

**FINAL DRAFT**

**SOCIAL SAFETY NETS,  
PUBLIC WORKS AND EMPLOYMENT IN  
THE INFRASTRUCTURE & CONSTRUCTION SECTORS  
VIETNAM**

**VOLUME 1: MAIN REPORT**

**INTERNATIONAL LABOUR ORGANIZATION  
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# TABLE OF CONTENTS

<b>LIST OF ABBREVIATIONS AND ACRONYMS</b> .....	iv
<b>EXECUTIVE BRIEF</b> .....	1
<b>1.00 INTRODUCTION</b> .....	11
1.10 Background .....	11
1.20 The Relationship between SSNs and PWs .....	12
1.30 Economic Framework .....	13
1.40 Legal Framework .....	13
<b>2.00 INSTITUTIONAL STRUCTURES</b> .....	16
2.10 National and Provincial .....	16
2.20 District and Commune .....	16
2.30 Universities and Specialist Institutions .....	16
<b>3.00 PUBLIC SECTOR INFRASTRUCTURE SERVICES</b> .....	18
3.10 Construction .....	18
3.20 Construction Standards .....	20
3.30 Construction Sector .....	21
3.40 Contracting and Procurement System .....	21
3.50 Construction Technologies .....	25
3.60 Construction Sector Associations .....	28
<b>4.00 LABOUR AND EMPLOYMENT GENERATION</b> .....	30
4.10 Skills availability and costs .....	30
4.20 Voluntary Labour .....	32
4.30 Employment Generation .....	35
4.31 Framework .....	35
4.32 Short Term Temporary Employment .....	37
4.33 Long Term Sustainable Employment .....	39
<b>5.0 EMPLOYMENT GENERATION PROGRAMME</b> .....	43
5.10 Rational .....	43
5.20 Delivery Strategy .....	44
5.30 Risks and Uncertainties .....	46

## **ANNEXES VOLUME 1**

- A. Principal Contacts
- B. Bibliography and ADB Greater Mekong Subregion infrastructure information

## **ANNEXES VOLUME 2**

- C. National Information on Vietnam 1990-1998
- D. Government Decrees, No. 52/1999/ND-CP Promulgating the Regulation on Investment and Construction Management, No. 88/1999/ND-CP on Issuance of Procurement Regulation.  
Ministry of Construction decision No. 500-BXD-CSXD Regulations on Registration and Issuance of Construction Practicing Licenses
- E. Organigrammes on  
Ministry of Labour, Invalids and Social Affairs  
Ministry of Transport and Communication  
Ministry of Agricultural and Rural Development  
Ministry of Construction
- F. Disbursement Tables of the World Bank, Asian Development Bank and Japanese Bank for International Cooperation.
- G. Rural Infrastructure Investment 1996-1999
- H. Survey on Social Safety Net and Employment - Infrastructure Constructions
- I. Vietnam Labour Code dated 23/06/1994
- J. ILO C29 Forced Labour Convention, 1930  
ILO C105 Abolition on Forced Labour Convention, 1957

## **FIGURES**

- 1. Gross Domestic Product by Sector 1990-98
- 2. Construction Machinery and Equipment in the State Sector
- 3. Building Material Production 1995-98
- 4. Construction Technologies
- 5. Economically Active Population Aged 15 Years and Over by Professional Qualification 1998
- 6. Construction Components by Percentage as applied in Projects in South and North Vietnam
- 7. Construction Components by Percentage as applied generally in Projects in Vietnam
- 8. Estimated Employment Generation in Construction Sector 1999-2003

## ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
ASIST-AP	Advisory Support, Information Services and Training (Asia Pacific)
	ILO Regional Programme
CEMMA	Committee for Ethnic Minorities and Mountainous Areas
CPC	Commune Peoples Committees
DCC	District Construction Company
DDMFC	Department of Dyke Management and Flood Control
DDT	District Division of Transport
DLE	Department of Labour and Employment
DPC	District Peoples Committee
EGP	Employment Generation Programme
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
HCMC	Ho Chi Minh City
HUAIC	Hanoi Union of Associations of Industry and Commerce
HUTC	Hanoi University of Transport and Communication
HWRU	Hanoi Water Resources University
ICC	Irrigation Construction Company
ILO	International Labour Office
ILSSA	Institute of Labour Science and Social Affairs
IRAP	Integrated Rural Accessibility Planning (ILO)
LB	Labour-Based
L BSP	Labour-Based Sub-Programme
LBSU	Labour-Based Support Unit
ILRP	Institute for Long-Term and Regional Planning
MARD	Ministry of Agriculture and Rural Development
MOC	Ministry of Construction
MOF	Ministry of Finance
MOLISA	Ministry of Labour, Invalids and Social Affairs
MOPI	Ministry of Planning and Investment
MOSTE	Ministry of Science, Technology and Environment
MOTC	Ministry of Transport and Communications
NLBP	National Labour-Based Programme
NTPE	National Target Programme on Employment
NTPHEPR	National Target Programme for Hunger Eradication and Poverty Reduction
OECF	Overseas Economic Co-operation Fund
PDARD	Provincial Department of Agriculture and Rural Development
PDOT	Provincial Department of Transport and Communications
PE	Equitized State-Owned Enterprise
PF	Private Firm
PIM	Participatory Irrigation Management
PPC	Provincial Peoples Committee
PPER	Project Performance Evaluation Report
RITST	Research Institute for Transportation, Science and Technology

SCBMA	Saigon Construction and Building Material Association
SDPCED	Socio-economic Development Programme for Communes in Extreme Difficulties
SOE	State Owned Enterprise
UAIC	Union of Associations of Industry and Commerce
UNDP	United Nations Development Programme
VACC	Vietnam Association of Construction Contractors
VCA	Vietnam Construction Association
VSIWR	Vietnam Science Institute of Water Resources
WB	World Bank
WFP	World Food Programme

Exchange rate 1USD = 13,910VND (September 1999)

## DEFINITIONS

- a. “*employment-intensive*” is a generic expression to describe strategies, programmes, projects, activities and assets which will promote direct or indirect, short-term or long-term employment generation at the highest possible level;
- b. “*appropriate technology*” is a generic expression describing technologies which are cost effective, technically sound and which optimize the use of local resources including labour, materials, tools and equipment.
- c. “*labour-based technology*” describes technology in which labour, supported by light or medium-sized equipment, is used as a cost effective method (when compared with equipment-based methods) of providing or maintaining infrastructure to a specified standard;
- d. “*equipment-based technology*” is the opposite of “labour-based” in that most work is done by labour-replacing equipment, supported by a small labour force – generally effective where labour is not readily available or labour costs exceed US\$ 5 per day;
- e. “*labour-intensive works*” are those works of government or externally funded programmes which focus mainly on short-term employment creation and income distribution - in general do not emphasise cost effectiveness and quality outputs;
- f. “*public works*” are undertaken by central or local government agencies for the benefit of the population in general, the infrastructure created remaining in the charge and ownership of the agencies concerned, which assume responsibility for management, maintenance and, sometimes, operation;
- g. “*community based works*” are undertaken by clearly identifiable groups of people (usually with the help of a facilitating agency) for the benefit of the group as a whole, the assets created being owned, managed, used and maintained by the beneficiaries themselves;
- h. “*local level planning*” is a locally-based planning system, generally based on decentralized decision making and the use of local participation in defining the community’s needs (such as community-based works);
- i. “*community facilitators*” are professionals (from a social science, planning or engineering background) who are helping communities with preparing proposals for the development and maintenance of communally owned assets;
- j. “*a job*” is defined as an effective employment of 200 full days work per annum, paid at the market rate and not less than the minimum wage.
- k. “*targeted procurement*” is a contractual system which incorporates social targets, which are set to meet policies on poverty alleviation, employment, geographical focussing and use of local materials and services;
- l. “*poverty reduction*” is modifying the level of poverty by raising incomes and basic living standards through long-term institutional mechanisms and structural changes.
- m. “*basic living standards*” are conditions for providing basic needs, including adequate food supply, shelter, access to health and education services and sustainable employment.
- n. “*short-term*” are 1-2 year projects and “*long-term*” are programmes of more than 2 years.

# **SOCIAL SAFETY NETS, PUBLIC WORKS AND EMPLOYMENT IN THE INFRASTRUCTURE & CONSTRUCTION SECTORS IN VIETNAM**

## **EXECUTIVE BRIEF**

### **Social Safety Nets**

Governments of all persuasions use Public Works Programmes involving the construction of public service infrastructure in times of economic hardship to assist the poor and socially disadvantaged. Arguably the greatest example of this technique was during the “great depression” in the USA where the construction of roads, dams and public works was used to reduce catastrophic levels of unemployment. While no longer considered by western economists the answer to economic grief because of the relatively high wage costs in developed countries, it nevertheless remains one important way of fashioning a “social safety net” in developing countries for those in need while at the same time building important public service infrastructure.

This report is prepared by Harry O. Sandberg, Senior Consultant to the ILO, in close cooperation with the ILO ASIST-AP Programme. It is related to the Infrastructure Sector and addresses the public sector infrastructure construction in Vietnam, the employment opportunities labour-based construction can deliver and the necessary institutional structures required to do it. It examines how labour-based works could be used to act as poverty alleviation relief works by providing not only short term, but even more importantly long term, sustainable employment. Based on field visits, interviews and a consideration of all these issues a preliminary employment generation strategy has been prepared as part of an overall study on Social Safety Nets for Vulnerable Groups (SPPD Study, VIE/98/039/08/11).

### **Background to Employment Intensive Construction in Vietnam**

Any study of employment generation prospects in Vietnam must acknowledge and understand the contribution labour-based construction has made to the development of Vietnam’s public sector infrastructure. With some notable exceptions most roads, water and irrigation schemes, community buildings and agricultural projects have been built by men and women using their own labour and the simplest of technologies. It is a tradition the nation is justly proud of and one where there is huge potential to modernise and appropriately equip the country’s labour force to address the demands of the next millennium. In more recent times numerous projects have been designed around the mobilisation and harnessing of large labour forces (typically drawn from the adjacent communities) to construct and rehabilitate valuable public sector infrastructure.

Central to any proposal to introduce labour-based employment intensive construction is the need for a clear understanding by Government and the target communities of what is meant by public works and public infrastructure assets. As the name suggests these are civil engineering and building works construction provided for the benefit of the general public and to facilitate economic, social and cultural growth. They are typically roadworks, water supplies, foul and storm water drainage systems, buildings, airport, marine and sea defence works and industrial systems. On the whole they have to meet the appropriate require a standards of engineering and in many instances they can be adapted for the use of labour-based construction methodologies.

### **The relationship between Social Safety Nets (SSNs) and Public Works (PWs)**

Part of the SPPD on Social Safety Nets in Vietnam is to assess how employment generation and social assistance initiatives can act as social safety net mechanisms. Attention is drawn to different types of public works and schemes launched by the Government or undertaken with support from international donors. It further assesses how ongoing public investment plans and initiatives can be slightly modified and re-focused to provide social safety to people in need.

All ASEAN countries have a rich tradition in organising special Public Works. However, the Public Work types organised, differ in their objective. Some can be characterised as “*directly economic supportive*”, such as programmes anticipating the economic crisis, in which governments provide special assistance to the unemployed in the communities as part of regular public investment plans. Other public works are just “*make-work*” projects that primarily aim to establish an income transfer among the poor. Community-driven public works often intend to strengthen social structures and capacities. Thus, the rationale behind launching public works, social investment, or Social Safety Net programmes is important, as it sets the conditions for implementation: the technical standards being met, the labour-content achieved in construction operations, the selection of the workers, the wages paid and other labour standards being applied. Sustainability and impact will be different under different conditions.

