.1.2 Curative program, together with promotion program we plan to provide a mass treatment of worm infestation by giving de-worming program twice a year in collaboration with local health care services.

2.3.2 Expected outcomes of Improving Sanitation Program,

We hope that Improving Sanitation Program can increase adoption to proper sanitation practice of households. It can increase percentage of households regularly using hygienic sanitation facilities and the percentage of households accessing to safe domestic water supply facilities, it can change old culture and bad habit of households toward living with proper sanitation practices, it can improve the households knowledge on sanitation practice. On the other side, we hope to lower the worm infection rate among the rural household members as lower than 90% as possible.

2.3.3 Conclusion

Sanitation program is not new in Vietnam and due to many reasons, it was not effective in rural Vietnam .The clear evidences are 82% of rural population do not have access to proper sanitation facilities and 66% not access to safe water supply (UNICEF Vietnam.2001). Many sanitation programs fail to result in improved health and environmental for rural communities, leading to deterioration in the living environment. For instance, the mal-functioning latrine may result in potential contamination and infection closer to the house, which can be worse than no latrine at all (Andrew Fang.1999). Over the past 20 years much progress has been made in developing

innovative and appropriate sanitation technologies which can serve the specific needs for low income such as rural community. One major area has been in the development of so call 'on-site' technologies, technologies that enable the households to own a self-contained sanitary latrine which is not dependent on the functioning of an expensive and technical complex sewerage net work for safe disposal of human excreta. However, the adoption and proper use of these technologies in the Vietnam rural community were still very low (Dao Ngoc Phong et. al.1989). We hope that Improving Sanitation Program (ISP) which is a comprehensive program should improve sanitation practices and overcome the failures of the previous sanitation program.

An intervention project, which will bring ISP in to effect, would be done in Sub-District Namson, Socson not only to provide some active changes in the area but also to provide knowledge and experiences in expanding Improving Sanitation Program in rural areas in Vietnam in the coming years.

REFERENCES

Andrew Fang.1999. ***On-site sanitation, an International Review of World Bank Experience.*** UNDP-World Bank . Water and sanitation Program-South Asia

Cotton, Andrew, Richard Franceys et al .1995.***On-plot sanitation in Low-income Communities-A reviews of literature,*** Loughborough University Technology.UK

Dao Ngoc Phong et al. 1989.***The cross-sectional survey Study of sanitation situation and factors affect to sanitation practices at rural areas in Northern Vietnam.*** Hanoi

Feachem, R.G et al .1983.***Sanitation and diseases: Health aspects of excreta and wastewater management.*** Chichester, Wiley.

Golladay,F.L.1983. ***Appropriate technology for water supply and sanitation; meeting the need of the poor for water supply and sanitation*** .Washington, DC, World Bank

GSO. 2000. ***Vietnam Statistic reports,*** General Statistic Office of Vietnam, Hanoi Vietnam

Mara, D.Duncan.1982. ***Appropriate sanitation Alternatives for Low-income Communities: A Brief Introduction,*** Transportation, Water, and Telecommunications Department. Appropriate Technology for Water Supply and sanitation ,Vol.1b.World Bank . Washington ,D. C.

Mc Michel, J. K.1976. ***Health in the third world studies from Vietnam.*** London, Spokesman Books

MoH. 1999 .***Vietnam Health sector review,*** Hanoi, Vietnam,

MoH. 1999. ***Vietnam Health Statistic year book,*** Vietnam ,

Tran thi Que, Vo Tri Thanh. 2001. ***National Reports Vietnam 2001, Economic growth and social development,*** Hanoi, Vietnam

UNDP.1999.***Human Development Report 1999.***New York; Oxford University Press.

UNICEF Vietnam.2001. ***Rural water and Sanitation in Vietnam***. Hanoi.

UNICEF. 1995. ***Strategy in water and environmental sanitation.*** New York,

UNICEF. 1999. ***Environmental sanitation and its impact on Health and Nutrition of Children ,*** UNICEF Reports .Hanoi, Vietnam

UNICEF. 1999.***KAP Study on School Sanitation and Control of Worm infection, UNICEF reports,*** Hanoi, Vietnam

UNICEF.1995. ***A Handbook for Improving Sanitation Programs.*** **Second** Draft, OCT.10

WHO .1998. ***Working Group on Promotion of Sanitation,*** WHO/Water Supply & Sanitation Collaborative Council. Sanitation Promotion. Geneva, (WHO/EOS/98.5)

WHO.1987. ***Prevention and control of intestinal parasitic infections: report of a WHO Expert Committee.*** Geneva, World health organization (WHO Technical Report Series,No749)

WHO.1997. ***Environmental matters-Strategy on Sanitation for high-risk communities.*** Report by the Director General to the Executive Board. , Geneva, World Health Organization. (EB101/19)

World Bank. 1999. ***Vietnam Attacking Poverty-Vietnam development Report,*** Hanoi, Vietnam

World Health Organization. 1997. ***Environmental matters- Strategy on Sanitation for high-risk communities.*** Report by the Director General to the Executive Board. WHO, Geneva

World Health Organization. 1998. ***Working Group on Promotion of Sanitation, WHO/Water Supply & Sanitation Collaborative Council. Sanitation Promotion.*** WHO, Geneva