Northern Mountainous Region Towns and the Uplands Sourcing Network:
A Multidisciplinary Inquiry into the Potential and Prospects for Intra-Regional Development

SPECIAL REPORT

By

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1. Introduction: Poverty Alleviation and Environmental Management

The Asian Development Bank’s “Regional Environmental Technical Assistance Programme 5771” is focused on addressing
rural poverty and related environmental degradation in remote watershed areas in the greater Mekong sub-region. Watersheds in the northern mountainous region of Vietnam are also included for analysis.

Phase One of the project is primarily for review and revision of policies, legislation, development strategies and guidelines related to environmental management. Secondly, literature reviews and smaller field research projects are contributing to a broader understanding of poverty reduction and natural resource management issues. Preliminary indications point to the dynamic relationship between the Northern Mountainous Region and the Central Highlands.

1.1 Project Justification: Vietnam’s Uplands Development

Justification for this research project in the northern mountainous region is the dynamic relationship to other upland areas in Vietnam especially human migration, resource utilisation patterns and the state of biodiversity. The situation in the northern mountainous region can also provide important lessons for development trajectories that may be beginning to occur in other Upland areas. This research project occurred in Bac Ha Township and District, Lao Cai Province.

The ongoing environmental degradation and spiralling poverty in the northern mountainous region has been seen as a primary cause of out-migration to other Upland regions, particularly the Central Highland Region. A significant percentage of these migrants are either Kinh or ethnic minority from the northern mountainous region. The push factors for out-migration are the steadily decline of resource base, agricultural self-sufficiency and population increases. Recent studies and reports state that the Central Highland’s ongoing loss of biodiversity, encroachment on protected areas, loss of capacity for local governance, especially land use planning, destruction of the social fabric of local ethnic communities can be attributed to in-migration.

Concurrently, the growth pandemonium in the Central Highlands is beginning to exhibit the same foundation and trajectory that led to the current crisis in the northern mountainous region. The backdrop to this trajectory is:

- The increasing marginalisation of long term residents (i.e., ethnic minority people) and their relocation onto more and more fragile ecosystems.
- Farming systems and resource utilisation patterns that are ill-suited for long term sustainability.
- The resource degradation - erosion and lack of water (droughts in 1998-1999) have put into question the carrying capacity of the region.
- Substantial biodiversity losses.

Notwithstanding, the most compelling argument for focusing this research on the northern mountainous regions is summarised by; “mountainous areas of Vietnam are in a state of deepening environmental crisis. Unless the current trends are reversed, there is a real danger of widespread environmental disaster and massive human tragedy.”

1.2 Project Goal

The project goal is to further understand the development potential of Upland district towns and the intra-regional sourcing network. The backdrop to this research is national and international policy and programme activities that are promoting the change from self-sufficiency to a market economy as an end result. The research inquiry is to determine the validity of the hypothesis, “the development of industry and services in Northern Upland towns can enhance environmental management (or correspondingly lessen environmental degradation) and alleviate poverty. The underlying assumption for this strategy (hypothesis) is:

- **Fostering human migration from remote watershed areas to district towns lessens population and resource utilisation pressure that has been resulting in environmental degradation and spiralling poverty.**
- **Fostering positive ecological and economic resource development in remote watersheds is the basis of sustainable, and a more valuable agro/forestry sourcing network.**

1.3 Project Focus

Uplands development strategies focusing on a process of modernisation are implicitly about transforming people and their relationship to land and community. The most challenging questions that quickly arise are knowing how this change can happen, and what does this change imply for these people and their communities?

Knowing how this change can happen and what it will imply in the future for these communities is complicated. The transformation process, especially when keeping to ideals of equity and long term sustainability is complicated and cannot be understated. Therefore, the set of “stock assumptions” underlying modernisation development processes have to be rigorously questioned.
As such, this research project is a multi or inter-disciplinary inquiry and the research methodology includes both specific and comprehensive research objectives (ways of knowing). This is in order to encompass the full range of people, agencies (or institutions) and the processes involved in a modernisation strategy.

The specific research objectives are:

1. **Institutional**: Analysis of the institutional framework and discourse for industrial, resource and social development strategies.

2. **Economic**: Analysis of production, trade, industry and services in district towns and the intra-regional agroforestry endowments and processing potential.

3. **Social**: A socio-ethnological analysis of community processes between upland communities, and communities in district towns to determine the mode and interaction and corresponding social relations and endowments.

The comprehensive research objectives are:

1. **Indicators** are development through synthesis analysis of institutional, economic and social spheres. Based on these indicators, the validity of the strategy (hypothesis) will be determined.

2. Scoping of **opportunities** to foster this strategy, or define alternative strategies.

1.4 The Research Process: Development of Indicators

The most challenging aspect of multidisciplinary inquiry is defining a common set of indicators, or shared set of values that accurately defines a situation. As the process of modernisation is about people and their relationship to land and community in a process of transformation, indicators should clarify change. Change in a modernisation context is the change from food-self sufficiency to commodity production and market activity; local languages and traditional community relations to dominant (kinh) language and the rule of law, and most importantly, from isolation to interaction.

