

SUSTAINABLE AQUACULTURE DEVELOPMENT FOR POVERTY ALLEVIATION IN NORTHERN UPLANDS OF VIETNAM WITH WOMEN INVOLVEMENT

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ABSTRACT

The project “**Aquaculture Development in Northern Uplands**” (VIE/98/009/01/NEX) stressed on strengthening an extension network and improvement of seed production and delivery system among the target groups at the remote area. Moreover, it gave a high priority to gender education and women’s involvement in all activities. The project was implemented by the United Nations Development Programme (UNDP), provincial departments of Agriculture and Rural Development in Son La, Lai Chau and Hoa Binh, Food & Agriculture Organization of UN (FAO) in cooperation with the Vietnam Ministry of Fisheries (MOFI). This project had introduced and tested two new management practices for poverty reduction, which could be considered for replication under the HEPR (Hunger eradication & poverty reduction) & others programme in Vietnam. First, the establishment of CAG (Commune Action Group) - small responsive social group and used it in creating an enabling environment & mobilizing the involvement of the local communities and their organization in planning and implementing the project. Secondly, the role of CAG in organizing a participatory extension & credit support service to best ensured the delivery of technology and financial package assistance to poor disadvantaged & isolated ethnic communities of whom more than 50% were women. This study clearly demonstrated that the poor ethnic minority women group played a vital role in small-scale aquaculture and received substantial benefits from the project. This project has succeeded in creating suitable opportunities and condition for women to be able to effectively participation in all activities such as providing loans, aquaculture technologies and micro credit management training. There also changed about the idea of women group the way to do economic & generally in evaluation of capacity, empower of women. It also proved & placed special emphasis on empowering women through aquaculture by improving the productivity and profitability of family aquaculture through introducing appropriate aquaculture technologies, training and by assigning them the lead role in homestead aquaculture. The evaluation studies on gender roles are conducted to learn statement of production labour, household labour and paid special attention to the role of women in aquaculture before the project launch and after the project phase out.

Key Words: Poverty alleviation, Sustainable aquaculture, Northern uplands, Vietnam

INTRODUCTION :

The UNDP project “**Aquaculture Development in Northern Uplands**” (VIE/98/009/01/NEX) is being executed by Vietnam’s Ministry of Fisheries, the department of Fishery Extension as the implementing department with the following co-implementing agencies: Provincial Department of Agriculture and Rural Development (DARD) of the provinces of Son La, Lai Chau & Hoa Binh; the Research Institute for Aquaculture No. 1 (RIA 1) and Food and

Agriculture Organization of the United Nations (FAO). The project aimed at poverty alleviation in the 3 pilot provinces by diversifying rural development through viable sustainable aquaculture activities, increment of building capacity of the project staff, for increasing the household food security, reduce malnutrition of disadvantaged ethnic minority and women as well as improving their quality of life, empowerment of women community in their families as well as in the society, giving high priority to gender education & women's involvement in all activities of the project. It included components on resource assessment, participatory planning and implementation of an action plan of aquaculture activities. It also stressed on strengthening an extension network and improvement of seed production and delivery system improved, micro-credit & savings schemes established to provide direct support for aquaculture activities to the upland ethnic minority farmers living in remote & isolated areas. This project had launched in July 1999 and phased out in December 2002. A total of 50 communes from 3 pilot provinces (Son La, Lai Chau & Hoa Binh) of 6 districts (Thuan Chau & Song Ma of Son La province, Tuan Giao & Sin Ho of Lai Chau province, Da Bac & Mai Chau of Hoa Binh province) and involved 151 Result Demonstration farmers (RDFs) of which were 72 grow-out & 35 nursing including the integrated household farming methodology VAC (horticulture-aquaculture-livestock), 41 rice-fish, & 3 cage culture farming and more than 5900 poor ethnic minority farming households (Fellow farmers) were the project target groups (**Siriwardena, 2002**) and especially 50% of them were women.



Image 1: The Map showing various parts of Project area of Northern Uplands, Vietnam

Methodology of the Study

Study area

Fieldwork had been carried out between July to August 2002. It focused on 6 districts under the 3 pilot provinces: Son La, Lai Chau & Hoa Binh. The team studied one commune per district. So, Chieng Ly & Na Nghiu commune from Thuan Chau & Song Ma district of Son La province, Quai Cang & Sin Ho commune from Tuan Giao & Sin Ho district of Lai Chau province and Tong Dau & Tu Ly commune from Mai Chau & Da Bac district of Hoa Binh province were selected for this study.

