

RURAL TRANSPORT IN VIETNAM

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Abstract

Rural transportation has played a crucial role in the rural socio-economic development process. New construction and the improvement of rural transport systems are important factors in reducing poverty, eliminating hunger, and improving people's general living conditions. Due to improvements in Vietnam's rural transportation, movements of people and cargoes in rural areas have become easier, more convenient, quicker, cheaper and more reliable. These improvements in rural transportation have led to greater accessibility by rural populations to key facilities and services, which can be provided on a more efficient basis. In contrast in places where improvements have not occurred, the poor condition of the rural transport acts as a major obstruction to poverty reduction and the improvement of the rural population's living conditions.

In recent years, the Vietnamese Government, with the support of international development organizations, has made a focused effort to invest in rural transport. The development of rural roads has formed a key component of Vietnam's poverty alleviation strategy. This paper presents key issues relevant to rural transport; the Vietnamese Rural Transport Strategy (RTS); investment in rural roads and the end user requirements.

1. General introduction of the Vietnam Socio- Economic Context

1.1. Geographical position

The country of Vietnam roughly forms the shape of the letter "S" and stretches along the Indochina peninsula. It is connected to the landmass of Asia on the west and the Pacific Ocean on the east. The length of the mainland, when considered in a straight-line from north to south, is approximately 1,650 km, while the width from west to east varies between 600 km and 50 km. Vietnam has an inland border of about 4,550 km, which it shares with People's Republic of China, the Laos Peoples Democratic Republic and the Kingdom of Cambodia. It has a coastline of over 3,000 km with its sea territory on a continental shelf surrounded by islands. It is made up of a variety of terrain with three quarters of Vietnam's territory mountainous and hilly regions.

1.2. Area and population

Table 1 Vietnam's area and population

	Area (km ²)	Population (year 2006)			% Ethnic minority
		Total (1000)	% Urban	% Rural	
Whole Country	331,212	85,155	27.12	72.88	14.00
North East	64,025	9,544	21.37	78.63	45.00
North West	37,534	2,650	13.92	86.08	79.00
Red River delta	14,862	18,401	23.56	76.44	0.70
North Central Coast	51,552	10,723	13.71	86.29	10.50
South Central Coast	33,166	7,185	30.12	69.88	15.30
Central Highlands	54,,660	4,935	28.09	71.91	33.00
North East South	34808	14,1932	54.71	45.29	8.00
Mekong River Delta	40,605	17,524	20.66	79.34	7.70

1.3. Overview of national socio-economic development

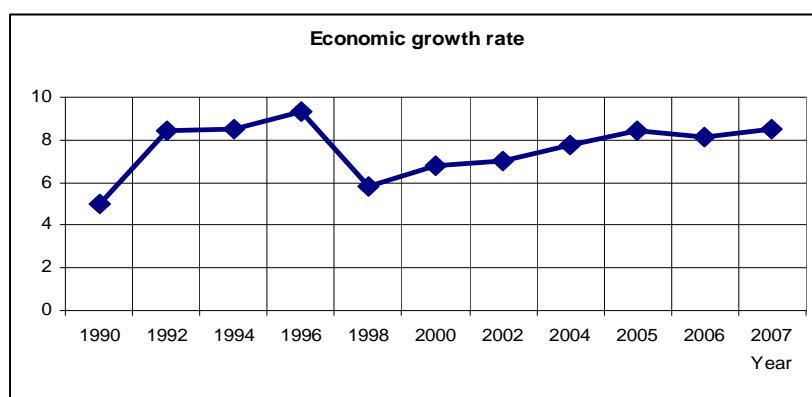
Positive Economic Growth

In recent years, Vietnam's economy has seen rapid economic growth. The country's Gross Domestic Product (GDP) growth rate per annum was 5% in 1990 whilst the average GDP was 6.9% and 7.5% per annum in the period 1996-2000 and 2001-2006, respectively.

Positive Growth of per Capita of GDP

Average GDP per capita in 2007 was about USD 838, based on current prices. However, economic development is still slow in rural areas; and GDP per capita in the agricultural, forestry and fishery sectors is only about USD 226.

Figure 1 GDP Growth rate in period 1990-2007



1.4. Poverty and Results of Poverty Reduction in Recent Years

Poverty reduction: The reduction of poverty has been one of the most remarkable achievements of Vietnam's economic development. In the latter part of the last decade, 58% of the total population of Vietnam was classified as below the poverty line. However, by 2006, this figure was reduced to 16%. Thus, the Government of Vietnam (GOV) has achieved its millennium development objective in poverty reduction.