The past and recent experiences with public works in ASEAN countries demonstrate that when Public Works are organized as temporary relief measures the quality of the created assets and sustainability of operations receive often low priority. Works tend to be “*labour-intensive*”, which means that implementation is done using hand tools only, in combination with an extensive percentage of manpower. Public Works that support the economy or communities on a permanent base are better designed and pay more attention to quality. These works tend to be “*labour-based*”, applying a competitive mix of labour and essential equipment.

In Vietnam, Public Works draw on a rich tradition through which community action has become the nation’s pride. A well-considered policy to construct and maintain public or community assets in roads, irrigation, health, education infrastructure can provide *directly* and *indirectly* a buffer against the impact of hunger, natural disasters and starvation. Wage labour under fair working conditions, or various indirect benefits can



indeed be an alternative to other measures, such as money-transfers or social insurance schemes. Public Works are a viable option. However, to provide the necessary social safety, works should be productive and add value to Government and private initiative. The leading question for this part of the SPPD is to assess in which form Public Works can be an effective instrument and which implementation conditions and programme objective should receive the required attention.

### **Institutional Structures and Public Sector Delivery Mechanisms**

In Vietnam the highest representative organ of Government is the National Assembly and it alone has constitutional and legislative powers. The executive organ of the National Assembly is the Government and through its various ministries, state committees and general departments the business of governance is conducted. At the next level down and arguably the most critical from the perspective of implementing development initiatives is the Provincial Peoples Committee (PPC). They are the undisputed power in the provinces and any project that has not thought through and taken due account of this fact is unlikely to succeed.

After the PPC is the District Peoples Committee (DPC) and the Commune Peoples Committee (CPC). The simplest form of governance is the townlet but to all intents and purposes it is the CPC that will be the entry point for labour-based infrastructure projects targeting the poor. At the provincial level the national ministries are “shadowed” by provincial departments and district divisions. For example the Ministry of Transport and Communications (MOTC) delivers its projects through the Provincial Department of Transport (PDOT) and likewise the Ministry of Agriculture and Rural Development (MARD) works through the Provincial Department of Agriculture and Rural Development (PDARD)<sup>1</sup>. At the district level the same devolution of responsibility occurs and how these entities function and interact must be understood and built into project delivery.

There is little doubt that the provincial, district and commune organs of governance could be used to design, organise, manage and implement “safety net” project delivery. They are highly organised in public sector service transfers and with technical and financial support could prove an effective implementation force. There are on the other hand indications of difficulties in getting funds through to the provinces.

### **Responsibility for Delivery of Public Sector Infrastructure Services**

A number of Government ministries responsible for public services infrastructure regularly use labour-based construction methodologies. These are primarily the MOT, MARD and the Ministry of Construction (MOC) who on the whole implement labour-based works in the rural and “deep rural” areas. Working through their provincial and district arms the ministries rely heavily on the mobilisation of the local communities to provide the necessary labour. The Ministry of Science, Technology and Environment (MOSTE) have an overarching responsibility for ensuring that all construction works - including those using labour-based systems - prove environmentally sustainable and that environmental legislation is enforced. Like other ministries they also discharge their responsibilities

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<sup>1</sup> Fundamental Laws and Regulations of Vietnam, 2<sup>nd</sup> Edition, 1995

through “shadow” departments in the provinces.

At national level the Ministry of Planning and Investment (MOPI) coordinates the planning of projects and the setting of national priorities. The districts through the provincial departments prepare and submit their annual work priorities to their line ministry at the centre who then prepare their work plans and operational budgets. These are submitted to the MOPI and negotiations determine what projects will proceed and how much will be funded from the centre and how much will be met from provincial budgets. The system is highly organised and generally allows the PPCs to set their own priorities within the national development framework.

Ultimate responsibility for the delivery of services through projects (new works or maintenance) rests with the provinces. Their technical departments, construction companies and State Owned Enterprises (SOEs) design and construct the works under the general supervision of the national line ministry. Design and construction standards, supporting legislation and decrees are the responsibility of the latter who support and maintain frequent contact with their “shadow” entities at the provincial and district levels.

### **Use of Public Works to Provide Safety Net Programmes**

One social class ranked high on the “poverty scale” is that of the ethnic minorities and the Government has targeted these communities for particular help. To coordinate work in this field the Committee for Ethnic Minorities and Mountainous Areas (CEMMA) has been set up. There are a number of poverty alleviation projects underway in the mountainous areas at the present moment and most include the deployment of ethnic minority labour to construct community infrastructure. These range from access tracks and tertiary roads to small-scale irrigation and water harvesting schemes, forestry rehabilitation, schools and primary health care centres. All these interventions would benefit from the injection of specialist labour-based technical support as too often the works as constructed are inferior and have a short life. There is no excuse for this and with the right technical supervision their useful design life could be increased substantially.

Another critical national rural development initiative with far reaching environmental consequences is the preservation of forests and environmentally sensitive areas. Once again these rely almost exclusively on the mobilisation of local labour to construct access tracks, forestry centres, policing networks and tourism infrastructure. The primary aim of these projects is employment generation and the establishment of buffer zones which will eventual see the handing over of the forests and wildlife to the indigenous peoples who then become its custodians<sup>2</sup>. These projects would benefit markedly from the introduction of labour-based construction methodologies.

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<sup>2</sup> World Bank Forest Protection and Rural Development Project, 1999

## **Skills Assessment and Needs Survey**

On the whole the standard of engineering design and construction supervision at the provincial and district levels is appropriate although in some provinces there is a shortage of experienced graduates. Over many years the nations universities have been producing engineering and science graduates of a generally high calibre. While the civil engineering skills for infrastructure construction exist this is not so when it comes to project formulation and social engineering. Here there is a definite need for direction and support to ensure that a project selected for implementation meets the aspirations of the community it intends to serve, is economically viable and environmentally sustainable.

As well as being involved in pure research the universities play an important role in setting civil engineering and building construction standards. Attached as they are to particular ministries there is a continual movement of engineers and scientists from one to the other.

In assessing where and how new labour-based methodologies could be introduced due cognisance must be placed on the way ministries operate and their specific technical functions. There is little doubt that the point of entry for labour-based initiatives is the universities and through its association with the Hanoi University of Transport and Communication (HUTC) which is attached to MOTC, the ILO ASIST-AP Programme has identified this fact and work with this university. A detailed needs survey would be required to identify specific gaps in the knowledge base and locate any other institutions that could usefully contribute to a labour-based construction technology strategy. Emphasis should be placed on a national sustainable strategy rather than separate programmes although some specialist programmes are also necessary.

## **Technical Standards and Quality Control**

The reliance on outdated Russian and eastern European engineering technology is hindering infrastructure development in Vietnam and many recent schemes (constructed in the last 10 to 20 years) are deteriorating rapidly.

But at the other extreme there is now an over willingness to adopt modern methodologies (sometimes unsuitable) and apply high technology approaches to simple engineering problems. This dichotomy will have to be accommodated in future infrastructure projects if they are to prove successful - particularly where labour-based construction methodologies are employed.

There is a burgeoning engineering consultancy sector (mainly comprised of engineers and scientists drawn from the universities) which can be used to deliver specific technical expertise (i.e. design services, set up and run soils laboratories, carry out specialist studies, quality control audits, provide consultants, etc.). While still very much in its infancy the consulting industry is able to quickly mobilise resources and in some disciplines they seriously rival the SOE design companies.

## **Contracting & Procurement System**

Contracting in the rural areas is principally the domain of the SOE construction companies although since “doi moi” there is an increasing proportion of public works carried out by private sector companies. Both have their part to play in the construction of public service infrastructure but in the long term the private sector contracting companies are expected to increase their market share because they are proving more efficient and cost effective. There is an established culture of small scale civil engineering contracting and if these entities are allowed to flourish they will prove an ideal entry point for small labour-based construction interventions.

## **Use of Labour in the infrastructure and construction sector**

Although labour-based construction in Vietnam is not new the potential of this valuable methodology has never been fully recognised. Most civil engineering and building works construction at the district level relies heavily on mobilising the local community and using labour - men and women. They are usually designed with labour construction in mind so it would not be too difficult with some specialist training inputs to codify and bring existing technical skills into line with modern labour-based construction practices.

Historically if a section of road needed repair the District Division of Transport (DDT) would go out and either employ the local community direct on force account or contract the work out the SOE District Construction Company (DCC). They would employ the labour (probably on task work) and be responsible for execution of the works. Similarly if a SOE irrigation company needed their annual canal maintenance carried out they would employ the farmers in the immediate area or subcontract the work to the SOE Irrigation Construction Company (ICC). These are all highly structured and well-trying systems that could be harnessed for worthwhile labour-based projects.

Ordinance 15, introduced in November 1999 and replacing a similar 1988 ruling, now obliges Vietnamese adults to work for 10 days annually for various construction works intended to benefit the community. This ordinance affects men 18 to 45 and women 18 to 35, although exemptions apply including a “substitution fee”.

The ILO has observed internationally that when people are coerced to work quite often the work is of poor quality and of low productivity. This study recommends a reexamination of this issue in the interests of ensuring a competitive and efficient use of labour-based work methods as a viable option to equipment-based methods.

In the rural areas labour-based construction programmes must be designed with the agriculture calendar in mind. This varies between the uplands where rain fed agriculture is practised to the lowlands where irrigated agriculture is the dominant feature. During peak activities there is little or no spare capacity in the labour market while during the quieter times there is mass migration to the provincial centres or metropolitan areas by men and women seeking employment. These are the times when the benefits from labour-based construction projects can be maximised. But there are many in the community who do not even have the resources to travel to seek work and these are the target groups.

## **Community Based Works to Address the Needs of the Poor**

The UNDP has identified poverty elimination as an important development priority and through various initiatives target communities have been identified and an appropriate strategy mapped out<sup>3</sup>. And the Government are using the National Target Programme for Hunger Eradication and Poverty Reduction (NTPHEPR) as a vehicle to specifically address the issue at commune level. A successful poverty elimination programme must involve (which means listen to) and mobilise the community at commune level. As well as social service interventions (primary health care, education, etc.) it must include worthwhile infrastructure works that are sustainable. A road constructed to an isolated village may be technical feasible but if the community see a school as their first priority that is what they should receive support for.

Community based works must utilise an acceptable blend of labour-based technologies and machine intensive construction systems. This is not new as up until 1986 and the 'market forces' revolution all communal infrastructure services were delivered through the commune and traditionally employed a mix of machine and labour-based technologies. But that is the problem and a natural dislike of the old commune system and its tradition of service by all for the good of all - particularly as practised by the agricultural communes - will have to be overcome if projects founded on labour-based construction are to succeed. Not impossible but the concept needs repackaging in a palatable form if it is to be willingly embraced by local communities.

Notwithstanding the legacy of the old commune model it should not be too difficult to mobilise the local community to participate in a labour-based construction initiative as there is still a strong sense of "community". More recently there has been a move towards greater dialogue and community involvement in the selection or initiatives and how this 'squares' with existing provincial and district delivery systems will have to be carefully thought through at the planning stage. In addition the level of technical expertise needed to ensure the right project is selected, designed and constructed to a sufficiently high standard would have to be weighed.

The opportunity exists to better link local level planning with community development programmes, and the ILO's Integrated Rural Accessibility Planning (IRAP) Programme is a simple and effective planning and priorities system designed for this purpose.

What type of labour-based projects could be implemented depends largely on where the target community is located and its requirements. Road works in the rural and 'deep rural' areas are the obvious choice as are forestry regeneration and social services building infrastructure projects. In the low lying areas along the coast and up into the river estuaries sea dykes would be high on the list of interventions, and in the areas where intensive agriculture is practised irrigation and drainage works would qualify for support. All these types of civil engineering works entail significant volumes of construction materials (i.e. cubic metres of excavation, square areas of clearing, etc.) and these are

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<sup>3</sup> Poverty Elimination UNDP, VIE/95/029

the initiatives that best lend themselves to labour-based construction. When the maintenance of existing infrastructure is included the list of opportunities is almost endless.