The construction of indicators is through the combination of variables (measurements, either qualitative or quantitative) that have a direct bearing on the current situation of the uplands people and projected change.

Of primary importance is the transformative value of the variables and their inter-relationship. To take for example the development of agro-processing industry. Agro-processing requires a sound ecological environment for a sourcing network, education (language and skills) and upstream and downstream market activity (seeds through to product markets). Each of these different “links” strongly relies on each other. A weak “link in the chain” such as the lack of knowledge about water conservation could strongly mitigate against increasing the volume of produce.

2. Northern Mountainous Region: Background

2.1 Carrying Capacity Crisis

Carrying capacity refers to the resilience and persistence of systems that constitute an ecology (the Northern Upland region) and correspondingly micro-spheric ecologies (a valley surrounded by mountains). Ecology is more than the “hard” science – botany or hydrology- but also includes humans and the way communities interact– anthropology and sociology.

In a pristine ecological state, the threshold for traditional and sustainable swidden agricultural system is population density below 24 persons per square kilometre. This is assuming that the resource base and biodiversity are substantially intact. Clearly, population growth beginning in the early 1960’s outstripped the carrying capacity for traditional swidden systems. The government policy of building New Economic Zones catalysed the movement of 2,500,000 people from the densely populated lowlands of the Red River Delta and the Coastal Region to the Northland Uplands by the late 1980s. Average population densities in 1993 were 100 persons per square kilometre. In conjunction to in-migration, the following factors significantly contributed to deforestation:

- The development of State Forest enterprises and unsustainable timber harvests.
- Regulatory agency’s limited history and practice of sustainable land use management.
- The displacement of ethnic people and their migration to higher and more sensitive watersheds.
- Collectivisation, de-collectivisation and its corresponding destruction of traditional patterns of land use and land tenureship systems amongst ethnic groups.
One estimate of the specific causes of deforestation is: 50% by commercial logging, 25% by forest fires and 25% by shifting cultivation by all ethnic groups (kinh included).

Ongoing deforestation and heightened environmental degradation is the result of overexploitation of the remaining natural resources. The significant decline in the resilience and persistence of the ecology is evident by the increasing poverty of uplands people – longer hungry seasons, scarcity of water, greater distance to swidden fields and desertification.

Forest coverage in the northern mountains has fallen to less than 20% and areas primarily inhabited by Hmong and Dzao is as low as 7% and the forests that remain are highly degraded. Significant transformations in the relationship between people and the land are required to avert a total crisis. The manner in which this transformation will occur and how it will benefit these communities continues to be a strongly debated question amongst national and international development planners.

2.2 The State of Social Capital

Social capital is the presence and strength of the social fabric that underlies household, kin and community interaction. Social capital in regards to economics and economic development is about how people, individually and collectively, organise themselves or are organised for their own well-being.

As is stated in the last section, the decline of traditional land use management systems is seen as a significant factor contributor to environmental degradation. Land use management systems are only one element of the social capital of uplands people. Social capital is also composed of governance, economic organisation and practice, education, familial and religious practices and overall community processes.

One of the most critical issues in regards to social capital is the relationship between people living in remote watershed regions and their economic and social interaction outside of their immediate household. These patterns of interaction provide a window into livelihood strategies and their short and long term trajectory. These traditional patterns of interaction, i.e. “social capital” have been strongly impacted since the beginning of the national liberation struggle.

The Communist Party of Vietnam’s policy on nationalities was based on three basic principles: Equality, Solidarity and Mutual Assistance. These principles were to gain the support of Upland communities in the liberation struggle and to “turn the uplands autarky economy into an economy with commercialised products, capable of serving the cause of socialist industrialisation of the country.”

Numerous reports point out how this development trajectory had, and has limited relevance to the social capital of different ethnic groups. Introduction of these overarching principles and ensuing socialist industrialisation programmes did not result in the hegemonic displacement of Uplands cultures nor in the wholesale adoption of Kinh culture. This is particularly true for ethnic communities that are not close to roads, commune or district centres and have strong cultural cohesion. Hmong peoples, who live in areas with limited accessibility (walking), have been influenced to an even lesser degree.

To avoid continued alienation from the modernisation process and bridging the gulf between traditional social capital and the modernisation process, a simple question needs to be answered: Are these communities able to perceive, participate in, and benefit from economic development?

2.3 Economic Growth and Development

Contrary to popular belief, most upland people are deeply involved in the cash or commoditised economy. Uplands people have a long-standing history in trade, particularly opium and non-timber forest products. The prohibition of growing and trading opium in 1992 had a particularly detrimental affect for some uplands groups.

For most other contemporary trade activities, the terms of trade are significantly weighted against uplands people. For example, in the non-timber forest product markets primary collectors make very low to questionable returns and have very little capacity to influence these terms of trade. The limitations in trading activity are further exacerbated by few known alternatives.