Table 2 Poverty rate by regions (%)

Whole Country	1993	1998	2002	2004	2006
	58.1	37.4	28.9	19.5	16.0
Urban	25.1	9.2	6.6	3.6	3.9
Rural	66.4	45.5	35.6	25.0	20.4
By region					
North East	86.1	62.0	38.4	29.4	25
North West	81.0	73.4	68.0	58.6	49
Red River delta	62.7	29.3	22.4	12.1	8.8
North Central Coast	74.5	48.1	43.9	31.9	29.1
South Central Coast	47.2	34.5	25.2	19.0	12.6
Central Highlands	70.0	52.4	51.8	33.1	28.6
North East South	37.0	12.2	10.6	5.4	5.8
Mekong River Delta	47.1	36.9	23.4	19.5	10.3

However, the poverty reduction achievements are not uniform:

- Poverty reduction rates differ between regions;
- Poverty is concentrated in 4 regions: North East, North West, North Central Coast and Central Highland;
- Poverty is still concentrated in rural area where 90% of the poor population are located;

- Poverty rates are significantly higher in mountainous and remote areas where most of the country's ethnic minorities live. The poverty rate in such areas is 1.7 to 2 times higher than the national average;
- The rate of poor households is relatively high among minority people and has actually increased (from 21% in 1992 to 36% in 2005);
- The rate of reduction in poverty generally appears to be slowing; and,
- Poor rural transport is considered to be a major impediment in the country's poverty reduction efforts and is fundamentally linked to the improvement of living standards in rural areas.

2. Vietnam's Rural Transport Situation

2.1 General Transport

Vietnam has five transport modals: road; railway; inland waterway; aviation; and, marine. Focusing on the road sector

Table 3: Road Hierarchy Lengths

		Length (km)	Percent of Total (%)
	Total	232,518	100.00
1	National roads	17,228	7.41
2	Provincial roads	23,520	10.12
3	District roads	45,998	19.78
4	Commune	130,846	56.27
5	Urban roads	8,492	3.65
6	Specialized roads	6,434	2.77

Road density is about 0.78 km/km² and 3.09 km/1000 persons. If we take into consideration the national and provincial roads only, the road density is 0.12 km/km² and relatively low compared to the regional situation. The road quality is also low with the paved roads making up approximately 31.2% of the total national and provincial roads???

2.2. Definition of rural transport

According to the current GoV regulations, only district and commune roads are classified as "rural roads." These make up more than 60% of the total length of the road network.

However, in this report reference to rural roads also includes village and lower order tracks and trails.

Rural transport system consists of:

- o Rural Transport Infrastructure which includes the
 - Rural road network (i.e. district, commune, village roads, paths and roads to the field; culverts and bridges); and,
 - Rural inland waterway network (i.e. river crossing boats, landing stages, inland waterways and berthing facilities).
- o Means of transport; and,
- o Road users.

2.3. Analysis and assessment of the current situation of rural transport

Rural road network

Table 4: Rural road current situation

Region	Length of rural road are classified (km)			Rural road density	
	Total	district	commune	Km/km ²	Km/1000 person
Total	176,844	45,998	130,846	0.53	2.10
North East	31,395	8,737	22,658	0.49	3.75
North West	8,472	2,704	5,768	0.23	3.25
Red River delta	21,056	3,909	17,147	1.42	1.09
North Central Coast	29,989	9,286	20,703	0.58	2.81
South Central Coast	13,597	4,092	9,505	0.41	1.91
Central Highlands	8,830	2,922	5,908	0.16	1.81
North East South	21,983	5,946	16,037	0.63	1.59
Mekong River Delta	41,522	8,402	33,120	1.02	2.38

According to best available statistics, village roads are estimated to have a total length in the order of 61,000 km. These are roads that are very important in the daily life of local people. They are usually small scale, low standard and mainly with earth surfaces.

Rural road pavements surfaces

Table 5 Percentage of different rural road surfaces (district and commune roads)

Road Surface type / Total	Length (km)	%
	176,844	100.00
Concrete	15,916	9.00
Bitumen	19,453	11.00
Macadam	21,221	12.00
Gravel	31,832	18.00
Earth	83,117	47.00
Other	5,305	3.00

Coverage, Connectivity and Accessibility of Rural Roads

The density of:

- Commune roads is 0.4 km/sq.km, and 1.54 km/1000 people;
- District roads is 0.14 km/sq.km, and 0.54 km/1000 people;
- Combined commune and district is 0.53 km/sq. km., and 2.08 km/1000 persons.