Of course there is no need to concentrate labour-based construction projects exclusively in rural areas, as there is considerable scope for urban regeneration initiatives in many of the larger provincial capitals where lack of investment has seen public infrastructure services deteriorate. For example in Thanh Hoa in Thanh Hoa Province urban flooding in some parts of city is now a common occurrence in the wet season and can be traced back to poor drainage and unplanned development along the main drainage canals leading surface water into the Ma River. Their rehabilitation would prove an ideal urban labour-based project vehicle.

The question is whether the long-term goal should be to use labour-based construction works simply as a poverty alleviation tool and for emergency works<sup>4</sup> or infuse the technology into the countries future construction ideology. The arguments in support of both options are strong but if the former approach was to be adopted it would seem sensible to expand the use of the technology to embrace the latter and so make a long term and lasting contribution to the development of the countries public sector infrastructure. Such an approach would need to integrate the local level planning process (IRAP) with the labour-based works methods.

### **Preliminary Strategy for a Poverty Alleviation Employment Intensive Programme**

The LBSP study examined in some detail the issues that had to be addressed in setting up a labour-based employment intensive infrastructure project. It looked at roadworks (rehabilitation and maintenance) as well as irrigation and social micro enterprises. Useful additions to this list would be urban regeneration and sea defence dykes rehabilitation.

All of these initiatives would assist the poor and disadvantaged by improving their quality of life and through employment generation.

This report on employment in the infrastructure construction makes it clear that there is sufficient capacity on the labour market and that there is an abundance of potential projects that would benefit from a labour-based programme. Possible initiatives can generally be divided into;

- **Short-term temporary employment creation** through the infrastructure construction components of National Target Programmes which will generate approximately 59m workdays in 1999 and approximately 43m workdays in 2000; and,
- **Long-term sustainable employment creation** is focusing on increased labour absorption under regular Government budgets for new constructions, minor- and major repairs, and maintenance programmes. To achieve this, it will be necessary to introduce and implement the concept of **labour-based technology** in all stages and to all concerned parties of the infrastructure construction cycle simultaneously, with

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<sup>4</sup> Strategy and Action Plan for Mitigation Water Disaster, UNDP, 1994



supporting Government statements and guidelines. The estimations show in three models a generation of 322,000, 465,000 and 485,000 new employment opportunities during 1999-2003, or an increase over 1998 employment figure by between 32% and 50% percent.

With the long tradition of labour-based construction in Vietnam, the institutional structures are in place to ensure successful service delivery. To mount a suitable project that could benefit the poor and disadvantaged through employment generation, a staged and cyclic approach should be adopted and this is described in section 5 of the report and involves; Stage 1 – Preparation, Stage II - Planning, Stage III – Implementation and Stage IV – Evaluation.

### **Risks and Uncertainties in the Implementation of Employment Intensive Projects**

As amply demonstrated above there is undoubted scope for labour-based infrastructure construction projects in Vietnam. These would not only provide direct assistance to the poor through job creation but would also provide useful public works assets and create sound economic platforms in disadvantaged communities. But there are risks and uncertainties in any such programme and these must be understood and reconciled.

For example the demand by some line ministries to centre projects carried out in the provinces and districts in Hanoi at the national level can seriously hamper delivery. Experience has showed that this causes communication problems and obscures the chain of command. It is much more sensible to locate a project in the province/district and maximise the use of local universities, training establishments, contractors, equipment and small tools manufacturers and service providers generally.

It has not proved easy to “move” a donor related project out of Hanoi as liaison with the project agencies and donors is carried out by the line ministries centrally and not surprisingly they want to maintain a close watch on developments. But if a rural development project is to succeed it must be designed, managed and implemented at least at the provincial level and preferably at the district level.

To facilitate the wider and improved use of labour-based methods successfully the traditional role of the “contract” will have to be redefined. A situation where everyone involved has a “commission” is unsustainable as by the time a project is implemented there is too little left in the budget locally. Government acknowledge that “leakage” is endemic and any procedures for containing this would at least be outwardly welcomed.

There are also numerous small private sector contractors working in the provinces but the quality of their outputs is generally inconsistent. They find it difficult to compete with the SOE construction companies and they are subjected to the normal “commission” procedures. It might prove difficult breaking the control the SOE construction companies hold in the provinces and the districts and therefore competition and contractor choice may not be easy to achieve. Small contractor development and targeting for future procurement of work should address this important area.

One final point is that the sharing of resources and facilities is not widely practised by the technical departments at the provincial and district level. They each tend to insist on having their own facilities (i.e. soils laboratories, sets of survey equipment, computer software packages, vehicles, etc.) which proves inefficient and wasteful of resources. Even when they share project facilities purchased through externally funded sources it is often only after a consultancy “fee” is paid.

Clearly there is an urgent need for greater transparency and good governance in the construction sectors and it is possible that reforms can be effected in these sectors if there are clear unambiguous directives and controls from Government to put this into effect.



## 1.00 INTRODUCTION

### 1.10 Background

1.11 Any study of employment generation prospects in Vietnam must acknowledge and understand the important contribution labour-based construction has already made to the development of Vietnam's public sector infrastructure. With some notable exceptions most roads, water and irrigation schemes, community buildings and agricultural projects have been built by men and women using their own labour and the simplest of technologies. It is a tradition the nation is justly proud of and one where there is huge potential to modernise and appropriately equip the country's labour force to address the demands of the next millennium.

1.12 In more recent times numerous projects have been designed around the mobilisation and harnessing of large labour forces (typically drawn from the adjacent communities) to construct and rehabilitate valuable public sector infrastructure. These include sea dykes, rural access roads, community buildings, irrigation schemes and forestry regeneration projects. In the case of the former some 30 million workdays have been expended on the construction of sea dykes in 12 northern and central provinces over a period of 9 working years on two major World Food Programme projects<sup>5</sup>.

1.13 In the rural roads sector a joint World Bank and DFID programme will develop rural access infrastructure in 38 provinces and much of this work will rely heavily on labour-based construction technologies<sup>6</sup>. This initiative will build on a previous World Bank project currently working in 15 provinces. Both the sea dyke and rural roads initiatives are targeted at the poorest and most needy communities. The development of participatory irrigation management (PIM) operation and maintenance procedures is mobilising farmers and will see the tertiary systems in the state owned irrigation companies rehabilitated and eventually handed over to farmer based associations<sup>7</sup>. The state owned companies do not however possess the financial resources and it will up to farmers using their own devices to realise the full agricultural potential of these major irrigation schemes.

1.14 A detailed study has already been carried out by the ILO as part of a United Nations Development Programme venture looking at the feasibility of implementing a national rural non-agricultural employment generation programme. The outcome was positive and the implementation of a labour-based sub programme was strongly recommended and drawn up<sup>8</sup>.

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<sup>5</sup> WFP, CFA:33/SCP/18 and CFA:39/SCP:14 dated 27th February 1992 and 10th April 1993

<sup>6</sup> World Bank Proposed Second Rural Transport Project, dated June 1999 and DFID Rural Access Programme Dated July 1998

<sup>7</sup> ADB Operation and Maintenance Project, SMEC Final Report, dated 1997

<sup>8</sup> Planning for Employment Generation for the Rural Sector, ILO, VIE/94/005, 1994

1.15 This study has been carried out by Harry O. Sandberg, Senior Consultant to the ILO, in close cooperation with UNDP, MOLISA and the ILO ASIST-AP Programme and has involved discussions with the World Bank, ADB related donors and NGOs. A list of principal contacts is included in Annex A and documents referred to are listed in Annex B.

## **1.20 The relationship between Social Safety Nets and Public Works**

1.21 Part of the SPPD on Social Safety Nets in Vietnam is to assess how employment generation and social assistance initiatives can act as social safety net mechanisms. Attention is drawn to different types of public works and schemes launched by the Government or undertaken with support from international donors. It further assesses how ongoing public investment plans and initiatives can be slightly modified and re-focused to provide social safety to people in need.

1.22 All ASEAN countries have a rich tradition in organising special Public Works. However, the Public Work types organised, differ in their objective. Some can be characterised as “*directly economic supportive*”, such as programmes anticipating the economic crisis, in which governments provide special assistance to the unemployed in the communities as part of regular public investment plans. Other public works are just “*make-work*” projects that primarily aim to establish an income transfer among the poor. Community-driven public works often intend to strengthen social structures and capacities. Thus, the rationale behind launching public works, social investment, or Social Safety Net programmes is important, as it sets the conditions for implementation: the technical standards being met, the labour-content achieved in construction operations, the selection of the workers, the wages paid and other labour standards being applied. Sustainability and impact will be different under different conditions.

1.23 The past and recent experiences with public works in ASEAN countries demonstrate that when Public Works are organized as temporary relief measures, the quality of the created assets and sustainability of operations receive often low priority. Works tend to be “*labour-intensive*”, which means that implementation is done using hand tools only, in combination with an extensive percentage of manpower. Public Works that support the economy or communities on a permanent base, are better designed and pay more attention to quality. These works tend to be “*labour-based*”, applying a competitive mix of labour and essential equipment.

1.24 In Vietnam, Public Works draw on a rich tradition through which community action has become the nation’s pride. A well-considered policy to construct and maintain public or community assets in roads, irrigation, health, education infrastructure can provide *directly* and *indirectly* a buffer against the impact of hunger, natural disasters and starvation. Wage labour under fair working conditions, or various indirect benefits can indeed be an alternative to other measures, such as money-transfers or social insurance schemes. Public Works are a viable option. However, to provide the necessary social safety, works should be productive and add value to Government and private initiative. The leading question for this part of the SPPD is to assess in which form Public Works can be an effective instrument and which implementation conditions and programme objective should receive the required attention.

### **1.30 Economic Framework**

1.31 Most economic and social indicators in Vietnam improved sharply over the past ten years, driven by reforms initiated in the late 1980s following on *doi moi*. The out-put growth was closely associated with the large inflows of foreign direct investment, primarily from the Asian region, and related increasing exports. These investments levelled out in 1997 and started to decrease, because of the regional financial crises.

1.32 Magnified by the domestic structural weaknesses, especially in the banking and state-owned enterprise sectors, the Asian economies have been in crisis. However, the effects have been less in Vietnam than in other countries in the region due to its partially insulated economy. The country reached an impressive GDP growth averaging close to nine percent during 1992-97, while in 1998 it fell to under six percent, and with a further decline forecast in 1999 to around five percent<sup>9</sup>. For further reference cf. Annex C Volume 2 and Figure 1.

### **1.40 Legal Framework.**

1.41 It is important that the official environment is providing a positive framework to the application of labour-based technology. The manufacturing industry in Vietnam receives tax incentives to substitute equipment investment with labour employment, but there are however, no such incentives to the construction industry. There are however no decrees or other official statements directing or official guidelines assisting the line ministries, which generate infrastructure works, to assist or encourage them to optimise labour absorption in the implementation stage. However, the Department of Labour and Employment Policies (DLEP) of the Ministry of Labour, Invalids and Social Affairs (MOLISA) has stated that they are preparing draft policies concerning line ministries to adopt approaches that are focused on labour absorption. These policies are to be implemented next year. This is an important step in the right direction.