Research Methods

The methods used in the study were Focus Group Discussion and Key informant interviews.

Focus Group Discussion

Focus Group Discussion is one of the best approaches used in Participatory Rural Appraisal (PRA). The members of each focus group discussed aquaculture among themselves with the help of an outside facilitator and in the presence of one or more outside observers. The focus groups such poor women, middle and better living standard women

who already took Aquaculture activities (5 to 7 woman are in labour age and married. 95% of them are ethnic minority people of each group) were selected. An attempt was made to conduct the group discussion with no sense of formality. Initially the team was to so closed and made rapport with the participants, introducing the facilitators and providing background information on the purpose of the visit and focus group discussion. The team then explained the general purpose of the meeting, emphasized that the group's assistance is needed to ensure the VIE/98/009/01 project meets their needs.

Key Informant Interviews

Semi-structured interviews were conducted with the key informants: selected stakeholders (Head of CAGs, Commune Women's Union, DAGs, CEWs) to the project who had a particular knowledge of aquaculture and gender issues. A checklist was prepared for this purpose. Secondary data were collected from PMU office and PIUs of 3 pilot provinces for the application in this study.

Gender Roles

Gender is the social differences between men and women but to the social relations between them that define their roles. Gender roles are therefore not determined biologically, but are constructed socially and can differ between cultures and environments. As a whole gender roles have a major impact on production, reproduction, consumption and distribution in aquaculture.



Image 2: A view of Thai ethnic women fellow farmer of project attending the Chieng Pac commune monthly CAG meeting under the Son la province



Image 3: The project woman Result Demonstration Farmer (RDF) is feeding in her fishpond in Hao Ly commune under the Hoa Binh province



Image 4: A group of ethnic women Result demonstration farmers (RDFs) in front of their ponds for the preparation of harvesting



Image 5: The project official demonstrating the rice-fish farming technique among the project farmers whose more than 50% are women from the project area



Image 6: A view of smiling harvesting fish farming group of the project with minimum participation of women



Image 7: A great potentiality of pond side dyke cropping/gardening as an additional income for the project farmers in northern Vietnam

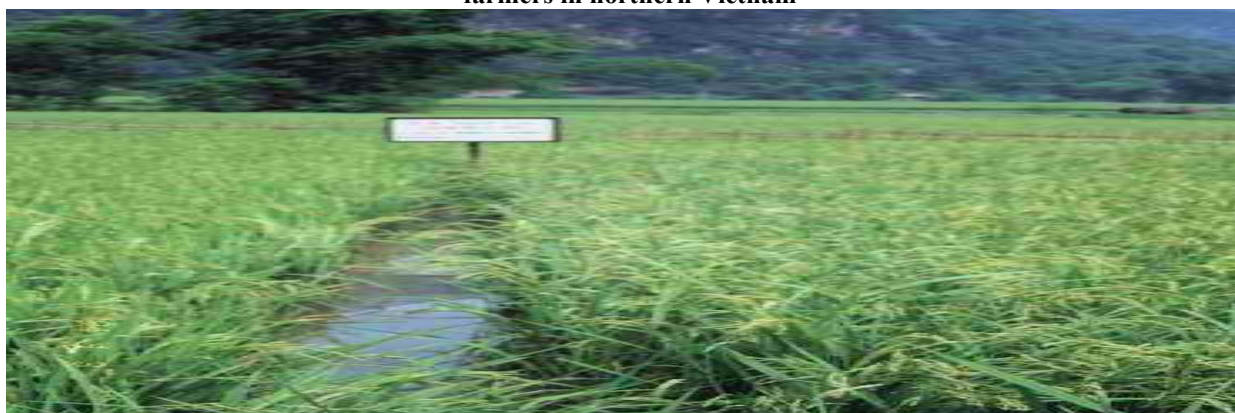


Image 8: A view of rich-fish farming model, which is being done by the project farmers in the project area of northern Vietnam