Table 6 shows the distribution of different road systems nationwide. This rate varies among regions:

Table 6: Distribution of road types by region

Region	National Roads	Provincial Roads	District Roads	Commune Roads
Red River Delta	1	2.02	2.96	12.90
North East	1	1.20	2.08	5.50
North West	1	0.94	2.60	3.20
North Central Coast	1	0.80	2.70	6.10
South Central Coast	1	1.80	2.80	9.40
Central Highland	1	1.04	1.55	3.00
North East South	1	2.62	4.20	5.00
Mekong River Delta	1	1.80	4.30	16.90
Nationwide	1	1.37	2.79	7.83

Rural Road Deficiencies

- 290 communes still have no roads and many others have limited road access;
- The percentage of all-weather roads is only 50% of the total;
- The percentage of paved roads (with bituminous and cement concrete) is just 19%;
- Investments in maintenance remains low, with generally only 20-25% of the required maintenance conducted, and many roads receiving no maintenance at all;
- Investments in inland waterway are limited. Channels are not improved and there is inadequate maintenance.
- The organization and management of the rural transport network is poor, with limited capacity at district and commune levels.

2.4. Investment in rural road development

Between 2000 to 2004, several hundred thousands kilometers of rural roads were newly built, rehabilitated or upgraded nationwide. Under the Rural Transport Project 2, more than 13,000 km of roads were rehabilitated, with millions of rural people benefiting. Hundreds of rural bridges were constructed under two rural bridge projects in the Central Region that covered the Central Highlands and the Mekong Delta. In addition, there is the combined rural infrastructure construction socio-economic program for the Central Highlands and border provinces in the North, and the project to upgrade monkey bridges in the Mekong Delta which is benefiting many millions more. Investment in rural roads continues to increase every year.

The total investment within the last 5 years was more than USD 1.76 billion, which is 2.7 times higher than that in the period of 1996-2000. The North Central Coast and the Red River Delta received the highest amounts of investment (about USD 667 million per year). The average annual investment per province for this period ranges from the highest in the North Central Coast (about USD 9 million), to the lowest in Mekong Delta (USD 5 million).

Overall investment in rural transport accounts for about:

- **1% of GDP/year;**
- 5% of GDP in the agriculture–forestry-fishing sector; and,
- 20-25% of total investments in the transport sector.

2.5. Inland Waterway Network

Local Inland Waterway Infrastructure

Due to the geographical conditions, Vietnam's Inland Waterway network (I.W.) is mainly concentrated in the Red River and the Mekong River Deltas. In the Mekong Delta, the river is networked with abundant systems of canals/channels.

Table 7 River's main characteristics

	Unit	Red River Delta	Mekong Delta
Total transport length	km	3,073	13,000
Density	km/km ²	0.45	0.68
Minimum depth	m	1.5 – 2.0	2.5 – 3.0
Minimum width	m	30 - 60	30 - 100
Difference in water level between dry and rainy season	m		2.5 – 7.0

Problems Facing Rural Inland Waterways

- Channels: There are few surveys on the width and depth of rural inland waterways. Lack of funding inhibits improvement and maintenance of the channels. Most rural inland waterway sections cannot accommodate river-crafts at night time due to a lack of navigation aids. Linkages to the general transport network are not particularly convenient.
- Ports and jetties: Ports are small scale and with low average capacities. Port equipment and facilities are insufficient or out of date. Many ports are being operated on a seasonal basis, with manual loading/unloading activities.
- Boat/vessel fleet: Boats are old and irregularly maintained. The loading capacity is generally low and non-licensed individuals run most river-craft, particularly small boats, which leads to accidents.
- Management and institution: More appropriate and transparent policies are required. The legal framework for the operation of water transportation and ports is weak in areas such as the issuing water transportation licenses, boat/ship registrations, port operation licenses and etc. The majority of operators are local people but they operate on a small scale.

3. Rural transport development strategy

Given the importance of rural transport for socio-economic development, especially as part of the Comprehensive Poverty Reduction and Growth strategy (CPRGS), TDSI have elaborated MoT's rural transport development strategy until year 2020.

3.1 Objectives

By 2010

- Basic access roads will be provided to commune centers and commune clusters.
- 30% of roads will be paved with concrete;
- 70% of rural roads will be passable year-round.
- 80% of monkey bridges will be replaced in the Mekong River Delta.
- In areas with difficult terrain roads will be constructed for horse-pulled carts at first, and then widened to accommodate 4-wheel vehicles;
- Maintenance will be gradually increased to 70% of rural road network.

By 2020

- Sustainable development of rural transport will be continued;
- 50-60% of rural roads (district and commune roads) will be paved with bitumen or concrete;
- 100% of rural roads will be passable year-round; and,

- All monkey bridges will be replaced in the Mekong River Delta.
- 100% of rural roads will be maintainable.