1.42 The present Labour Code is dated 23 June 1994, and implemented 1 January 1995. The Code supersedes all previous labour legislation and is an important step towards a market economy. The Code contains provision for the protection of employer and employee rights and obligations, regulation of labour contracts, the right to strike, and social insurance in case of unemployment and retirement. The Code prohibits the use of forced labour in whatever form. Separate chapters contain provisions on minimum wages, working and rest time, labour discipline, occupational safety and health, and

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<sup>9</sup> International Monetary Fund, Staff Country Report No. 99/55. Vietnam Selected Issues

Figure 1:

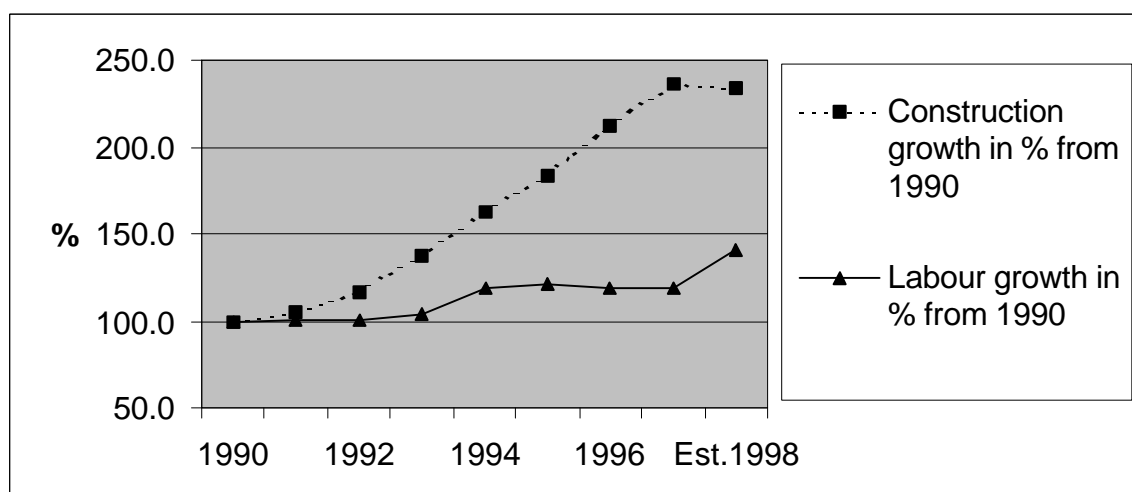
**Gross Domestic Product by Sector 1990-98 (billions of VND at constant 1994 prices; real growth rate in %)**

	1990	1991	1992	1993	1994	1995	1996	1997	Est.1998
Agriculture, forestry and fishery	41,773	42,600 2.0	45,867 7.7	47,381 3.3	48,968 3.3	5,319 4.8	53,577 4.4	55,577 4.3	57,867 4.1
Industry and construction	32,486	35,288 8.6	40,383 14.4	45,455 12.6	51,540 13.4	58,550 13.6	67,016 14.5	75,473 12.6	81,989 8.6
<b>Construction growth in % from 1990</b>	<b>7,974</b> <b>100.0</b>	<b>8,361</b> <b>104.9</b>	<b>9,339</b> <b>117.1</b>	<b>10,951</b> <b>137.3</b>	<b>12,946</b> <b>162.4</b>	<b>14,590</b> <b>183.0</b>	<b>16,938</b> <b>212.4</b>	<b>18,855</b> <b>236.5</b>	<b>18,674</b> <b>234.2</b>
<b>C.-GDP/labour (mVND)</b>	<b>9.7</b>	<b>10.2</b> 4.9	<b>11.3</b> 11.7	<b>12.9</b> 17.3	<b>13.3</b> 18.2	<b>14.6</b> 12.7	<b>17.4</b> 16.1	<b>19.3</b> 11.3	<b>16.2</b> -1.0
Services	57,524	61,813 7.5	65,531 6.0	71,198 8.6	78,026 9.6	85,698 9.8	93,240 8.8	99,895 7.1	104,820 4.9
Gross Domestic Product	131,783 5.1	139,701 6.0	151,781 8.6	164,034 8.1	178,534 8.8	195,567 9.5	213,833 9.3	231,263 8.2	244,676 5.8

**Labour Force by Sector 1990-98 (thousands of persons; growth rate in percent)**

	1990	1991	1992	1993	1994	1995	1996	1997	Est.1998
Agriculture, forestry and fishery	21,889	22,483 2.7	23,208 3.2	23,898 3.0	24,511 2.6	24,122 -1.6	24,775 2.7	25,444 2.7	26,104 2.6
Industry and construction	4,210	4,214 0.1	4,275 1.4	4,370 2.2	4,576 4.7	4,582 0.1	4,628 1	4,633 4.9	5,148 11.1
<b>Construction - total</b>	<b>818</b>	<b>820</b>	<b>825</b>	<b>848</b>	<b>972</b>	<b>996</b>	<b>975</b>	<b>977</b>	<b>1156</b>
<b>Growth in % from 1990</b>	<b>100</b>	<b>100.2</b>	<b>100.9</b>	<b>103.7</b>	<b>118.8</b>	<b>121.8</b>	<b>119.2</b>	<b>119.4</b>	<b>141.3</b>
<b>Constr. - state sector</b>	<b>383</b>	<b>0.2</b>	<b>0.6</b>	<b>2.8</b>	<b>14.6</b>	<b>2.5</b>	<b>-2.1</b>	<b>0.2</b>	<b>18.3</b>
		<b>302</b>	<b>278</b>	<b>278</b>	<b>290</b>	<b>297</b>	<b>294</b>	<b>338</b>	<b>350</b>
Services	4,187	4,277 2.1	4,332 1.3	4,450 2.7	4,577 2.9	5,886 28.6	6,389 8.5	6,917 8.3	7,494 8.3
Total Employment	30,286	30,974 2.3	31,815 2.7	32,718 2.8	33,664 2.9	34,590 2.7	35,792 3.5	36,994 3.4	38,746 4.7

Source: GSO, MOLISA, and Elaboration



women, young workers, and other categories of workers. Machinery for the settlement of disputes arising out of individual and collective labour contracts is instituted and a system of labour administration and labour inspection outlined. For further reference cf. Annex I.

1.43 Governmental Decree No. 42/1996/ND-CP of July 16, 1996 promulgating Regulations on Investment and Construction Management and Decree No. 92/CP of August 23, 1997, and Decree No. 43/1996/ND-CP of July 16, 1996 on Promulgation of Bidding Regulations and Decree No. 93/CP of August 23, 1997, have been substituted by Decree No. 52/1999/ND-CP of July 8, 1999 promulgating the Regulation on Investment and Construction Management and Decree No. 88/1999/ND-CP on Promulgation of Procurement Regulations. For further reference cf. Annex D.

1.44 Main changes are that responsibilities have been further delegated in the first decree, and the floor tender value has been abolished on construction contracts in the second decree. It is too early to evaluate, the effect of abolishing the floor value will have on the choice of technology in the construction sector. Line ministry decisions pursuing decrees are still valid after the issuance of new decrees where they do not contradict, until new decisions have been issued. E.g. Ministry of Construction decision issuing “Regulations on Registration and Issuance of Construction Practicing Licenses” pursuant to Decree 42/CP, cf. Annex D.

## **2.00 INSTITUTIONAL STRUCTURES**

### **2.10 National and Provincial**

2.11 In Vietnam the highest representative organ of Government is the National Assembly and it alone has constitutional and legislative powers. The executive organ of the National Assembly is the Government and through its various ministries, state committees and general departments the business of governance is conducted.

2.12 At the next level down and arguably the most critical from the perspective of implementing development initiatives is the provincial PPC. They are the undisputed power in the provinces and any project that has not thought through and taken due account of this fact is unlikely to succeed. Indeed the PPC often pursues policies of its own and has been known to ignore laws and instructions promulgated from the centre.

### **2.20 District and Commune**

2.21 After the PPC follows the district and the DPC and then the commune and the CPC. The simplest form of governance is the townlet, but to all intents and purposes it is the CPC that will be the entry point for labour-based infrastructure projects targeting the poor. There are hamlets which collectively make up a commune and this is the final level in the commune political order.

2.22 At the provincial and district level the national ministries are “shadowed” by provincial departments and district divisions. For example the MOTC delivers its projects through the PDOTC and likewise the MARD works through the PDARD. At the district level the same devolution of responsibility occurs and how these entities function and interact must be understood and built into project delivery.

### **2.30 Universities and Specialist Institutions**

2.31 On the whole the standard of engineering design and construction supervision at the provincial and district levels is appropriate. Over many years Vietnam’s universities have been producing engineering and science graduates of a generally high calibre. There are however some technical short falls - primarily in the areas of quality control and construction management. And the current sampling and laboratory testing facilities needs bolstering (i.e. geotechnical, chemical, construction material properties, etc.) but there is a strong technical services delivery structure which could be very easily mobilised to support labour-based construction initiatives.

2.32 While the civil engineering skills for infrastructure construction exist, this is not the case when it comes to project formulation and social engineering. Here there is a definite need for direction and support to ensure that a project selected for implementation is done so through a participatory planning and prioritising process and meets the aspirations of the community it intends to serve, is economically viable and environmentally sustainable. There is strong evidence to suggest that with its political antecedents based on a centrally planned economy these issues may not yet have received

the prominence they deserve. Government development policy must be clear and “market” considerations should be used to test and assess the appropriateness of projects.

2.33 As well as being involved in pure research the universities play an important role in setting civil engineering and building construction standards. Attached as they are to particular ministries there is a continual movement of engineers and scientists from one to the other. At the present moment two Vice Ministers in MARD have been professors at the HWRU where the ILO have a current collaboration programme. This intellectual transfer ensures that academia recognises and understands the needs of the infrastructure providers.

2.34 Of course there are differences in the way engineering is practised in Vietnam, and the most significant is the separation of management, design and construction functions. Concentrating on management few engineers or scientists in the line ministries understand design or construction and leave these issues to the SOE design and construction companies respectively. This applies equally at provincial and district level where the “shadow” departments work through the provincial and district SOE design and construction companies. And it is the separation of these two functions which makes it so hard to introduce workable quality control systems.

2.35 In assessing where and how improved labour-based methodologies could be introduced due cognisance must be taken of the way ministries operate and their specific technical functions. There is little doubt that the point of entry for labour-based initiatives is the universities and through their association with the HUTC which is attached to MOTC. The ILO ASIST-AP Programme has identified this fact and currently works with this university. A detailed needs survey would be required to identify specific gaps in the knowledge base and locate any other institutions that could usefully contribute to a labour-based construction programme. One of these worth considering is the Research Institute for Transportation, Science and Technology (RITST) but there are others. On current evidence there seems adequate scope for future collaboration but how the SOE design companies - or more importantly the SOE construction companies - would cooperate in any future labour-based construction initiative would need to be carefully considered.

## 3.00 PUBLIC SECTOR INFRASTRUCTURE SERVICES

### 3.10 Construction

3.11 Numerous cases show how important it is, for enhancing the economic growth, living standards, and environmental sustainability in a country, to improve the quality and quantity of its infrastructure services. Especially in developing economies are the benefits noticeable and contribute to substantial growth and effective poverty alleviation. The rapid growth in Gross Domestic Product (GDP) and export in Vietnam during the previous period was facilitated by the increased provision of national level infrastructure services i.a. in the transport and power sectors. The value at current price in 1998 of the gross domestic production in the construction industry sector was 20,761 bVND, almost six percent of the total GDP<sup>10</sup>. The national budget for the whole country is 16,000bVND with 13,000VND for construction and 3,000VND for maintenance, while the non-national budget, including foreign investment, donors, NGOs and citizens, comes to 30,000VND and 21,000VND respectively 9,000VND<sup>11</sup>. This value includes all types of ownership, state, collective, private, household, mixed, and foreign investment. For further reference cf. Annex C and G.

3.12 Government authorities responsible for project investment and construction management are Ministry of Planning and Investment, Ministry of Construction, Ministry of Finance and State bank of Vietnam. The principal line ministries responsible for generating infrastructure constructions are Ministry of Transport and Communication, Ministry of Agriculture and Rural Development, and Ministry of Construction. At the province level, the ministries are represented by their department offices, and in the districts by their district offices. Their organogrammes together with the one of Ministry of Labour, Invalids and Social Affairs are included in Annex E. Other line ministries generating infrastructure constructions are Ministry of Energy, Ministry of Education and Training, and Ministry of Health.