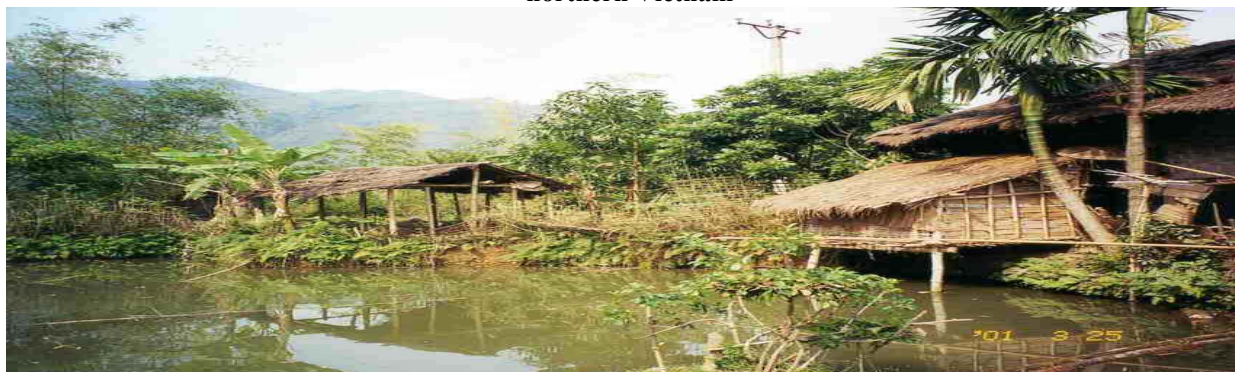


Image 9: A view of typical VAC model in the project area of northern Vietnam



Image 10: A view of potential cage farming by the project farmers in the project area at Son La province, Vietnam

Research Findings

Gender division of labour

It is implemented clearly at commune & district level through the field study. The role of male & female is different in production activities. In fact labour division between two sexes are suitable to physical culture and mutual social relation between male and female. Gender division of labour is cooperative and supplementary to each other to be achieved efficiently at production level.

Cultivation

It had observed through this study that woman did all stages of rice production. Man merely performed some stages like ploughing, transporting rice after harvesting. Woman carried out most of the stages such transplanting, daily caring, watering, apply pesticides, harvesting, drying etc (Thao, 2002).

One of the woman of Tong Dau commune stated **“Women do main part of cultivation & husbandry while man assisted women for only heavy work like ploughing, spent more time for sowing, fire wood collection, take part in building house or public construction”**.

Husbandry

It created a significant income generation for most of the households. This is one of the best way to raise income and improve the poor household's livelihood through have capital or borrow loan from the micro-credit schemes. Popular livestock raising at farmers level are pig, poultry and cattle. Women spent much time in husbandry like cultivation than men. Women often get up early and spent time for cooking food for poultry & pig before going to rice field or after finishing farm work. Cattle (Buffalo, cow etc) care is usually done by older or children of the family. One of the woman of Chieng Ly commune reported **“Husbandry is often done in the early morning or at night for time saving. Before going to field feed (grass) for fish is being applied. During the field work I usually collect vegetables for pigs and prepared food for pigs, poultry once returned at home in the evening”**

Small-scale handicraft industry, services and hired labour

There are differences and similarities in labour division of small-scale handicraft industry, service & hired labour. It can be divided into 3 following terms of labour:

- Weaving is the most popular traditional labour type for the mountainous ethnic women (Thai, Muong, H'mong, Dao etc). At Tong Dau commune there are 60-70% of women are doing this business on weaving and made bedding as reason it is not only a self demand-supply activity for using in their family but create a good source of income. One of the ethnic woman of Tong Dau commune quoted **“We earn 200-250,000 VND²/month if only in evening while an unmarried girl (not busy with house work) can earn 400,000 VND/month very easily”**.
- Labour in service activities like making cakes, tofu, selling miscellaneous goods through open grocery shops at village, commune level is initiated by the women. Women consider this service as an additional income for their family.

² 15,000 VND = 1 US\$ (April, 2003, Vietnam)

- Mainly man worked as a hired labour activities such construction building, road, wood workers etc.

So it is proved that at all communes level women are main labour force in agricultural production, husbandry, additional work for their family.

Gender in income contribution to household

It is noticed through this study that women playing a vital role to develop their livelihoods. It is found in many ethnic families both husband & wife actively involve at economic activities to earn more income for their family. Commune leader of Tong Dau informed **“My wife contributes her earning 80% for family purpose albeit I have salary but spent much for social maintenance so, I have to use family’s income”**. Another woman from Na Nghiu commune reported, **“If any Thai ethnic family have a hardworking limber wife, the living standard of that family will be better. In contrary, living standard of that family will be deteriorate if posses lazy and not limber wife”**.