3.2 Infrastructure development

The Strategy for infrastructure development investment for roads and inland waterways has two distinct periods: 2006-2010 and 2011-2020. It defines target regions' economic development levels as i) difficult, ii) less developed or iii) more developed.

The RTS emphasizes improving the technical standards of the rural transport infrastructure taking into account road tasks, the local environment and local materials. Moreover, it stresses that Road maintenance should be a compulsory task, which is as important as construction.

3.3 Transport services development

The RTS provides recommendations on appropriate vehicle types for rural areas and travel options in areas that are difficult to access.

3.4 Use of local materials

Using local materials in road construction and maintenance activities is one of key components of sustainable rural transport development. Guidance on road surface types appropriate for each type of terrain has been obtained from various surface trial studies and recent practical experiences and the findings are therefore provided for future application.

3.5 Organization rural transport management

Four Significant Rural Transport Development Management Policies are:

- The mobilization, management and utilisation of development investment funds;
- Planning operations with an emphasis on maintenance;
- Encouragement and cooperation of all stakeholder economic sectors involved in rural transport development and transport service provision; and
- Encouragement of utilization of local materials and labor.

The organization of rural transport management and operational priority activities include:

- Developing policies for designing the rural transport organization structure and an effective management apparatus; and,
- Enhancing the management capacity, particularly improving the planning capacity for local transport staff are key investment areas.
- Establishing a rural transport forum.

3.6 Financing policy

Identification of sources of funding that can be mobilized to support rural transportation is a priority activity.

3.7 Selection criteria for road investments

The first priority for provincial projects is to provide year round access (roads and inland waterways) to commune centers. These projects are given higher priority under the budget allocation process. The selection of rural roads to link district and commune centers will depend on the the expected impact on poverty reduction and the size of the population that will benefit compared to the total improvement costs using the following formula:

$$\text{Prioritization Index1} = \frac{(\text{Number of poor people}) + 0.2 (\text{Number of non-poor people})}{\text{Total improvement and rehabilitation costs}}$$

The second priority is for projects to upgrade or improve existing district and commune roads. This priority will be taken into consideration once all district and commune centers are linked.

Roads will be selected for improvement based on cost-effectiveness criteria and will be upgraded on the basis of cost-benefit analysis. This method takes into consideration the population served who are classified as poor and considers the extent of uncultivated land that has the potential for agricultural production, as well as a number of physical facilities (such as health stations, markets, post offices) that provide socio-economic services within 1 km of the project coverage. Benefits then are multiplied by the total population in the region (including poor and non-poor people). The resulting figure will be compared to the total cost of the proposed work. This is expressed in the following formulation:

$$\text{Prioritization Index 2} = \frac{\{[1 + I (\text{Cultivated land per capita}) + I (\text{Physical facilities per capita})] \times [(\text{number of poor people}) + 0.2 (\text{number of non-poor people})]\}}{\text{Total rehabilitation and improvement costs}}$$

3.8 Rural Inland Waterway Transport Development Strategy up to 2020

The overall objectives for IW are to:

- Enhance the role of rural inland waterway transport;
- Share the burden of traffic volumes with local road transport;
- Reduce the transport costs for farmers;
- Promote rural economic development; and,
- Eliminate hunger and alleviate poverty.

To achieve these objectives it is planned to:

- Improve the efficiency and effectiveness of the management for rural inland waterway transport;
- Classify rural inland waterways;
- Enable navigation for day and night time on main rural inland waterways in the Red River Delta and the Mekong River Delta;
- Invest in the management of rivers, channels, local river landing stages, especially in the Mekong River Delta to take full advantages of the rivers and channels for transporting goods to communes and commune clusters.

It is planned that the IW will be **upgraded** so that transport networks (channels, routes, berths, and yards) together with other technical infrastructures will be in conformity with IW classes and standards. Vehicle capacities will be improved in terms of loads and speeds. At the same time inland waterway transport safety will be enhanced and environmental pollution reduced.