Unknowingly, the region’s inhabitants are destroying their environment in the pursuit of the cash economy. As well, most of the cash crops grown in the region have dubious relevance for either comparative crop advantage or household nutrition. Short-term strategies for food cropping do not fulfill household nutritional requirements and forested areas are no longer an adequate storehouse to compensate for limited agricultural returns (hunting and gathering). The opportunities for moving to urban areas are perceived to be limited by both cultural, linguistic and the already high unemployment or underemployment in the region.

A more comprehensive intra-regional development stressing the growth and development of the light manufacturing – agroprocessing and the service sector are perceived to be one economic development trajectory. Once again the question arises, how are uplands people going become involved in sustainable, ecologically sound and profitable economic development?
3.0 Introduction to Reset Site: Bac Ha District, Lao Cai Province

Bac Ha District of Lao Cai Province from a cursory point of view has the prerequisites for economic development. The district is an upper watershed area, close to the Chinese border and close to the Yen Bai-Lao Cai Highway corridor. In Bac Ha town comprehensive infrastructure already exists such as electricity, all season paved roads, regional markets and government services. The District is also beginning to attract domestic and foreign tourists who come for its ethnic minority cultures. The agro-processing potential of its fruit orchards, contrasts with significant and frightening level of ecological degradation.

3.1 Lao Cai Province: Statistical Overview

Area: 8,044 km²

Administrative Units: 10 districts (+1 town), 180 communes

Geography: the province is primarily mountainous, 84% is sloping land, ranging in altitude 50 m to 3143 m with limestone terrace, strong karsification and a mean gradient of 20-25 degrees. The province shares a 200 km border with China. The rainy season is July and August with average yearly precipitation of 1900mm.

Land Classification (ha²): 42% of the land has been classified, 48+% remains unclassified. Forest land with forest cover, 27% (including heavily denuded).

<table>
<thead>
<tr>
<th>Agricultural Land:</th>
<th>84,292</th>
<th>Infrastructure &amp; Urban</th>
<th>11,397</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Land:</td>
<td>239,000</td>
<td>Special Use</td>
<td>2,800</td>
</tr>
</tbody>
</table>

Population: 598,000, 27 ethnic groups. Pop. growth rate 2.5%, density?

Ethnic Composition:

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinh</td>
<td>33.7%</td>
</tr>
<tr>
<td>Hmong</td>
<td>21.7%</td>
</tr>
<tr>
<td>Dao</td>
<td>12.3%</td>
</tr>
<tr>
<td>Tai</td>
<td>13.3%</td>
</tr>
<tr>
<td>Thai</td>
<td>8.2%</td>
</tr>
<tr>
<td>Day</td>
<td>4.06%</td>
</tr>
<tr>
<td>Nung</td>
<td>3.89%</td>
</tr>
<tr>
<td>other</td>
<td>2.85%</td>
</tr>
</tbody>
</table>

Health Indexes

- Communes with health station (basic): 88%
- Communes classified as poor and hungry: 64%
- Malnutrition: +45% of children under five years of age, three degrees of severity.
- Maternal Mortality (per 10,000): 181
- Infant Mortality (per 10,000): 67
- Gynaecological diseases: 25% of the female population
- Common diseases: malaria, goitre, typhoid, diarrhoea
- Major Concerns: lack of water, foodstuffs

Education Indexes:

- Adult literacy: Female 6.2%, Male 5.1%
- Gross enrolment in Primary school: 76%

Economic and Infrastructure:
GDP by Sector:

<table>
<thead>
<tr>
<th>Agriculture</th>
<th>56%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industries</td>
<td>15.1%</td>
</tr>
<tr>
<td>Services</td>
<td>28.6%</td>
</tr>
</tbody>
</table>

- GDP/Capita: $88.00
- Villages having roads to centre of village: 53%
- Households with Electric Supply: 25%

3.2. Bac Ha District: Statistical Overview

**Area:** 921 km² (92,132 ha²)

**Administrative Units:** 1 district town, 33 communes

**Geography:** High mountainous areas with elevations between 1000 and 1950 m, averaging 1200 m. The Chay river borders on the east and south, China on the north. Annual precipitation is 1785 mm, temperature between -2 and 32 degrees Celsius. The climate is characteristic of temperate and subtropics with occasional hoarfrosts, hails and freezing rains.

**Land Classification (ha²)**: forest 17.4% (heavily degraded), Barren hills 57.3%

<table>
<thead>
<tr>
<th>Agricultural</th>
<th>17,726.4 ha (19.2%)</th>
<th>Forest</th>
<th>16,334.9 ha (17.4%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Use</td>
<td>871.5 ha (0.9%)</td>
<td>Residence</td>
<td>156.2 ha (0.2%)</td>
</tr>
<tr>
<td>Unclassified</td>
<td>57.1 (62.3%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Population:** 68,721 (1996), 16 ethnic groups, pop. growth rate 2.89, density 74 persons/km²

**Ethnic Composition:**

<table>
<thead>
<tr>
<th>Hmong</th>
<th>63%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dao</td>
<td>8.2%</td>
</tr>
<tr>
<td>Tay</td>
<td>5.2%</td>
</tr>
<tr>
<td>Kinh</td>
<td>11.5%</td>
</tr>
<tr>
<td>Nung</td>
<td>6.8%</td>
</tr>
<tr>
<td>Other</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