Gender in resources control, or asset possession and decision making related production activities

Most of asset such as land, house are used but not possessed by women in ethnic minority society. So most land or house owners are male but after husband expire, his land or house will belong to his wife. Most of the decision making related production like production pattern, labour division, inputs purchase, outputs selling belong to male as reason they possess higher education and they usually contact with other people, so that they have better knowledge than female. Actually this custom is being followed by Thai, DAO, Mong ethnic people who always consider the rights for man higher than women in the society. At this stage the decision-making activities are same to young couple. One of the Mong ethnic people from Sin Ho commune quoted **“Mong ethnic woman is not equal to her husband. Husband always possess bad impression on his wife as reason they always at home, they don’t know how to good approach with out side people and also they are illiterate. So, they also don’t have any right to make decision any kind of family affairs”**.

One of the Dao woman from Sin Ho commune stated **“Dao ethnic man is a leader of his family. When children want to do something them mother refer them father’s advice. Construction of building, door etc heavy works often initiated by husband but homestead activities like husbandry, household production are undertaken by wife”**.

Gender in household activities

Housework:

Housework like cooking, washing, bringing water, collecting firewood etc for women work. This is not only a thought of ethnic patriarchal man but also the attachment of woman to the works that is considered their heavenly mandate. At studied area, man also took part in housework but they can do at given time such as after his wife bearing children, illness or over busy etc and it means husband **“help his wife”** is not a work to him. It happened to husbands who are not healthy enough to do heavy works stay at home to do housework instead of wife go farming in

field and hills but this is rare case. It always exist a concept that husband is more intelligent than wife is so that they have right not to do housework. One of the woman from Chieng Ly commune stated **“Husband does not do the works of woman. He feels shy. Husband never washes clothes of wife & children. He says to his mother to help wash as well as assist his wife hanging the washed wet clothes”**.

Taking care and teaching children:

Look after small children is also a solemn duty and obligation for women. Once children grow up, both husband and wife should concentrate to teach them for good education and behaviors. At present the parents are so busy at rural area, limited knowledge so that they can't teach them properly but stressed on their study and merely send them at school. In general the role of woman is much than husband in teaching children (especially to daughter to weave and do farming). One of the woman from Na Nghiu commune stated **“I'm a wife and being a mother I should have much responsibilities than my husband. Sewing cloths for children, feeding children, washing etc. Man doesn't do or understand these type of work”**.

Managing household fund and expenses:

Women usually responsible for keeping and managing money in family as reason they spent money more economic than man, they also concerned to spend money for preparing the daily meals so that they preserved money more conveniently than man. Household fund is managed by woman and it doesn't mean that they have right to spend the money freely what they liked. In this regard woman can only make decision by herself on expense of family daily meals, clothes and part of children learning (tuition fees, Tiffin etc). Also other family expenses (expensive family goods) are decided by husband or both husband & wife. One of member of Tu Ly commune reported **“Financial management is concerned with woman. If I keep money, I'll spend much for various purposes and there is no limitation. So, I only advice my wife to follow up all daily activities but my wife smoothly run family expenses with her own capacity”**.

Division of labour by Gender in the project areas:

<u><i>Aquaculture</i></u>				
Tasks	M	W	B	C
Pond Preparation:				
Pond dyke compaction	√			
Removal of rocky/stones from pond bed	√			
Deweeding			√	√
Water draining	√			
Drying pond bottom	√			
Liming			√	
Stocking	√			
Feeding & Fertilization			√	
Fish health check & disease control	√			
Harvesting			√	√
Marketing			√	

M: Man
W: Woman
B: Both
C: Children

Source: Author's field survey (Kibria, M.G. 2001)

Agriculture:

Tasks	M	W	B	C
Land preparation			√	
Watering			√	
Transplanting			√	
Weeding		√		√
Pesticide spray	√			
Harvesting			√	√
Storing			√	√
Husking		√		
Package			√	
Transportation			√	√
Selling		√		
M: Man W: Woman B: Both C: Children				

Source: Author's field survey (Kibria, M.G. 2001)

Impact of Aquaculture activities through project intervention:

Before the project the fish farming in the uplands area was so traditional with out any technical/financial assistance. It was treated merely for man activity but women can assist them. It was not so transparent about women's role. So, after the project intervention "Aquaculture Techniques" training by the project for ethnic women at communes level was a pragmatic & needful activity and made good awareness on pond, cage & rice fish culture techniques among the women group of the uplands area. The ethnic women community learnt pros & cons of aquaculture through a series of Aquaculture technologies training from the project (Schmidt, 2002). They also agreed that fish farming brought many benefits to households like supplement nutrition to women and their children, make gender division of labour between man & women as well as make labour force of children (grass & local feed collection), make use of by-products in pond farming, improve family's income.