4. Accessibility of the rural transport

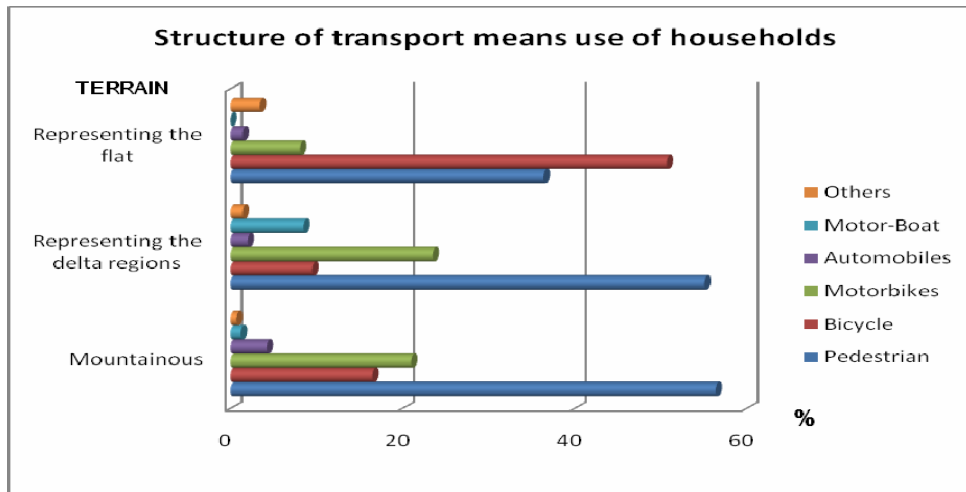
TDSI has carried out a series of investigations to understand the characteristics of rural transport and mobility.

Travel modes:

- 80% of the total journeys traveled by the local people in flat and mountainous regions are on foot and bicycle.
- In the Delta regions travel on foot and bicycle accounts for only 60%, because people also

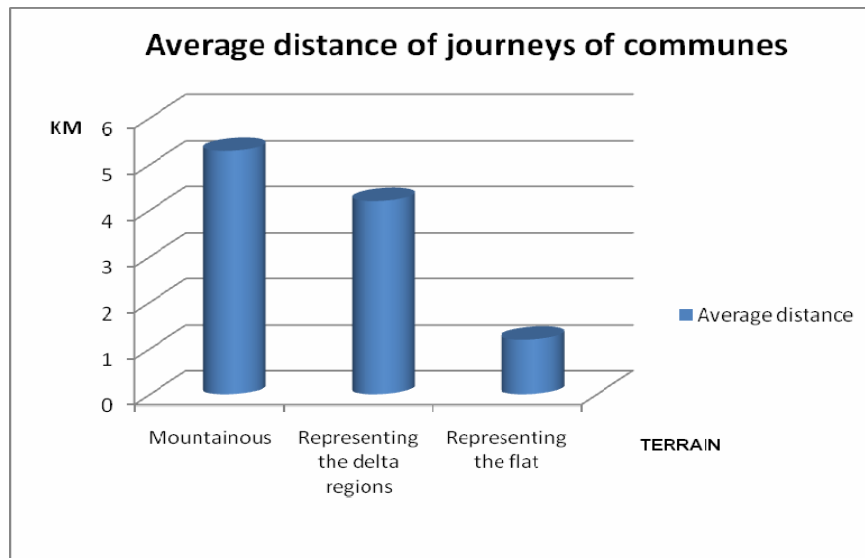
- travel by boat.
- Depending on the region, total journeys by motorbikes account for 8% to 24%. Automobile use is not significant (1.4% - 4.2%).

Figure 2 Structure of transport means use of household



Average travel time and distance: The travel times and distances for journeys of people in mountainous communes were greater than those on the flat provinces.

Figure 3: Average distance of journeys of communes



Travel frequency: The frequency for trips taken for different purposes does not vary much from commune to commune in the same province. However, it varies somewhat from province to province. Concerning the frequency of trips taken for different purposes it was found:

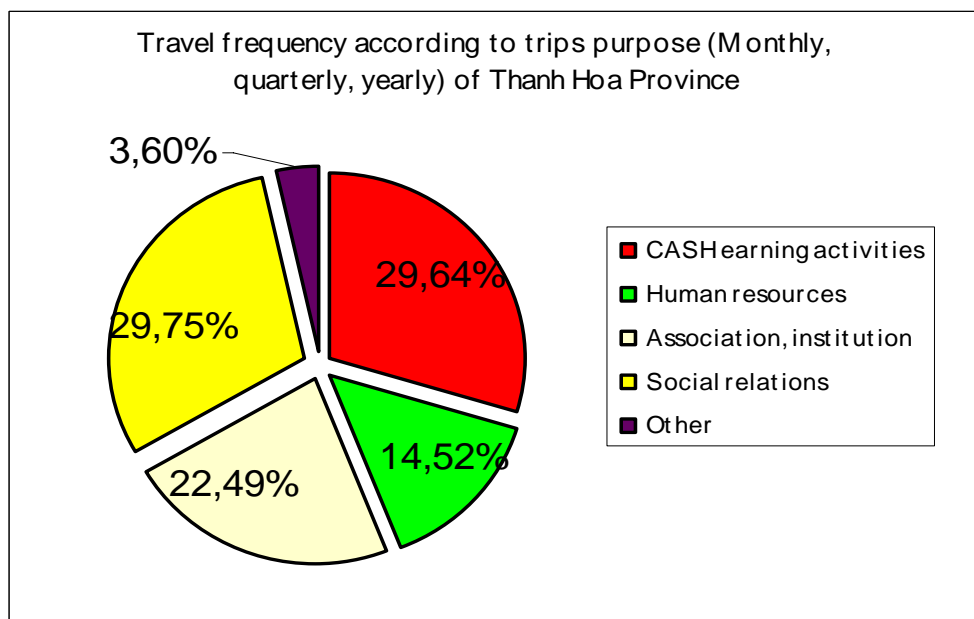
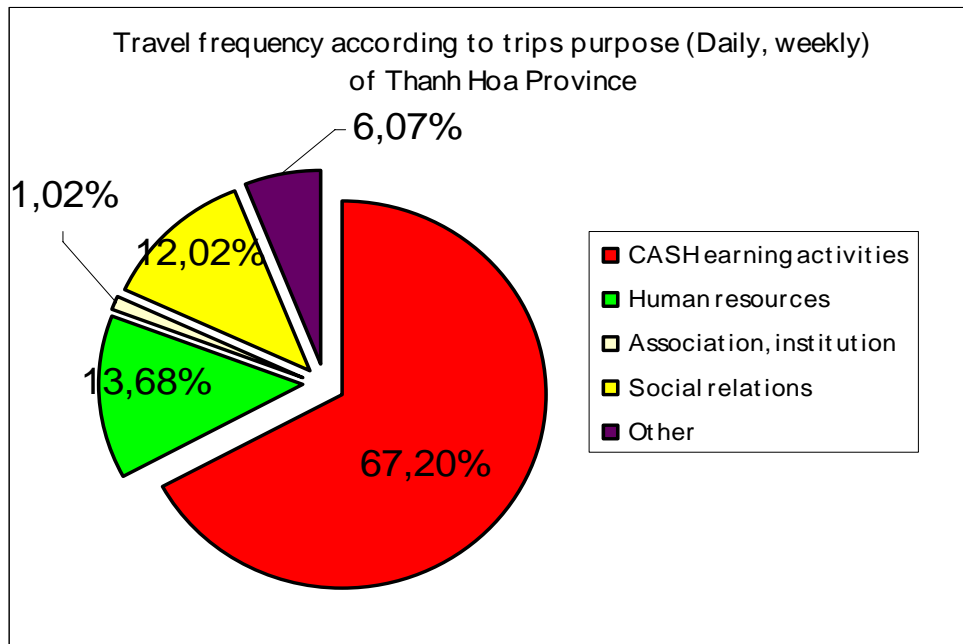
- The daily and weekly frequency of trips for cash-earning purposes (to the fields to work and harvest and to working places) had the highest frequency, accounting for 58 - 72% of the total number of trips made;
- Human resource activities (education and health care) accounted for between 14 and 19% of trips made;
- The frequency of trips for maintaining social relations accounted for 10-12% of the total trips made;
- The frequency of trips for meeting purposes, accounted just 1% or less of the total.

When trips are considered on a monthly and quarterly basis the frequency of trips for:

- Maintaining social relations (visits to relations, going to weddings, funerals, etc.) had the highest value, accounting for between 30 and 45% of the total number of trips made.
- Cash earning activities accounted for between 20 and 30% of the total.
- Human resources activities accounted for 14 - 15% of trips.
- Meeting and association purposes accounted for 19 - 23% of the total.

The frequency of different types of trips in the Thanh Hoa province are presented in Figure 4 that follows:

Figure 4: Travel frequency according to purpose of trips in the Thanh Hoa Province:



Social and–cultural features: Females usually carry out housework and field work. They also go to the district markets to make purchases; they also make visits to their relatives and friends. Males usually travel further and use motorbikes more regularly than females to carry out their business

Natural conditions: Natural conditions and the weather affect transport of the local people. Many people prefer to travel on the dry road surfaces, and on these roads, the travel speeds are higher than those on the wet, slippery road surfaces.

On the wet, slippery roads, the traffic flows are slow and the travel speeds are low. Agricultural activities are affected by the condition of the roads, which consequently affects the markets and business sector. In general, during the harvesting period, the local people use roads and the transport services more than in other periods.

Occupation: Non-farmers, especially business people and traders, show greater mobility than farmers do. They travel away from the villages and make more trips. Due to the nature of their business, time is more crucial to success. As a result, they tend to care more about travel time and distances.