**Health Indexes**

- Communes with health station (basic): 100%
- Communes classified as poor and hungry: 93%
- Malnutrition: +30%
- Maternal Mortality (per 10,000): not stated in the District Annual Report
- Infant Mortality (per 10,000): not stated in the District Annual Report
- Gynaecological diseases: 25% of the female population
- Common diseases: malaria, goitre, typhoid, diarrhoea
- Major Concerns: lack of water, foodstuffs

**Education Indexes:**

- Adult literacy: Female 6.2%, Male 5.1%
- Gross enrolment in Primary school: 76%

**Economic and Infrastructure:**
4.0 Introduction to the Research Findings

The structure of the research findings differs radically from conventional reports. The primary task is to directly validate or refute the original hypothesis based on key indicators. To state once again, the foundation of the research process is to understand the transformation or change. This is a two-fold research endeavour:

- **Indicators** define the relationship between the current situation, an inferred transformative trajectory and a hypothesised future situation.
- **Variables** are measurements, both quantitative and qualitative, that articulate the current situation and transformative potential. In other words, variables describe the capacity for change. Variables are about people's reality and their perception of their reality.

The beginning of the research is to fully understand and to gauge the perception of these people and their situation. There is no assumption that a Hmong villager and a lowland or foreign development planner think the same way.

As such, there are no assumptions of "reality". To take for example a conventional modernising programme such as promoting the building of a community centre or a school. Formal education and community institutions are seen to be an obvious means to improve the situation of a community, i.e. modernising. This is an inferred future scenario that is based on the assumption that these people have shown this interest, or have the capacity to evaluate these choices or alternative choices. But in reality, was the question first asked; "do people perceive that formal education (in its current context) can improve their lives, or even that their community is perceived in the same context as is being promoted in a modernisation context?"

4.1 Structure of Analysis and Research

The following analysis and research is structured to directly examine the hypothesis and underlying assumption. "The development of industry and services in Northern Uplands towns can enhance environmental management and alleviate poverty" The underlying assumption for this strategy (hypothesis) is:

1. **Fostering human migration from remote watershed areas to district towns lessens population and resource utilisation pressure that has been resulting in environmental degradation and spiralling poverty.**
2. **Fostering positive ecological and economic resource development in remote watersheds is the basis of sustainable, and a more valuable agro/forestry sourcing network.**

The underlying assumptions are clearly stating a transformative process leading to a future scenario. The validity of this scenario is by construction indicators that test these assumptions.

For simplicity, indicators are grouped in three broad categories: social, economic and institutional. These indicators are key nodal points of a transformative process by gauging the current situation (variables) and the potential for change. Each indicator is composed of several variables that measure the transformative potential of the current situation. For brevity, background data is endnoted.

4.2 Social Sphere:

4.2.1 Relationships and Communication

**Indicator:** The current state of relationships and communication within upland communities, and between those communities and district towns.

**Variable:** Geographic settlement patterns that measure the capacity for relations and communications within the Uplands.

2. Scattered: (predominantly Hmong) traditional household settlement patterns are scattered and far apart from each other.

**Analysis:** Existing settlement patterns leads to limited interaction as households and villages are far apart.

**Variable 2:** Physical and Material patterns of exchange as a measure of flow-through of goods and information between the Uplands and Commune Centres and District Towns.

1. Physical Movement 1: movement is not substantively an economic or institutional interaction, it is for social interaction (to play).

2. Physical Movement 2: Goods traded on the market are minimal both in variety, value and there potential economic multiplier effect. (clothing, basic household tools and goods, limited animal husbandry and no commodities).

3. Physical Movement 3: There is an inverse relationship between distance to the market and the amount of goods that can be transported as the predominant means of transportation is walking, secondly walking with ponies.

4. Frequency of Market Occurrence: Markets occur once per week on Saturday or Sunday.

5. Radius: A maximum of 3 to 4 hours walking distance and considering the typography, this is less than 5 km "as the crow flies". Therefore there are limited inter-regional exchange.

**Analysis:** Physical movement has yet to have a significant economic or information exchange value.

**Variable 3:** Social exchange patterns as a measurement of the magnitude of social exchange.

1. Interaction between Upland and Centres is focused on socialising.

2. At the market, taxation is the only regulatory body that is present.

3. The solidarity networks are hampered by traditional reluctance to speak of broader socio-economic changes or issues, absence of considerable economic activity outside of the family and the weak interaction between nuclear families.

**Analysis:** Social interaction has yet to develop diverse characteristics and is limited to narrow context.

**Variable 4:** Community interaction as a measure of the capacity to focus community process.

1. Within Upland Communities: The customary management systems and principles (village based resource management) have become defunct and have not transformed into new models.

2. Between Upland Communities and the State regulatory system 1: There is no substantial recognition or discussion of the potential of these management systems.