3.13 The three main international finance institutions assisting the country to develop its infrastructure constructions are the World Bank (WB), the Asian Development Bank (ADB) and the Overseas Economic Co-operation Fund of Japan (OECF). The WB and ADB are focusing the future emphasis of their infrastructure inputs rather on community-wide than sector-narrow aspects, while OECF focus on rural sector-narrow aspects. The financial disbursements made last year by the three lending institutions to the country were WB 217mUSD, ADB 128mUSD, and OECF 40bJPY. Their disbursement reports for the last years are included in Annex F. The main international donor agency in the infrastructure construction sector is the World Food Programme with the present 25mUSD sea-dyke rehabilitation programme and a total 1bUSD input. In addition, there are some thirty NGOs active with construction and infrastructure projects in the country.

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<sup>10</sup> General Statistical Office

<sup>11</sup> Ministry of Construction



3.14 Vietnam is continuing the program of upgrading national roads (total 14,000 km) through the economic crises with international financial assistance. Highway 1, linking Hanoi-Ho Chi Minh City, is being upgraded; Highway 5, linking Hanoi-Hai Phong, 92 km of 105 km has been opened; Highway 10, in the Red River Delta, is being upgraded. The road use has increased by about nine percent per year for the last ten years, but the overall situation is still not satisfactory. The country has a road network of 210,000 km where ten percent is paved and eighty percent of bad quality<sup>12</sup>. Most of the roads are narrow, of poor quality, badly maintained and in poor repair, leading to fast deterioration. The roads in the south are generally better. Insufficient attention has been paid to the secondary and tertiary roads, many times constructed to low standards with high maintenance costs as a result. There is an overall co-planning on major infrastructure works for the Greater Mekong Subregion including Vietnam, involving several external sources of finance. Refer to Annex B which summarises proposed subregional programmes.

3.15 Investment for rural infrastructure development constructions has been funded through different sources including province, district and commune budgets. Programmes are targeted and implemented by various ministries, branches and agencies i.a. the ministries responsible for transport and communication, agriculture and rural development, health, education and training, labour, invalids and social affairs and the CEMMA. Total investment during 1996-1999, with a focus on mountainous areas, reached 17,900bVND with annually increasing figures of 3,500, 4,300, 4,700 and 5,400bVND; with roads comprising thirty-nine percent, lighting electrification nineteen percent, small irrigation eighteen percent, schools seven percent, clinics over two percent, safe water over one per cent etc. of the total<sup>13</sup>. For further information cf. Annex G.

3.16 In the mountainous regions some 20% of the communes lack proper roads, with even higher figures for lack of all weather roads. 663 or seven percent of the total communes and two provinces in the south currently have no road access. Also in the agriculture sector serious investments for maintenance, repair and upgrading of infrastructure are needed, e.g. irrigation schemes, dyke and flood control systems. Inland waterways need maintenance and rehabilitation, only 40% of the courses and channels are dredged in any year.

3.17 Overall, the upgrading of the infrastructure is being delayed by lack of government funds. This year the government estimates that there will be a 400-500USD shortfall in funding for infrastructure projects. Official indications are that approximately ten percent only of infrastructure projects currently ongoing are being constructed with sufficient government funds.

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<sup>12</sup> Hanoi University of Transport and Communication

<sup>13</sup> Ministry of Labour, Invalids and Social Affairs

### **3.20 Construction Standards**

3.21 The reliance on outdated Russian and eastern European engineering technology is currently hindering infrastructure development in Vietnam and many recent schemes (constructed in the last 10 to 20 years) are deteriorating rapidly. Indeed the Vietnam Science Institute of Water Resources (VSIWR) which is attached to the HWRU and MARD are engaged on a research project at the present moment to identify design and construction inadequacies in some of the country's major hydropower facilities. A proposed UNDP project with the MARD, currently being assessed, will see the setting up of a dams and reservoirs inspection unit with statutory responsibility for maintaining a watch over these vital national assets. These examples serve to underline the importance of moving away from older outdated technologies and the adoption of modern computer based western technical design and construction standards. This applies equally to the adoption and application of new and improved labour-based design and construction technologies such as those being developed internationally by the ILO.

3.22 But at the other extreme there is now also an over willingness to adopt modern methodologies (sometimes unsuitable) and apply high technology approaches to simple engineering problems. This dichotomy will have to be accommodated in future infrastructure projects if they are to prove successful - particularly where labour-based construction methodologies should be employed because they would be the most technically and economically appropriate.

3.23 In spite of a long history of labour-based construction works in Vietnam there is surprisingly very formal teaching of the technology. Even on UNDP projects relying on this type of construction work, no apparent attempt has been made to recruit or seek advice from the ILO labour-based specialist advisors. The WFP sea dykes project is one example where major sea defences were constructed using labour-based systems without any specialist technical advice of this nature. This is strikingly illustrated in the engineering practices described in this project's 'technical' guidelines and on-site results.

3.24 The UNDP's Sea Dyke Engineering Services Project (VIE/92/023) now recognises the need for improved quality control and is to introduce improved practices into MARD via the Department of Dyke Management and Flood Control (DDMFC). These should also be introduced at provincial and district levels.

3.25 There is a burgeoning engineering consultancy sector (mainly comprised of engineers and scientists drawn from the universities) which can be used to deliver specific technical expertise (i.e. design services, set up and run soils laboratories, carry out specialist studies, quality control audits, provide consultants, etc.). While still very much in its infancy the consulting industry is able to quickly mobilise resources and in some disciplines they seriously rival the SOE design companies.

### **3.30 Contracting and procurement system**

3.31 Contracting in the rural areas is principally the domain of the SOE construction companies although since “doi moi” there is an increasing proportion of public works carried out by private sector companies. But the former still have first pick of most public works and it is not uncommon for the latter to ‘cry foul’ where public tendering is concerned. Both have their part to play in the construction of public service infrastructure but in the long term the private sector contracting companies should be expected to increase their market share because they are proving more efficient and cost effective. There is already an established culture of small scale civil engineering contracting and if these entities are allowed to flourish they would prove an ideal entry point for small labour-based construction interventions. Contract packaging and contract procurement reforms are certainly very necessary to enable this to eventuate.

### **3.40 Construction Sector**

3.41 With an annual real growth rate of over thirteen percent during 1991-97 and a total real growth of one hundred and fifty-five percent for the same period, the construction sector has grown more rapidly than industry and total GDP. However, there was a drastic change and in 1998 the sector is decreasing with a negative growth rate of one percent. The GDP at current prices for the same year is 20,761bVND or less than six percent of the total.<sup>14</sup>

3.42 In Vietnam, there are four types of contractors in the infrastructure construction sector, some 2200 SOEs, more than 550 equitized state-owned enterprises (PEs) and original private firms (PFs), and international joint ventures between the two first groups and international contractors<sup>15</sup>. The SOEs and the PEs show very similar profiles by size, modus operandi, high level of equipment investment, all levels of registration and all sizes of contract, geographical presence throughout the country. SOEs and PEs, being equipment dense, prefer equipment intensive implementation. Especially as they now apply bookkeeping methods for market economy, and have to calculate depreciation on equipment and show return-on-investment. The origin of the equipment is Russian, Chinese and to a certain extent American.

3.43 During the first half of the 1990s the construction machinery and equipment in the state sector have decreased in number on the central government level by twenty-seven percent, partly because of the ongoing creation of PEs of SOEs, while during the same time there has been an increase on the local level by eight percent. It is noticeable however, that on the central level more than twenty-one percent of the total equipment and more than thirty-five percent of the heavy earth moving equipment were not in running condition, while only eight percent of the total equipment on the local level (cf. Figure 2). This trend has continued, and today an important portion of the equipment is

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<sup>14</sup> General Statistical Office

<sup>15</sup> Ministry of Construction

**Figure 2: CONSTRUCTION MACHINERY AND EQUIPMENT IN THE STATE SECTOR**

	1990	1991	1992	1993	1994								
					Total			Central			Local		
					Total	In working condition	%	Total	In working condition	%	Total	In working condition	%
Total	25777	25721	20745	20129	21579	18075	84						
Central	17916	17869	13650	11602				13113	10330	79			
Local	7861	7852	7095	8527							8466	7745	92
1. Earthmoving equipment	3896	3803	3773	3597	3732	3024	81	1885	1304	69	1847	1720	93
Bulldozers					1285	994	77	680	445	65	605	549	91
Levellers					253	197	78	136	86	63	117	111	95
2. Air compressors	881	867	681	715	355	287	81	291	225	77	64	62	97
3. Construction machines	5404	5398	3873	3934	4636	4006	86	2581	2202	85	2055	1804	88
Concrete mixers					876	793	91	349	323	93	527	470	89
Lime mixers					200	176	88	40	36	90	160	140	88
Concrete tampers					1335	1098	88	655	543	83	680	555	82
Piling machines					261	224	86	164	133	81	97	91	93
4. Horizontal movers	8566	8765	8007	7490	7203	5880	82	4627	3490	75	2576	2390	93
5. Mechanical lifters	1526	1313	1157	1175	1284	1092	85	726	606	84	558	486	87
Tower cranes					129	112	87	99	83	84	30	29	97
Pioneer cranes					185	148	80	57	44	77	128	104	81
Motorcar cranes					350	316	90	223	203	91	127	113	89
6. Generators	913	759	698	717	616	517	84	394	305	77	222	212	96
7. Mechanical pumps	614	736	245	181	250	222	89	140	121	86	110	101	92
8. Dredgers	489	463	292	201	203	160	79	141	102	72	62	58	94
9. Other	3488	3617	2019	2119	3300	2887	86	2328	1975	85	972	912	94

Source: GSO, and Elaboration

ageing and will soon need replacement. On the other hand, the international partners of the joint ventures bring in modern high quality equipment.

3.44 The PFs are usually smaller, with less overheads, medium/low level of equipment investment, lower level of registration and no large contracts, a concentration with more than 100 firms in the south. Under the favourable conditions in 1997 and relaxed profitability criteria, only forty percent of the SOEs (all sectors) were profitable, and many highly indebted due to support provided to them through bank credit<sup>16</sup>. They use half of all bank credit and account for only five percent of all jobs. Indications are that due to budgetary constraints the government is behind in payment of over 70mUSD worth of finalised infrastructure constructions<sup>17</sup>.

3.45 The PFs and in principle the PEs do not get bank loans on the same soft terms and at the same low rates as SOEs, and must follow normal banking procedures and provide collateral for credit. The Government's present difficulty in honouring payment obligations promptly is therefore affecting disproportionately the private sector participating as main contractors or subcontractors in Government projects. Considering that the SOEs are responsible for about seventy percent of the annual contract value,<sup>18</sup> it indicates also the government to be in a circular locked situation at the magnitude of some 50mUSD through the involvement of state credit institutes, state-owned enterprises and state sector clients.

3.46 For credit support there are different banks in the market, from banks with special profile with preferential terms and rates to business banks with standard request for collateral and market rates. There is no national target programme directly applicable on contractor development. For example, the focus of the National Target Programme on Employment (NTPE) is i.a. on traditional and handicraft business and services, with credit, training and infrastructure components. Small-scale private establishments can borrow on 24 month-term up to 300mVND at a rate offered by Ministry of Finance lower than the prevailing lending interest rate offered by the VietcomBank. The NTPs do not decide their components but are made up of the total of the included components<sup>19</sup>, and there is a certain flexibility allowing for percentage redistribution between components<sup>20</sup>.