Box 1:

One of the households from Noong Heo commune of Sin Ho district of Lai Chau district Mr. Lo Van Ua reported **"before the project I don't have any clear idea about the stocking density, feeding rate, fertilizer dose etc albeit I usually released a certain number of fingerling in the pond. I only applied grass for pond fish and if I engaged for another job, no body can help to take care pond and as a result the fish growth attain very small"**.

Box 2:

One of the project farmers from Mai Hao commune of Hoa Binh province Ms. Vi Thi Mung stated **“The Aquaculture Techniques training notified me fish culture easy and bring many advantages. Our rice fields not enough and so income very low. After starting the rice fish farming we have earned money for daily marketing, for medicine, children’s school fees etc”.**

Women advancement & gender mainstreaming:

This project clearly demonstrated that the poor ethnic minority women group played a vital role in small-scale aquaculture and received substantial benefits. This project succeeded in creating suitable opportunities and condition for women to be able to effectively participation in all activities such as providing loans, aquaculture techniques and micro credit management training. There also changed about the idea of women group the way to do economic & generally in evaluation of capacity, empower of women. The role and status of ethnic mountainous women had been improved through aquaculture activities. The role of women’s Union had also been strengthened by several numbers of project meetings, workshops, study tours, cross-field visits etc. The project already proved & placed special emphasis on empowering women through aquaculture by improving the productivity and profitability of family aquaculture through introducing appropriate aquaculture technologies, training and by assigning them the lead role in homestead aquaculture. Similarly, active participation of local communities in implementation of the project had accorded high priority.

Figure 1: Ratio of women participation from various units of project management

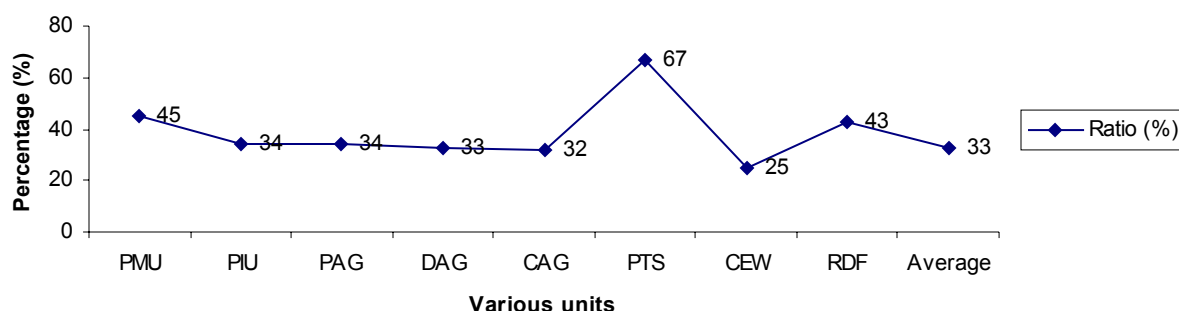


Figure 2: Status of "Aquaculture Techniques" training among the project farmers (2000-2002)

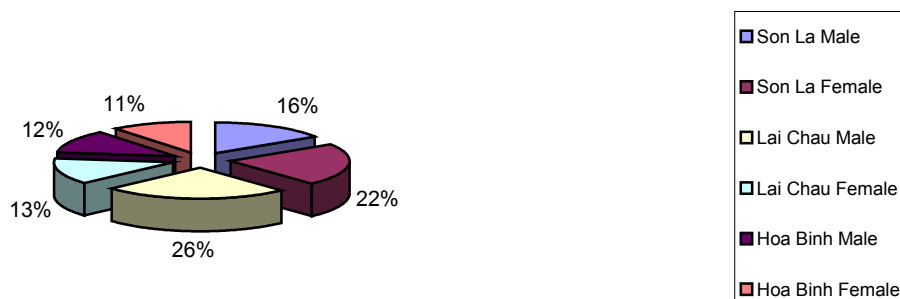
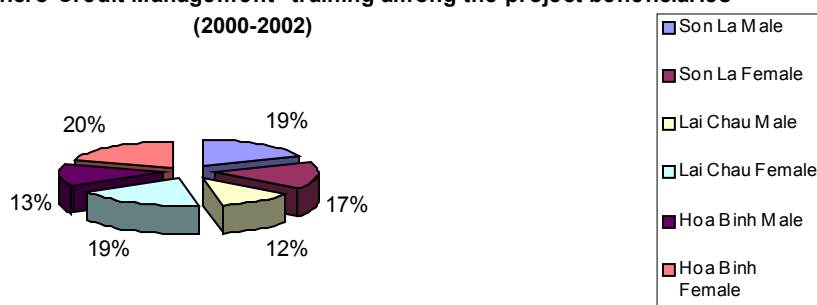