3. Between Upland Communities and the State regulatory system 2: Community interaction is uni-directional, primarily transferring directives and state regulatory directives are not substantively taken up by the uplands population.

**Analysis:** As there has yet to be a discourse established within these communities, and between these communities and the State, there are limited community processes that result in comprehensive social transformation.

**Indicator Analysis:** The state of relations and communications within upland communities, and between those communities and district towns is very minimal. There is almost no permanent migration to district towns from the uplands. Social or economic information flows are not substantial both in context and volume. Although there is an awareness of community processes they are not substantial and have not yet developed into concrete – on the ground – transformative activity. It will require a substantive increase in interaction in order to examine if, or which, modes of interaction can facilitate a transformative process.

**4.3.2 Gender, Household and Resource Development**

**Indicator:** Gender specific role/involvement for household and resource development

**Variable 1:** Traditional and contemporary gender roles as a measure of resource utilisation.

1. Traditional: Labour division puts the main work load on women (the first to rise, the last to sleep)
2. Contemporary: Men: The decline in forests and environmental management systems has resulted in men’s increasing under-utilisation for the household economy and resource contribution.

<table>
<thead>
<tr>
<th>Resource Status</th>
<th>Current Status</th>
<th>Resource Status</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>decline of trade (opium)</td>
<td>decline of cash economy</td>
<td>deforestation</td>
<td>less food (hunting)</td>
</tr>
<tr>
<td>soil degradation</td>
<td>decrease swidden productivity</td>
<td>decline of community interaction</td>
<td>decline of representation</td>
</tr>
</tbody>
</table>

3. Contemporary: Women: The environmental degradation and decline of swidden has resulted in a growing over-utilisation of women’s household and resource contribution.

<table>
<thead>
<tr>
<th>Resource Status</th>
<th>Current Status</th>
<th>Resource Status</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>increase of non-agricultural activities</td>
<td>increase cash economy interaction</td>
<td>deforestation</td>
<td>less food (gathering)</td>
</tr>
<tr>
<td>soil degradation</td>
<td>decrease swidden productivity, more work</td>
<td>Low overall health of women</td>
<td>Greater stress on biology, reproductive, nurturing function</td>
</tr>
</tbody>
</table>

Analysis: Contemporary gender roles are increasingly polarised between under and over utilisation of labour for household and resource contribution. This polarisation is resulting in inefficient resource utilisation and increases the stress on the social fabric of households and society.

Variable 2: The changes in gender roles as measure of capacity for household and resource development

1. Contemporary: Men: The under-utilisation of men’s labour is not compensated by other productive activities that contribute to the household economy (idle, low productivity)

2. Contemporary: Women: The over-utilisation of women’s labour mitigates against increasing their capacity for further household and resource development (education, access to services and know-how, state of health)

3. Modernising: Women: Lack of access to modern forms of representation further limit women’s ability to foster choice.

Analysis: The widening imbalance between gender roles, particularly reproductive and support functions strongly limits household and resource development.

Indicator Analysis: The gender specific roles for household and resource development are one of the key indicators of transformation. The contemporary trajectory for gender roles and activities point to a downward trend that exacerbates poverty, the lack of opportunity and potential for positive resource development.

The traditional supporting role of men within the household-family-kinship group is becoming less substantial. Idleness is accompanied by non-productive activities (alcoholic consumption greater than traditional contribution in-kind). The decline of resource contribution tends to be static as there are very limited relationships, means of communication and activities to respond to, and reverse this decline.

Women’s over-utilisation for household and resource development significantly limits fulfilling traditional nurturing and family well-being roles. This is evident by their severely poor health and increasing workload. The situation of female children becomes even more precarious as the predominantly patriarchal construction of the households places greater and greater emphasis on “supporting” male children. Transforming the situation of women, by focusing support directly to them is strongly limited by the simple lack of time and capacity.

4.4.3. Cross-Cultural Interaction and Transformation

Indicator: Intra-cultural and cross-cultural channels of communication that facilitate awareness of needs and self-perception.

Variable 1: Measuring the effectiveness of the education system to foster cross-cultural communication.
1. Qualitative: Teaching is exclusively in Kinh (Vietnamese)

2. Qualitative: Content of textbooks does not reflect Upland communities’ culture or ecology and does not foster a reflective awareness of the local social, cultural and natural environment.

3. Qualitative: The uni-directional teaching method limits the capacity for participation

4. Quantitative: 82.4% of Hmong (6-25 years old) have not attended school (for women it’s 89.6%); 60% of Hmong officials have not gone beyond 4th class. Finish 5th grade 7%, finish secondary schooling <1%.

5. Quantitative: Recorded literacy rates of 15-25 year old 5th grade graduates: 70%.

Analysis: The capacity of the education system to develop intra and cross cultural awareness and to facilitate intra-cultural, and cross-cultural communication (read – write – speak) is extremely low.

Variable 2: Geographic coverage of modern channels of information and communication technology as a measure of capacity for inter- and cross-cultural communication

1. There are no newspapers or other print media available in Hmong language and very few Kinh publications substantially reach Upland communities.