3.47 The Government does however still control, through the SOEs, the building material production sector at large, so for example cement, paint, tile sheets and building glass production. During the period from 1995 to 1998, the cement production increased by twenty-six percent, the tile sheets production by twenty-two percent, while building glass, bricks and lime all decreased by close to twenty percent, compared to the GDP growth at constant price of the construction sector (cf. Figure 3). It shows that the SOE

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<sup>16</sup> International Monetary Fund, Staff Country Report No. 99/55. Vietnam Selected Issues

<sup>17</sup> The Economist Intelligence Unit. Country Report, Vietnam 2<sup>nd</sup> quarter 1999

<sup>18</sup> Ministry of Construction

<sup>19</sup> Ministry of Finance

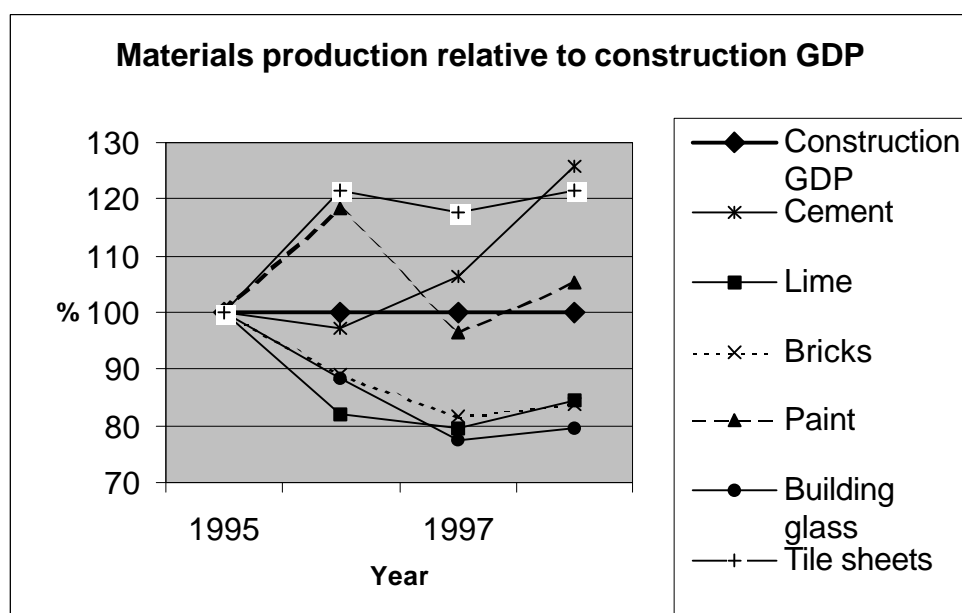
<sup>20</sup> Ministry of Labour, Invalids and Social Affairs

Figure 3:

**BUILDING MATERIAL PRODUCTION**

Main industrial products	Unit	1995	1996	1997	Prel.1998
Cement	1000 tons	5828	6529	8019	9390
State		5828	6585	7139	7350
Non state			56	44	40
Foreign invested sector					
Lime	1000 tons	1041	992	1069	1124
State		69	57	64	65
Non state		972	935	1002	1055
Bricks	10 <sup>6</sup> pieces	6892	7119	7262	7378
State		1121	1522	1746	1842
Non state		5769	5590	5506	5525
Foreign invested sector		2	7	10	11
Paint	Ton	21081	28995	26285	28388
State		10321	15286	17971	36
Non state		226	676	39	
Tiles	10 <sup>6</sup> pieces	561	478	482	484
State		66	62	65	62
Non state		495	416	410	412
Tile sheets	1000 m <sup>2</sup>	14791	20840	22492	23000
State		14722	20617	22436	23000
Non state		69	223	56	
Building glass	1000 m <sup>2</sup>	4751	4877	4755	4831
State		4614	4787	4755	4831
Non state					
Stones	1000 m <sup>3</sup>	10567	12465	15849	17434
State		5058	6442	8942	10458
Non state		5556	5991	6484	6526
Foreign invested sector		43	32	423	450
Sand, pebbles	1000 m <sup>3</sup>	14363	17147	22395	22417
State		5372	6486	9056	9248
Non state		8991	10661	13339	13169

Source: GSO



sector continued to produce to stock during the down turn of the economy, also in the building material sector. A new proposal by the Government is to introduce the construction of rural roads made from concrete, obviously in order to balance the distinct overproduction. The main sources of external finance in the rural roads sector (WB and DFID) are strongly resisting this move on the grounds of cost. These works are also not likely to be employment-intensive comparing with the experience of Thailand as the material costs are very high.

3.48 Public officials, and consultants and contractors in the public and private sectors state that infrastructure construction projects are severely affected by corruption of up to thirty percent of total value. For example, the full cycle of a project funded by Government budget is said to pass through some sixteen steps from concept to handover. Although impossible to quantify, it is commonly accepted that each step in the process is exposed to possible “leakage” of between one and four percent with the focus being on the tendering stage of between fifteen to twenty percent.

3.49 It is obvious that “leakage” of this magnitude can not be covered by any built-in profit margin, overestimation of additional work or streamlined operation approach alone, but can only be by cuts in quality and quantity. Cuts in quality and quantity increase the needs and costs for maintenance, minor and major repairs, resulting in high lifetime costs. A drain on resources that could be better used for an accelerated infrastructure development, with positive impact on employment and the economy as a whole.

3.50 The central government is well aware of the constraining impact on the overall economic growth generated by the corruption in general, and has already implemented several drastic steps to cope with the problem. In accordance with Decree 43/CP of 1996 on promulgation of bidding regulation, was until now a system of floor and ceiling limitations on the bid price applied for qualifying tenders. An accurate information on the floor value was most important in order to pass a tender. In the superseding Decree 88/1999 the floor value has been abolished, and a lowest bid price policy introduced instead. Also opening the door for further cost savings on construction projects. But, clearly, improvements are needed for greater transparency and the manner in which contracts are procured and implemented.

### **3.50 Construction Technologies**

3.51 The concepts of equipment- and labour-based technologies are not always easy to understand by their titles alone. This report therefore includes in Figure 4 a comparison between the different construction technologies, and on Page v definitions which explain the various technologies as well as the important differences between public and community works and other key aspects of national development programmes.

**Figure 4: CONSTRUCTION TECHNOLOGIES**

<b>Parameters</b>	<b>Equipment-intensive Technology</b>	<b>Labour-based Technology</b>	<b>Labour-intensive Technology</b>
Labour Input	Minimal	Optimal	Maximal
Equipment Input	Maximal	Well designed hand tools with supporting input of light or medium-sized equipment	Hand tools with minimal input of light equipment
Management Input	Modern (systems, procedures, training) essential at all levels	Same as equipment-intensive technology	Normally of less concern
Quality of Output	High	Same as equipment-intensive technology	Generally lower
Delivery of Output	Well planned, controlled and on time	Same as equipment-intensive technology	Uncertain and difficult to control, generally delayed
Cost of Output	Effective and competitive, well estimated and controlled	Same as equipment-intensive technology	Uncertain and difficult to control, generally expensive in relation to quality
Quality of Employment Values	Well monitored and implemented	Same as equipment-intensive technology	Generally not addressed
Type of production	New construction, repair or maintenance to a specified standard.	New construction, repair or maintenance to a specified standard. Design and planning to suit labour-based technology.	Limited to mainly maintenance, drainage or environmental activities
Sector Participation	Private and public sectors	Private and public sectors	Usually public sector
Reasons of Choice	Labour a scarce and/or expensive resource. Domestic production of heavy equip. and/or easy access to hard currency.	Labour an abundant and cheap resource. Heavy equipment a low-priority investment item. Socio-economic justification.	Socio-political justification

Source: ILO, and Elaboration



3.52 The equipment-based technology has developed out of modern industrialised production methods applying effective management techniques to maximise equipment inputs. It is well known that the use of this technology usually generates a high and even quality at a well-estimated cost within an easy-controlled time frame<sup>21</sup>. The technology is preferred in an environment where labour is a scarce and expensive resource prioritised for other sectors of the economy, and equipment is easily available through local production or supply of hard currency for importation. This is also the technology most widely taught at universities in Europe, the USA and Vietnam alike.

3.53. However, it is possible to achieve the same output and absorb more labour at the same time by substituting equipment-based with **labour-based technology**. This technology absorbs an optimum of labour while using a minimum of essential well-identified equipment at the same output standards as equipment-based technology. In a “targeted procurement” environment it is used where there is a socio-economic justification, where labour is an abundant resource at a competitive price, and equipment is scarce, expensive and low-prioritised and where there is a high demand for infrastructure. (cf. Figure 4.)

3.54. However, it is not possible to simply introduce this concept in the implementation stage. Programmes must be carefully designed and managed (often in a more management intensive way) through all stages to make the use of these programmes work. It is equally important that all concerned parties, directly and indirectly involved, at all levels and at all stages have a proper understanding of and are well trained in the use of the technology, relevant to their involvement.

3.55 It has been found that labour-based technology as a concept is not as well known in Vietnam as labour-intensive technology. Outside the academic world of HUTC, few parties involved in any stage of the construction project cycle, either in the public or in the private sectors, have viewed the technology as one which was a better option to moving directly from labour-intensive to equipment-based technology. There is however a good understanding of the concepts of equipment and labour-intensive technologies. There is also a long tradition in the country to use labour on infrastructure projects in rural areas, especially on “voluntary” labour projects using mainly unskilled and semi-skilled labour, but there seems to be little research and knowledge about the basic socio-economic concepts behind. As previously has been indicated, the SOEs and PEs already prefer to use equipment-intensive technology, and in some parts of the country there is a serious shortage of engineers and skilled workers even for this approach.

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<sup>21</sup> International Labour Organization

### **3.60 Construction Sector Associations**

3.61 In Vietnam, there are already well established associations for the different parties of the construction sector. There are associations also for the consultants, the building material manufacturers and the construction contractors, sometimes they are members of the same body sometimes of different ones. The associations are affiliated to regional unions of associations of industry and commerce. There are also unions in Ho Chi Minh City (HCMC) and in Hanoi.

3.62 The HCMC Union of Associations of Industry and Commerce (UAIC), is an organisation including members which are businesses in various manufacturing and trading fields and municipal administrators concerned with economic and technical development. It has primarily three functions. The first one is to represent the legal rights of members in relations with domestic and foreign organisations. The second one is to recognise the legitimate aspirations of members, to recommend to government the drafting and implementation of policies and laws in the industrial and commercial fields and creating opportunities for members to expand their abilities and make their full contribution to the welfare of the country. The third one is to promote solidarity and mutual support among members to contribute to the success pursuit of policies of the Party and the laws of the State in the business sectors represented by the union.

3.63 Another association in HCMC for the construction sector is called Construction Enterprises Association, which is a member of the UAIC. The group was formed 1975 on advise from the government, and the members worked as individuals under the protection of FNL. In 1993, the association was properly instituted. The association is well anchored in the private sector with about 150 members whereof 100 PF contractors, 10 SOE contractors, and the balance being building material merchants and consulting architects and engineers. Most of the contractors are building contractors, about half are small contractors and half medium, and registered on district, province or national level. The association acts as an intermediary between the members and the government, a reference to the government on questions concerning the construction sector, and organiser of meetings and conferences on professional subjects.

3.64 Another association in HCMC for the construction sector is called Saigon Construction and Building Material Association (SCBMA). The association has about 70 members which with few exceptions are SOEs, PEs, government offices and joint-ventures. They are construction contractors, building material merchants, architect and engineer consultants, investment and development houses, professional institutes, schools, and magazines. The functions of the group are to act as focal point for joint-venture and economic combination between members and the outside world; to act as focal point for calling investment, technology and labour mobilisation in and out of the country; to represent the members' right for direct contact with the outside world in the matter of investment, joint-venture, combination, and business production; to combine other economic organisations in supplying materials, raw materials and in consuming members' products; and to collect and provide information related to business activities.