5. Rural Transport's Impacts on Socio-economic Development and Poverty Reduction

TDSI studies reveal that the main positive impacts of the rural road network are as follows:

Economic

- In low lands - Boosting and diversifying the local economy from agriculture-based towards agricultural, service, and cottage industries;
- In remote areas moving from subsistence farming to cash crop farming, and from extensive to intensive farming;
- Creates more off-farm cash-income opportunities, especially in the plain communes;
- Opens up market opportunities to the people and they show that they know how to maximise these opportunities;
- Creates access to the markets, for both inputs and outputs;
- Makes easier, cheaper, and time-saving transport of goods, flow of people and vehicles;
- Makes goods and services more available, bringing more choices for the consumers, both rich and poor;
- The better off are able to benefit the most from the improved road network as they have better means of transport and they use roads more often.

Socio-culturally

- Households have better equipments and facilities (electrification, televisions, telephones, motor-bikes, bicycles, brick houses, cement roof tiles, clean water, etc.);
- More children attend class, and they are self-motivated to study as they have brighter futures;
- Social safety net preserved and built up, thanks to better roads, they can make more visits and attend more meetings or social events; and;
- More children get health care services, nurses make more visits to the villages, family planning is much more better than before.

Technology: Increasingly people are applying modern techniques in cultivation, rearing of livestock, processing agricultural produce, etc which increases productivity, reduces costs, and eases the burden on farmers, especially women and saves time for doing other chores, as well as eventually nurturing better health.

6. People Awareness of Rural Transport's Importance

Peoples' awareness surveys have found:

6.1. Benefits

- General Benefits

The great benefits brought about by rural transport projects are seen as easy traveling, convenient linkages within and between communes and surrounding areas as well as new job opportunities, which result in higher incomes. The locals have also found that the upgrading of roads enables easy access to hospitals, schools and other social services and helps the enterprises in the area to run more effectively. A good transport system is also seen to help to develop the commune public infrastructure. Moreover, amongst well-educated people, additional benefits are seen in that upgrading roads will help to attract investment to the area and create more jobs for local people. In short, the general benefits that the locals expect are the life will be improved and poverty levels will be reduced.

Community Benefits Resulting From Full Use of the Local Available Labor and Material Resources

It is important to utilize thoroughly the available local resources in rural road construction. This helps ensure the sustainable development of rural transport and, consequently the local economy and to reduce poverty levels. However, based on pilot projects, it is estimated that local available resources can only meet about 20% to 50%, depending on the conditions of each province, of the total expenditure for constructing rural roads.

The effect of project on the workers: The survey results indicate that the percentage of local labourers is relatively high. 63% workers are from the local area, and 38% are from other areas with most of them acting as vocational workers for the contractor.

Materials: bitumen and emulsion are imported from other locations while other materials are often available locally.

Benefits for the poor

Most of the poor can indirectly benefit from the local socio-economic development. However, it is a fact that in some mountainous communes, the rural road network has improved but the poverty rate has not. The reason for this seems to be that the poor have no vehicles and travel mainly by foot so they use the shortcuts and trails instead of using the roads constructed by the project. Thus, transport alone does not necessarily immediately reduce poverty.

6.2. Impact of Improved Rural Transport

Positive impacts

- Increased stability in local life;
- Convenient traveling and economic development
- Awareness of the local women and their roles in family and in community are raised, family life is improved and more business opportunities are created for women;
- More jobs are created especially for the poor. In SEACAP1 surveys, the statistics showed that 23.5% of the contractors' workers and 44.3% of the road users were the poor.

Negative impacts

- Land, crops and assets may be affected by road construction;
- Speeding drivers cause traffic accidents.
- Lack of maintenance may also lead to higher rate of traffic accidents.
- "Social evils" may increase such as theft;
- Disease spread.
- "Dis-connectivity" of transport and higher transportation costs due to prohibition of some vehicles in some roads and user-pay policies.
- Increase in price of land makes late comers difficult to resettle on the road

6.3 Community participation in rural transport development

Each local government (province) has its own context, its own specific topographic characteristics (e.g. mountains versus plains), socio - economic conditions (e.g. poverty, lack of resources) and political strategies to cope with the development challenges (e.g. provincial decisions). These contextual factors have shaped the system of community contributions for each province.