2. Transmission of radio/TV signals reaches a minor fraction of the Upland communities (numbers?)

3. Very small percentage of the population owns a television set or radio (Out of 354 families in 9 communes 4 have TV, 88 have radio)

4. The duration of minority language radio programmes is limited. Content is not culturally adapted.

Analysis: Modern means of communication have very little impact on Upland people’s lives. The overwhelming majority of Uplands people still receive their information through traditional channels of communication (word-of-mouth).

Variable 3: The composition of need as a measure of capacity for transformation (putting ideas into practice). This variable points to awareness and the perception of need and access that is necessary for individual, household and community transformation. Brevity limits this discussion to family planning, which has begun to have the rudiments of "the composition of need" and tourism, which has yet to develop that composition.

1. The composition of need has 3 components that have significant inter-relationship; awareness – self-perception – access.

2. Family Planning

   i. Occurrence of early marriage (13-17 years old): 21%

   ii. Stated wishes for number of children: 5-7 children (50%), 3-4 (35%), 1-2 (15%)

   iii. Use of contraceptive methods among Hmong women: 25% (IUD, Pill, Abortion, Sterilisation)

   - The high occurrence of early marriages and the wish for large families points to a limited awareness of the need to have fewer children (for family and community well-being).

   - Having numerous children is recognised to be connected to poverty and limited household resources. This has catalysed a need for limiting children being born.

   - The access to these methods, though, is limited because communal health stations have neither information or contraceptive devices or medical procedures available to these women. Nonetheless, 25%, a relatively high number, of Hmong women have accessed family planning methods.

3. Tourism

   - The appearance of foreign tourists at District markets has not yet created awareness of their cultural preferences

   - There is, therefore, no self-perception of goods and services that could be offered, especially none that are culturally specific for tourists.

   - This being the case, there is no increased revenue (~access) through providing services to the tourists

Analysis: Very limited capacity for the awareness and corresponding self-perception of needs significantly hinders transformation
Indicator Analysis: Intra-cultural and cross-cultural channels of communication that facilitate awareness of needs and self-perception are a foundation for a transformative process. The education and communication systems do not play a significant formative role in the transformation process. These limitations are amplified by intra-cultural and cross-cultural barriers for interaction. Current education and communication systems do not halt the downward trend and their impact is more often random and superficial. The education and communication systems though do not facilitate a systematic comprehension of how to cope with downward trends, based on the local reality.

There still exists a vast gulf between the necessity for change and the people's perception of what needs to change. Foremost is the lack of integration of immediate-survival needs and long term –sustainable social transformation.

4.4 Economic Sphere

4.4.1 Economic –Ecological Resource Base

Indicator: The Comprehension of the ecological foundation

Variable 1: Scientific analysis of the basic variables and their inter-relations that define an ecological system (such as hydrology, geology, zoology, anthropology, sociology, botany, meteorology) at macro and micro levels.

1. Basic variables are not well known or are absent, usually after the beginning of the failure of a system (such as water).
2. Examined scientific inter-relationships are at best superficial and narrow cause-effect relationships (such as forest cover, hydrology and meteorology).
3. Humans and society are frequently considered outside the ecological systems, not as a component, particularly by decision makers.
4. Ecology was rarely defined within a scientific context and referred to by one or several of its components.

Analysis: Ecology has yet to be defined. Scientific analysis of the basic components and their relationships is absent or compartmentalised.

Variable 2: Comprehension of scientific ecological analysis.

1. The predominant view and corresponding discourse has superficial allegiance to scientific ecological analysis. Ecology is referred to as nature without interference -in general. The concepts of resilience and persistence of ecological systems are not well known.
2. The farther away from the field (analysis and practice), the less comprehension of micro-ecologies, although this is changing quickly.
3. The critique and focus of ecological analysis is highly value laden (often dependent on resource extraction) and has little allegiance to fundamental scientific principles.

Analysis: Analysis of ecology is value laden with non-scientific, and often ideological distorted (resource use) biases.

4.4.2 Ecological Cultivation

Indicator: Value attached to human dynamics in ecological systems

Variable 1: The position of the human communities in this system

Tenureship:

Household reproduction

Variable 2: Carrying capacity (resilience and persistence)

4.4.3 Ecological/Economic Structure

Indicator: The relationship between the ecological and economic structure.
Variable 1: The existing sourcing network between the uplands and district towns (and further afield).

Gender specific roles for non-agricultural income activities (minimal potential for increase, because of over-utilisation)

Women's role:

Men's Role:

Variable 2: The ecological and economic value in resource development efforts

Economic Transformation, subsistence to commodity production

Variable 3: The direction and weight (information & money) of in/outputs to ecological and economic structures

Infrastructural development

Tenureship

4.5 Institutional Sphere

4.5.1 Planning of Policy and Programming

Indicator: "What factors are considered in planning policy and programme activity?"

Variable 1: Actors involved in policy and programme planning

Variable 2: Focus of planning (measurement of interests and intention)

Variable 3: Interaction of cultural perspectives as a measure of inclusion or exclusion.