3.65 The Hanoi Union of Associations of Industry and Commerce (HUAIC) is an organisation with similar functions and responsibilities as the organisation in HCMC with a similar name. The Vietnam Construction Association (VCA) in Hanoi is a member of the Hanoi union and close to the MOC. It was founded in 1982 as a certificate and technical association with almost only individual members. In 1988 the association was reorganised for the market economy into a professional and technical umbrella organisation. It has today as members, 15 professional and technical associations, 32 provincial associations with individual and company members, and some 7000 individual and 250 company direct members. The members are contractors active in different areas of construction, building material merchants, architect, engineer and quantity surveyor consultants. It has similar functions and responsibilities as a union focusing on the construction sector.

3.66 The Vietnam Association of Construction Contractors (VACC) was founded in September this year, and became the fifteenth association member of Vietnam Construction Association. The association has 250 members, whereof 180 SOEs representing six ministries, six joint ventures (with Japan, Australia and Singapore), 23 PE share holding companies with minority state holding, eight PE share holding companies with full private holding, and the balance being original private limited companies. Among the members, there are construction contractors, building material producers and merchants, architect and engineer consultants, and large general construction corporations. Thus, the association has a profile and function similar to the SCBMA in HCMC.

## 4.00 LABOUR AND EMPLOYMENT GENERATION

### 4.10 Skills availability and costs

4.11 The average literacy rate in Vietnam is above ninety-one percent but distinctly lower in remote rural areas. The economically active population in working aged trained to professional qualification in the whole country is 4,4m total, whereof 2,7m men and 1,8m women. The economically active population is 37,4m total, whereof 18,7m men and 18,7m women. The percentage of trained workers is close to twelve total, over fourteen men and less than ten women. The Government has a present goal to increase the percentage of professionally trained workers to about twenty-two percent.<sup>22</sup>

4.12 In the construction industry sector there is a serious shortage of engineers and skilled workers<sup>23</sup>. The total employment in the sector is 1.2m. The representation of the economically active population with professional qualifications in the field of construction is relatively well balanced between the different regions of the country. However, in the Red River Delta the presence is almost twice the average and in the Central Highland also above, while in the South East below and in the Mekong River Delta less than half. As can be expected the population with university and college education is concentrated to urban areas and certain of the groups are partially employed outside the construction sector. (cf. Figure 5.) The labour outputs in south part of the country are estimated to be between one and a half and two times higher than in the north, both by quality and by quantity. A study of the reasons behind these major differences should be undertaken prior to the setting of National labour-productively standards for L-B programmes.

4.13 The Government official minimum wage rate is 144,000VND per month or 5,540VND per day, equal to about two kilos of rice. In the whole country, nine percent of total employers pay less than 144,000VND per month, eighteen percent pay from 144,000 to 200,000VND, twenty percent pay from 300,000 to 400,000VND, and twenty-seven percent pay more than 400,000VND<sup>24</sup>. Minimum graduate engineer salary in the SOE sector is 1.78x144,000VND per month. Average SOE salary 500,000VND. Maintenance labour in the SOE sector is paid 200,000 VND<sup>25</sup>.

4.14 In the northern delta and coastal areas, the rural off-season market rate for labour is 10-15.000VND per day, the suburban rate 15-20,000VND and the urban rate 20-25,000VND. In the mountainous areas, the rural off-season market rate is about 4-7.000VND per day. In the southern part, the rates are about twenty percent higher. Road construction workers in their mid-twenties are paid about 500.000 to 700.000VND per month and foremen in their mid-thirties about 1mVND (nominal salaries about 300.000VND plus incentive bonus) in the southern part<sup>26</sup>.

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<sup>22</sup> General Statistical Office

<sup>23</sup> Hanoi University of Transport and Communication

<sup>24</sup> Ministry of Labour, Invalids and Social Affairs

<sup>25</sup> Ministry of Transport and Communications

<sup>26</sup> Different Public Sector Sources and Field Visits

**Figure 5: ECONOMICALLY ACTIVE POPULATION AGED 15 YEARS AND OVER BY LEVEL OF PROFESSIONAL QUALIFICATION 1998**

Professional Qualification		Technician Training				Technical Secondary Education		University and College Education		
Region	Unit Person	Carpentry	Construction Engineering	Construction Material Production	Construction Machine Operation	Construction Engineering	Economic Management	Architecture	Construction Technology	Technical Economy
1 Red River Delta	Urban	6156	22186	388	1107	11842	24760	5185	11985	3478
	Rural	30252	35810	1666	6369	19600	23960	1040	5234	2716
	Total	36408	57996	2054	7476	31442	48720	6225	17219	6194
2 North East	Urban	3615	9451	569	2563	5845	21385	1433	1138	719
	Rural	6140	9552	254	1477	4838	17435	807	-	662
	Total	9755	19003	823	4040	10683	38820	2240	1138	1381
3 North West	Urban	1074	1311	22	531	1146	5421	165	116	128
	Rural	934	926	-	926	1659	3863	-	118	-
	Total	2008	2237	22	1457	2805	9284	165	234	128
4 North Central	Urban	4721	5449	326	1946	3471	18564	830	1474	328
	Rural	8481	7752	2008	880	6872	13712	422	-	211
	Total	13202	13201	2334	2826	10343	32276	1252	1474	539
5 South Central Coast	Urban	4615	5720	183	367	2838	5177	108	1728	890
	Rural	12188	13850	-	671	1926	4942	-	942	50
	Total	16803	19570	183	1038	4764	10119	108	2670	940
6 Central Highland	Urban	2779	3322	57	605	1198	4076	224	297	219
	Rural	1931	1839	-	1031	1281	4380	162	32	32
	Total	4710	5161	57	1636	2479	8456	386	329	251
7 South East	Urban	11236	18109	856	1355	1524	10045	4758	7226	301
	Rural	8266	13981	-	3064	2962	9056	660	2773	1221
	Total	19502	32090	856	4419	4486	19101	5418	9999	1522
8 Mekong River Delta	Urban	6044	4929	78	1427	1501	10286	682	595	338
	Rural	10461	11197	856	909	1799	13266	213	1221	214
	Total	16505	16126	934	2336	3300	23552	895	1816	552
Total 1-8	Urban	40240	70477	2479	9901	29365	99714	13385	24559	6401
	Rural	78653	94907	4784	15327	40937	90614	3304	10320	5106
	Total	118893	165384	7263	25228	70302	190328	16689	34879	11507

Source: GSO

4.15 The field survey carried out in the three provinces of Tuyen Quang in north-west, Nghe An in north-central, and Tra Vinh in the Mekong Delta gave the following average daily rates, in urban areas lowest 30,000VND (US\$2.16), highest 35,000VND (US\$2.52), common 33,000VND (US\$2.37), and in rural areas lowest 12,000VND (US\$0.86), and common 15,000VND (US\$1.08)<sup>27</sup>.

#### **4.20 Voluntary Labour.**

4.21 Voluntary (but obligatory) labour is still used in Vietnam as a mean for developing infrastructure construction. It is officially institutionalised by the Government and is normally implemented within the community of which the participants are members. The participants are directly involved in the decision process, or indirectly very close to the process identifying work to be carried out, and in almost all cases directly benefiting from the construction. The type of work is usually typical local infrastructure projects such as repair or new construction of rural roads, irrigation infrastructure, sea dykes, schools, clinics etc.

4.22 The obligation of voluntary labour<sup>28</sup> is at working age and of ten days annually including travel, i.e. work to be carried out is always counted as ten days allowing for two days travel whether necessary or not. Travel time is usually not needed as the participants leave very close by, but in mountainous areas for example, where the travelling speed is very low this allowance is needed. In such situations, participants stay as non-paying guests with local members of the society. Participants that wish to continue working after the end of the allotted period are paid in accordance with relevant market rates.

4.23 The obligation can also be fulfilled in kind or in cash. The cash value is locally decided and varies throughout the country. Public sector employees do not do voluntary work, but pay compensation by direct deduction from their salaries; in Hanoi the value is 15,000VND per day. For employees at NGOs in Hanoi it is 60,000VND. Thus, people that have a regular occupation pay rather than participate.

4.24 In Tuyen Quang Province in the north of the country, the value is 8,000-10,000VND to be paid by those who do not want to work. In Long An Province in the south the value was previously 15,000VND, but people did neither work nor pay. In other provinces in the Mekong Delta the participation was still lower. The value was decreased to 10,000VND for men and 8,000VND for women, and then further to 8,000VND and 5,000VND. The province is now achieving a high level of cash participation. People with a monthly earning of less than 120,000VND in rural areas and 150,000VND in urban do not have to pay. In this case the compulsory labour has practically been transformed into a commune tax.

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<sup>27</sup> Institute of Labour Science and Social Affairs

<sup>28</sup> Ordinance 15, November 1999

4.25 The Labour Code of Vietnam of 23 June 1994, and implemented on 1 January 1995, states in Chapter I. General Provisions, Section 5. (2) that “Maltreatment of workers and the use of forced labour in any form shall be prohibited”. For further reference please see Annex I.

4.26 Vietnam has not yet ratified two International Labour Organisation, C29 “Forced Labour Convention, 1930” adopted 28 June 1930, and C105 “Abolition of Forced Labour Convention, 1957” adopted 25 June 1957 (for further reference cf. Annex J). Paragraphs, referring to the type of work justifiable to the use of labour in C29, state in Article 2.2 that the term forced or compulsory labour shall not include

- (b) “any work or service which forms part of the normal civic obligations of the citizens of a fully self-governing country”; and
- (e) “minor communal services of a kind which, being performed by the members of the community in the direct interest of the said community, can therefore be considered as normal civic obligations incumbent upon the members of the community, provided that the members of the community or their direct representatives shall have the right to be consulted in regard to the need for such services”.

4.27 In Article 9 it is further stated that the competent authority shall satisfy itself i.a.

- (a) “that the work to be done or the service to be rendered is of important direct interest for the community called upon to work or render the service”;
- (b) “that the work or service is of present or imminent necessity”.

However, it is stated in C105 Article 1 that no use should be made of any form of forced or compulsory labour

- (b) “as a method of mobilising and using labour for purposes of economic development”.

The ILO has produced two recent guides on labour-based works programmes<sup>29</sup> and contracting<sup>30</sup> which are very useful references in this area.

4.28 As seen, voluntary labour in Vietnam is intended for self-help activities which benefit of the participants. These works are identified by them, and generally implemented in their direct local environment. Where people have a more regular occupation they would rather pay, and it happens that the community itself turns the obligation into a commune tax. Where people participate is primarily in rural areas with seasonal occupation.