Figure 3: Status of "Micro-Credit Management" training among the project beneficiaries (2000-2002)



The figure 1 displays the implementation of gender indicators which were one of the remarkable successes of the project management (Project management unit, PMU; Project implementation unit, PIU; Provincial action group, PAG; District action group, DAG) and it created the foundation for the enhancing the role and capacity of women in the community while the figure 2 & 3 indicate that the project tremendously succeeded in creating suitable opportunity and environment for ethnic women to be able to effectively participation in their facilities like providing loans, aquaculture techniques & micro-credit management training.

Box 3:

- At this stage ethnic women can part in discussion (stocking density/ratio, kind of feeds and rate, fertilizers, daily routine management of better farming etc) with their husband about the development of pond/cage/rich fish farming etc.
- It had been observed that the ethnic women fish farmers of the project now actively involve in aquaculture activities like purchase of fingerling, releasing fingerling, feeding, fertilization, daily routine management etc are being done by them. Only their husbands can help them in pond excavation, take part in guarding at pond site during the night.
- One of the project best Result Demonstration farmer (RDF) Ms. Ca Thi An from Quai To commune, Tuan Giao district of Lai Chau province stated that **“It is very good initiative of the project authority that they encouraged ethnic poor women community to join fish culture. I had been trained inside & outside country (Thailand) about the simple Aquaculture Techniques. So now I am capable to teach other interested fellow farmers around the commune. At this moment the dignity of women in the society very high and other outside people as well as their relatives rely and respect her”**.
- One of the project RDF Ms. Hoang Thi Mai from Sin Ho town of Lai Chau province reported that **“After the project launch the commune Women Union so intimated with us and if we feel any difficulties about the credit management we always inform them through the project Technical staff (PTS) and commune extension worker (CEW). Now, we interacted with them on interest payment, fish culture record keeping etc”**.
- Another project RDF Ms. Tran Thi Hien from Song Ma town from Son la province stated that **“After receiving gender training from the project we understood and realized that gender division of labour is good approach for family life where women have the right to take part in leading household economic development.**

Conclusions:

- The ethnic women community of 3 pilot provinces played a great role in agriculture as well as in aquaculture activities. The income generation activities by ethnic women in many households were satisfied and quite equal to man. They usually do 3 types of work at the same time such as farming production, husbandry, and additional work at home. The time & labour power of woman for production and family was more than man. Nevertheless, the role of women in making decision related production or other works in family was less worth than man.
- The project had tremendously succeeded in creating suitable opportunity and environment for ethnic women to be able to effectively participation in their facilities like providing loans, aquaculture techniques & micro-credit management training.

- The role and status of ethnic mountainous women had been improved through a series of aquaculture activities.
- Implementations of gender indicators were one of the remarkable successes of the project and it created the foundation for the enhancing the role and capacity of women in the community. So, this program will be replicated at local levels in the future.
- The market place of northern area of Vietnam still having poor facilities like infrastructure of the market, very far from the fish farmers vicinity, lack of electricity, not available oxygen or water pumps to keep fish alive as well as no sewage system which polluted the market place. So, the respective district fishery office should take immediate measures to improve these situation (**Anrooy, R.V. November, 2001**)

ACKNOWLEDGEMENTS

The author would like to extended thanks & gratitude to project farmers, head of people's committee at provincial, district, and commune level, officials of the Department of Agriculture & Rural Development (DARD) of provinces, Agriculture Extension Centres (AEC) of districts, Women's Union at district & provincial level as well as to local people of the survey area of northern Vietnam (Son La, Lai Chau & Hoa Binh) for their sincere cooperation during the study period. Also the project VIE/98/009/01/NEX was funded and executed by the United Nations Development Programme (UNDP), Ministry of Fisheries (MOFI) of the Government of Vietnam (GOV) and Food & Agriculture Organization (FAO) of the UN were gratefully acknowledged for their financial & logistic support. **This paper is prepared based on the author's intensive field monitoring experience in the VIE/98/009/01/NEX project of Vietnam as a UNV-Project Coordinator during 2000-2002**

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