4.5.2 Institutional Resource Allocation

Indicator: institutional resources allocation

Variable 1: Transparency in the allocation of resources

Variable 2: Flexibility and Accountability

Access the current structure of international and national development plans depends on a highly to moderately sophisticated contractual process. There are strong and often insurmountable barriers for upland communities to be involved in an infrastructural modernisation process. The development process is often the least to profit from "hard" infrastructural development and continue to be objects to change

Efficiency:

Participation

4.5.3 Institutional Coverage

Indicator: Extent of institutional coverage

Variable 1: Institutions present – in uplands and in lowlands

Variable 2: Capacity to fulfil their mandates

Variable 3: Efficiency of institutional activities

5. Critique of Hypothesis and Assumptions
5.1 Validation:
Industrial development is necessary for poverty alleviation and environmental management.

Scoping of Strategies:

Foundation for Strategy:
1. Complete re-orientation of the scope and mode of development.

Comprehensive view of ecological reconstruction:

Inclusive
Systemic
Inter-linked with feedback loops
Micro eco-spheric in focus

Simultaneous process in upper watersheds and district towns

Strategies to improve the situation of gender need to strongly examine how well these strategies focus on the entire household in their contemporary construction. Further polarisation of gender roles from traditional roots may not halt the downward spiral.

Women’s social overutilisation, economically new opportunity, two possible scenarios, further divergence and polarisation of role and activity leading to increased poverty, or greater convergence between development of women’s capacity and development of household activity.

Appendix

RESEARCH PROGRAMME
This field research project is focusing on one District market, and one nearby secondary market that have a very direct and substantial social and economic relations to nearby upper (and often remote) watersheds. The research programme will begin with introductory meetings and discussion with Provincial Government officials in Lao Cai Town. Afterwards the research team will commence activities in Bac Ha town for 3 days of field research. A concluding meeting will be held in Lao Cai town with provincial officials. The research schedule is based on the weekly markets occurring on Saturdays and Sundays.

Geographic Focus: Lao Cai Province

- Lao Cai Town
- Bac Ha Town and Market
- Can Cau Commune - Market

RESEARCH METHODOLOGY
The primary and secondary research methodology that will be employed in this project are:

Primary Research Methodology

- Structured interviews
- Semi-structured interviews
- Trade Mapping
- Resource Utilisation Mapping
Interviews at the Provincial Level:

- Provincial People's Committee
- Department of Trade/Industry
- Department of Agriculture and Rural Development
- Department of Education
- Committee for the Protection of Mothers and Children

Interviews at the District Level / Town

- District People's Committee
- District Department of Trade/Industry
- District Department of Agriculture and Rural Development
- Committee for the Protection of Mother and Children
- Business People involved in Trade, Manufacturing and Economic Activities

Interviews at the Market

- Market Regulatory Board – Management Committee
- Stall / Shopkeepers
- Petty Traders
- Shoppers
- Truckers
- Packers
- Porters

Secondary Research Methodology

- Analysis of Literature on Ethnic Minorities and Development
- Analysis of Literature on Economic Development in the Northern Mountainous Development
- Secondary Sector Analysis of sectors such as Land Use Planning, Agro- Forestry Potential and so on.

RESEARCH TEAM

Research Trip Schedule:

<table>
<thead>
<tr>
<th>Day</th>
<th>Place</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>19/1/1999</td>
<td>Greg, Counterpart &amp; Translator depart for Lao Cai</td>
<td>Introductory meetings with Lao Cai Peoples Committee</td>
</tr>
<tr>
<td>20/1/1999</td>
<td>Team Departs Hanoi</td>
<td>Travelling</td>
</tr>
<tr>
<td>21/1/1999</td>
<td>Lao Cai Town</td>
<td>Meeting with Provincial Officials and Provincial Departments</td>
</tr>
<tr>
<td>22/1/1999</td>
<td>Travel to Bac Ha Town</td>
<td>Meeting with District Officials and District Department Personnel, Business People</td>
</tr>
<tr>
<td>23/1/1999</td>
<td>Can Cao Commune</td>
<td>Interviewing at the market and trade network</td>
</tr>
<tr>
<td>24/1/1999</td>
<td>Bac Ha Town</td>
<td>Interviewing at the market, trade network and with Business People</td>
</tr>
</tbody>
</table>
## Daily Itinerary