Each province issues its own decisions on local contributions to rural transport, in the form of labour, cash and materials. Because of certain limited resources, each province tries in its own specific way its best to implement the policy of “the government and local people building roads together”. For the village roads in:

- Vinh Long province, the local government and people share the costs for making concrete roads. Depending on the poverty rate and ethnicity of the commune, local people pay between 50% to 70% of the total construction costs, with the remainder paid from the provincial budget;
- Phu Tho province, the local government provides cement and stone free of charge for rehabilitating the roads. The remaining inputs, labour, cash, and materials are provided by local people

Maintenance of village roads is carried out by local people:

- In Vinh Long, each household is allocated a section of the road to maintain;
- In Phu Tho, local people apply team work to the maintenance. Every six months people clear road sides and do maintenance. Their work is considered to be a social contribution in the form of labour for those of working age.

The maintenance of district, commune roads in the two provinces is carried out by the professional companies financed by the local government’s annual budget. However, the budget is small and is late. These are reasons for poor rural road condition, particularly in Phu Tho province

7. The Requirements of Rural Road Users

7.1 Under Preparation and Construction of the Project

Information

The surveys under SEACAP1 and SEACAP2 found that the poor people in project areas desired to participate in the preparation and implementation stages of the projects. All of them agreed that project information should be widely and easily accessed by everyone, especially the poor and the ethnic people. In general, people in the project communes strongly supported road upgrading and they desired to be involved in the implementation of the projects to improve their incomes and in turn their quality of life.

Choosing the Appropriate Pavement

Gravel roads are not recommended because they leave a heavy maintenance burden for the local people who are still poor. Statistics from SEACAP1’s surveys showed that 100% of interviewees disliked the gravel roads and preferred the cement concrete roads.

Labour Usage

It is necessary to maximize the economic benefits employment under the projects provide for all the local people including women, the poor, and the ethnic groups. To achieve this, projects must request the contractors to recruit local labour in compliance with current labour laws. Contractors should consider:

- Maximizing recruitment of local labour;
- Prioritizing the employment of Women and ethnic people;
- Ensuring men and women receive equal payment for the same work; and,

- The bidding documents should contain detailed terms explaining these issues will be strictly supervising during the project implementation..

Government's Support to the Rural Transport Development

The Government's support for Rural Transport Development is provided in different decrees and in varying forms depending upon the needs of each region. For remote regions, revolutionary base regions, and regions having extremely economic difficulties the Government should provide 100% budget support for rural road construction.

Every year, the government spends from its budget and from other sources, in support of rural transport development projects. The focus is on structures that require advanced techniques such as bridges, culverts, spillways, etc. and on constructing and upgrading district roads and access roads to commune centers. For the:

- o Delta and Midland regions, the government provides support through investment in and installation of construction equipment such as small-sized road-rollers, small-sized mobile material mixing plants, mobile asphalt, bituminous heating plants, cement and steel to build bridges, etc. ;
- o Mountainous regions, the government provides support in terms of explosives for rock breaking, stone crushing stations and small-sized quarries, road rollers, and asphalt plants; and,
- o Mekong River Delta, the government provides support for bridge spans and module-structured bridges.

7.2. Rural Transport Use

Traffic Safety

One of the requirements of rural road users is the safety for both drivers and vehicles. The intention of the road users is to reach their destination safely.

Traffic accidents are increasing mainly on district, inter-commune and village roads and even in low density residence areas, which have good road conditions.

Reasons are:

- Rural road infrastructure has not kept pace with the growth in vehicles in terms of width, loading capacity, geometric factors, or traffic safety regulations.
- Lack of safety signs due to the fact there are no compulsory regulations to provide them.
- Low awareness of and compliance with traffic rules by road users. Many motorbike drivers have no driving licenses or have not been trained to follow traffic rules.

Maintenance Funds

The need for maintenance work needs greater consideration. The budget for maintenance activities should be stable or increased, and mechanisms for the implementation of maintenance need to be more appropriate in order to achieve sustainable rural transport development. In very poor areas, with many difficulties, support should be allocated from the state budget for maintenance activities. Individuals or households can do some simple maintenance work.

Reduction of Adverse Environmental Effects

The roads running through residence areas need to be sealed or concreted to reduce the environment pollution that adversely affects the health of the local community.

References

- i. SEACAP 1: Rural Road Surfacing Research Project.
<http://www.seacap-info.org/?mod=home&act=pdesc&pid=4>
- ii. SEACAP 15: Community Participation in Rural Transport – Contribution and Participation Issues in Vietnam
<http://www.seacap-info.org/?mod=home&act=pdesc&pid=17>
- iii. SEACAP 22: Time and Distance Study.
<http://www.seacap-info.org/?mod=home&act=pdesc&pid=23>
- iv. Ministry of Transport, Rural Transport Strategy 2006
http://www.seacap-info.org/uploads/File/Final%20Report_Main%20Report.pdf
- v. Central region transport network project ADB TAN4034 – VIE, Socio–Economic report