<table>
<thead>
<tr>
<th>Day</th>
<th>Place</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>19/1/99</td>
<td>Depart Hanoi</td>
<td></td>
<td>Greg, Translator &amp; DFD counterpart travel to Lao Cai</td>
</tr>
<tr>
<td>20/1/99</td>
<td>Arrive Lao Cai</td>
<td>7:30</td>
<td>Greg, Translator &amp; DFD counterpart have introductory meetings with Provincial Peoples Committee</td>
</tr>
<tr>
<td>20/1/99</td>
<td>Depart Hanoi</td>
<td></td>
<td>Team Travelling by the night train to Lao Cai</td>
</tr>
<tr>
<td>21/1/99</td>
<td>Lao Cai Town</td>
<td>7:30 am</td>
<td>Arrive Lao Cai Check in to Hotel</td>
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<tr>
<td></td>
<td></td>
<td>10:30 am</td>
<td>Introductory Meeting:</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Vice Chairman Lao Cai Peoples Committee, Mr.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Director of the Department of Agriculture and Rural Department, Mr. Hoang Mich</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10:30 am</td>
<td>Team1: Meeting with the Department of Planning and Investment &amp; Department of Trade and Industry: Re: Provincial development strategy and the development of industry and service sector in district towns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10:45 am</td>
<td>Team 2: Meeting with DARD, Cadastral Department, Forest Protection Department and DOSTE – Environment Re: Land Tenureship and the Upland Ag/Forest product sourcing Network, sustenance and commodity production – state of the environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12:00 –1:30</td>
<td>Lunch with Provincial officials (department representatives)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2:00</td>
<td>Team1: Meeting with the Department of Health, Education the Department for the Protection of Mother and Children: Re: Health and well-being status of Uplands People</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4:00</td>
<td>Team2: Meeting with the Department of Sedentarisation for Ethnic Minorities Re: Sedentarisation, Policy and Programme activities, opportunities and constraints</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4:00</td>
<td>Team2a: Meeting with the Department of Tourism: Re: Tourism and the development potential in the Uplands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dinner &amp;</td>
<td>Open for further meetings and discussions at the provinces request</td>
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<tr>
<td></td>
<td></td>
<td>afterwards</td>
<td>Research Team meeting and discussion of findings</td>
</tr>
<tr>
<td>22/1/99</td>
<td>Lao Cai Town</td>
<td>7:00</td>
<td>leave Lao Cai Town for Bac Ha Town</td>
</tr>
<tr>
<td></td>
<td>Bac Ha</td>
<td>9:30</td>
<td>Arrive and check into Hotel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10:00</td>
<td>Meeting with Bac Ha District Peoples Committee Re: Introductory Meeting and Research Project Overview</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11:30-1:30</td>
<td>Lunch with Provincial officials (Department Representatives)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1:30</td>
<td>Team1: Meeting with District industry, trade, economic activity officials: re: industry and service sector development activities, history, current trajectory, opportunities and constraints</td>
</tr>
</tbody>
</table>
I Anthropology: Scope of Activity and Field of Interest

The anthropological research begins with the very basic questions of why people are involved in commoditised trade relations and their understanding the economic context of trade and the socio-economic context of their trade relations.

The foundation of the anthropological research is to determine the context of trade and the forces (such as sustenance, community obligations such as taxation or other factors such as perceived opportunity or direct demand) that act to determine value relations between upland peoples and their broader economic interaction.

What is the market perception of value of these goods or commodities traded into the market in the past and the present?

How has the perception (within those communities) of the value of these goods changed over time?

What are the factors that changed the perception of value?

At what point will these or other goods be traded and what are the push or pull factors determining trade?

Emphasis will be placed on detailing trade relations and defining the context of socialisation and social capital within those trade relations.

Are these trade relations and the process of economic interaction based on pre-existing patterns of socialisation such as: the household unit, kinship groups, or more recent modes of interaction such as those are based on collectivisation models or more recent interaction in the market economy?
To what extent are trade relations part of the household, kinship group or broader community’s process of interaction, and what is the value of this interaction?

What is the value of social capital in trade relations?

What is the value of trade relations between different social groups (such as highland peoples and lowland or district traders)?

To what extent are these social boundaries distinct or do their relative merit change over time (seasonal)?

What is the value placed on trade relations and to what extent do trade relations view from which uplands people operate, both socially and economically to better understand how this interfaces with commoditised market interactions.

II Economics: Scope of Activity and Field of Interest

The economic research begins from a more conventional examination of the regional factors of production and broadening into examining more thoroughly the economic conduits and processes within the community.

The raw material sourcing network for trade, both inbound and outbound.

To what extent do raw materials for primary, secondary processing and manufacturing derive from the region.

What are the inbound materials required for the agro-processing industry?

Regional supply and service network:

What is the status of the service sector in Bac Ha town?

To what extent does this sector?

Regional Factors of Production: Examining the service and manufacturing infrastructure such as:

Roads, supply of electricity and other physical infrastructure.

What is the current capacity of the agro-processing industry?

What is the projected growth of the agro-processing industry?

The regulatory environment for trade and manufacturing.

What are the regulatory bodies governing trade and agro-processing / manufacturing?

What are the regulations governing trade and agro-processing / manufacturing?

What are the promotional activities of the state in regards to trade and agro-processing / manufacturing?

The economic conduits and trade relations

III Intersectoral Analysis

What are the broader sourcing and trade relations between the Upland communities and the township?

Research Process Simply Stated

- How, and to what extent can uplands people get involved in the development of services and industry in Upland towns?
- How can this development alleviate poverty and lessen the environmental degradation in upland areas
- How can the modernisation process be developed to increase participation?
• How can this happen?
• How are we going to know this?
• What are the key indicators?
• What variables (modes of measurements) are used in the construction of indicators?