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<sup>29</sup> Employment - Intensive Infrastructure Programmes, Labour policies and practices, David Tajgman, J. de Veen

<sup>30</sup> Employment - Intensive Infrastructure Programmes, Capacity Building for Contracting in the Construction Sector, Peter Bentall, Andreas Beusch, J. de Veen

**Figure 6: CONSTRUCTION COMPONENTS BY PERCENTAGE AS APPLIED IN PROJECTS IN SOUTH AND NORTH VIETNAM.**

Area	VINH PHUC PROVINCE - NORTH VIETNAM 1999														
Authority	DARD									DOT			DET		Trung Ha Commune
Type of infrastructure construction	Canal and reservoir new		Dyke new		Dyke new		Small scale structure (Pump station)		1995-1999 Average	Primary road asphalt new	Secondary road new	Maintenance road	School building		1998-99 Upgrading repair
Components	mVND	%	mVND	%	mVND	%	mVND	%	%	%	%	%	mVND	%	%
Labour	16	15	20	6	13	24	10	13	25-30	12	25	36	50	10	30-40
Material	66	63	0	0	4	7	38	48	30	37	27	34	420	84	60-70
Equipment	4	4	305	86	33	60	1	1.3	30	21	10	4	12	2.4	
Admin Design							(24)	(30)		11	8	20	9	1.8	
Other	19	18	27	8	5	9	6	8	10-15	19	10	6	10	2	
Total	105	100	352	100	55	100	79	100	100	100	100	100	500	100	100
Labour/equip		3.75		0.07		0.4		10	0.83-1	0.57	2.5	9		4.17	
Comments			more equipm		more labour		(machinery)		8-10 bVND annual investment	more equipm.	cheaper mtrl, more labour		8 room school 3000 working days		170mVND disbursement

Source: Field visits 9/99

Area	LONG AN PROVINCE - SOUTH VIETNAM 1999																HCMC PROVINCE	Regional district 7	
Authority	DARD									DOT						DOC	DOH	Highway Directorate	
Type of Infrastructure construction	Canal earth lining		Canal concrete/brick lining		Canal-dyke earth		Canal-dyke earth	Small scale structure (intake)		Primary road asphalt new		Secondary rd asphalt new		Maintenance road asphalt	Maintenance road	Build ing new	Clinic	Maintenance road highway	
Components	mVND	%	mVND	%	mVND	%	%	mVND	%	mVND	%	mVND	%	%	%	%	mVND	%	%
Labour	6376	25	1304	12	3.9	3	70	13.6	26	574	8	639	9	61	27	10-15	52.9	12	61
Material	0	0	4594	43	2.6	2	0	25.2	49	4033	52	3585	51	28	70	70-80	357.7	80	28
Equipment	10686	43	1416	13	82.0	54	0	1.0	2	1117	14	1111	16	9.6	3	10-15	4.3	1	9.6
Admin Design	833	3	365	3	13.0	9	5	2.8	5	310	4	288	4	1.4		5	29.1	7	1.4
Other	7166	29	3071	29	48.5	32	25	9.4	18	1722	22	1406	20	0			Incl.		0
Total	25061	100	10750	100	150.0	100	100	52.0	100	7757	100	7030	100	100	100	100	444.0	100	100
Labour/equip		0.58		0.92		0.06			13		0.57		0.56	6.4	9.0	1		12	6.4
Comments					more equipm		more labor local												

Source: Field visits 9/99



4.29 The unskilled farmers participating are getting through practice an introduction to employable skills in the construction sector applicable in the off seasons, and an important understanding for self-help in the maintenance of infrastructure construction in the direct environment important for their agricultural production. At the commune level there is always a market for the small contractor to carry out construction work in the private sector, work in the public sector which is not directly implemented and supervised by the commune, and more complex constructions usually falling outside the scope of voluntary work projects. There is concern however that contractors may in future take advantage of this “voluntary labour” system, which should preferably not be a part of regular government programmes.

### **4.30 Employment Generation**

#### **4.31 Framework**

4.311 It is known that in the Vietnamese economy, labour absorption did not increase in direct relation to the real growth of GDP as in other comparable Asian economies. The same fact counts for the construction sector also, against a real growth of 155 percent during 1991-97 the labour force increased with only 19 percent to 0.98m, and the per capita production from 10.2 to 19.3mVND. (For further reference cf. Figure 1 and Annex C.) The relatively low figure for employment increase can partly be explained by slack capacity available as in other sectors of the economy with an important presence of SOEs and PEs, and partly by the new participation of international joint ventures introducing modern management and production methods. Also SOEs, PEs and international companies, dense, prefer equipment intensive implementation. Indications are however that it is over fifteen times more expensive to create a job in a large SOE than in a small PF.

4.312 Values of labour-equipment ratio<sup>31</sup> from different type of projects from the north and the south of the country are shown in Figure 6. For example, primary road construction in the north and in the south have the same ratio of 0.57, being somewhat less than the value of 0.4 for national highway construction indicated by Hanoi University as equipment-intensive in Figure 7. Maintenance of province roads shows the same ratio 9.0 in the north and in the south. While, as expected, maintenance of national highways and province asphalt roads are using more equipment at a ratio of 6.4. Dyke and canal projects in the north and the south show values in span from 0.06 to 70% labour/0% equipment. When evaluating the ratios it should be remembered that the labour rates in the country are relatively low, but also that there is a tendency to underestimate equipment inputs as much equipment was provided by “grant” and is estimated at operation and maintenance costs only (no amortisation or investment costs).

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<sup>31</sup> Different Government sources and Field



4.313 The employment figure for 1998 is estimated officially to 1.16m, which indicates an increasing labour absorption in view of the declining GDP of the construction sector. (Applying the per capita production of 1990 on the GDP of 1998 would give a fictive employment of 1.92m, a 0.76m higher figure.) Some 2200 SOEs employ 650,000 people whereof 190 SOEs under the main line ministries 230,000 people, the central government 229,000 and local government 120,900, and PEs, PFs, co-operatives and free local labour make out the balance<sup>32</sup>.

4.314 The field survey<sup>33</sup> carried out in the three provinces of Tuyen Quang in north-west, Nghe An in north-central, and Tra Vinh in the Mekong Delta gave that the rural infrastructure projects mainly concentrated on educational and irrigation projects with thirty-eight and twenty-five percent respectively of total value of rural projects, and thirty-four and twenty-six percent of total number of rural projects. For urban projects for transportation and education the figures were thirty-eight and twenty-four percent respectively, and equally twenty-five percent.

4.315 There was no “voluntary” labour used in the urban areas, while forty-six percent of workday inputs in rural areas was “voluntary” labour. Ninety-four percent of total “voluntary” labour was used in irrigation projects. These projects have a labour component of twenty-four percent, and with wage-cost compensation made for the free labour, the value comes to thirty-nine percent. For education projects the component is four and five percent respectively. These figures are rather low in comparison to corresponding values from the ratio study, which indicate for irrigation projects with high local labour inputs up to seventy percent labour and for education and health projects about fifty percent. Over ninety-five percent of the labour is local, with the balance being skilled or specialised labour coming from outside the locality. For further information cf. Annex H.

4.316 Normally labour is employed directly by the contractor responsible for the total contract or a specific subcontract. In rural areas also, where a commune is itself implementing a project, labour can be engaged through a labour-only subcontract. For 1998 the urban unemployment rate was below seven percent, and the rural working time rate was seventy-one percent with an even gender distribution<sup>34</sup>. In the present situation of needs of employment absorption, two scenarios are identified for the infrastructure construction industry, short-term temporary and long-term sustainable employment creation.

### **4.32 Short Term Temporary Employment**

4.321 The government’s present migration policy favours a continued high rural population rate. In order to motivate the part of the population exposed to social hardship to continue to reside in rural areas and not to participate in an uncontrolled migration to urban areas, it would be favourable to focus emergency employment schemes on rural areas. Subsequently, a follow-on effect could be that the migration would reverse.

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<sup>32</sup> Ministry of Construction

<sup>33</sup> Ministry of Labour, Invalids and Social Affairs

<sup>34</sup> General Statistical Office

Emergency schemes in urban areas, on the contrary, could have an accelerating effect on uncontrolled urbanisation.

4.322 Emergency employment programmes are preferable anchored on the lower levels of the government structure, on the district and preferable the commune levels. The experience from the field visits show that there is a long tradition on these levels of project identification, planning and self-implementation, well anchored to needs identified by the local population. The types of projects are usually upgrading of social and productive community-based assets. It is the chronic shortage of finance that limits the number of projects that can be implemented, and not a question of engagement. It is therefore natural, that the priorities as identified by the community should guide the choice of projects for these programmes.

4.323 By tradition infrastructure projects are implemented by using voluntary labour under the direct management of the local authority. During the periods between crop production, the rural labour is easily available for infrastructure projects. Depending on funding, contractors are used also. Labour is sometimes contracted on labour-only contracts, as indicated. There are no rural private construction contractors. They are usually found in the district and province centres and work from there into rural areas. For emergency employment programmes in areas where there is no small or medium private construction sector active, and a prompt implementation is required, the natural choice is to follow the existing tradition of implementation. However, where there is an opportunity to combine an emergency programme with contractor development, it gives an opportunity to strengthen the growth of this industry sector.

4.324 The scenario for short-term temporary employment creation is focusing on rural communes identified by the government. The Socio-economic Development Programme for Communes in Extreme Difficulties (SDPCED) or 1,715 Poor Communes Programme is a programme for seven years 1999-2005 for the poorest and most isolated regions in the mountain and Mekong delta areas with a high percentage of ethnic minorities. The programme is managed by CEMMA. The applied objective is found to be most relevant in the situation. It is to upgrade economic and social community-based public assets by creating temporary job in the short perspective, and by that preparing the ground for economic growth and subsequent permanent job creation in the long perspective.

4.325 The programme will include the 1,000 most vulnerable communes initially, giving assistance in this year to infrastructure development of one of six types as prioritised by the people to benefit directly from the services (road to commune centre, primary school, health centre, market building, electricity transmission station, administrative building). The balance of 715 communes is getting financial assistance from other sources this year, and will next year be included together with the 1000 communes in same budget<sup>35</sup>.

4.326 The model for implementation chosen is traditional for the country, following the standard approach of a high level of delegation to the commune level of identification and implementation of rural infrastructure projects. The model chosen engages from the very beginning the end users and achieves a high level of identification with the project. The

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<sup>35</sup> Committee for Ethnic Minorities and Mountainous Areas

aim is to carry out the constructions with a minimum use of equipment and an optimum use of local labour directly benefiting from the services. More simple construction such as roads, schools, health centres are build by the communes themselves employing the labour directly, while more complex constructions such as bridges, communication centres by contractors. The contractors are operating on the district level. Preference is being given to SOEs over private enterprises on negotiated contracts.

4.327 CEMMA uses half a percent of the budget for administration, estimates the labour component for constructions to be about forty percent of the balance, and pays between two and three kilos of rice per day per labourer (the WFP ration is two and a half kilo)<sup>36</sup>. Under the framework of the National Target Programme for Hunger Eradication and Poverty Reduction (NTPHEPR) is channelled the infrastructure components from the resources of sixteen programmes. The total value in 1999 is 1,500bVND including the 410bVND of the Poor Commune programme<sup>37</sup>. This generates approx. 59m workdays, applying the above indicated criteria with twenty percent skilled labour at 20,000 VND and standard 25% broken rice at 2,800 VND per kilo<sup>38</sup>. The budget for next year will be 1,100bVND generating approximately 43m workdays.

### 4.33 Long Term Sustainable Employment

4.331 It is feasible to implement the scenario for long-term sustainable employment creation through two schemes. The two schemes are focusing on different areas of the construction industry, by size of activities and by profile of participating contractors.

4.332 **The first scheme is to increase labour absorption under regular government budgets** for new constructions, minor- and major repairs, and maintenance programmes, i.e. without additional costs to generate additional employment. This can be achieved by applying **labour-based technology**, defined by absorbing an optimum of labour while using a minimum of well-identified equipment at the same output standards as equipment-intensive technology.

4.333 The construction firms participating in these projects and programmes are on the national and provincial level and only SOEs and PEs. Depending on the geographical area one can find on district level a combination of the three types of national firms. International joint ventures are found on projects with funding from international funding agencies. As previously indicated, the SOEs, PEs and international joint ventures prefer to use equipment intensive methods. South of the country is generally using a more equipment-intensive approach than the north, e.g. the highway maintenance teams in the south use only about thirty percent as much labour, and plans are to further decrease by fifty percent.

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<sup>36</sup> Ibidem

<sup>37</sup> Ministry of Labour Invalids and Social Affairs

<sup>38</sup> World Food Programme

4.334           **The second scheme is to develop the small and medium construction industry in the private sector** with the assistance from relevant supporting bodies and programmes. The small and medium PFs have usually a higher level of labour density, than larger firms do with a higher level of investment. The smaller firms can participate with limited investments in quite important projects in the infrastructure construction sector, when applying **labour-based technology**. This group of contractors needs a wide training programme including other professional areas than only about the technology. They also need assistance to financing on terms more favourable than normal market terms. There are programmes for employment creation through support to starting up and enlarging businesses. The major programme, NTPE is not designed to include small contractor development, but contain applicable training and credit components, as previously mentioned. Financing is usually an important constraint on small and medium contractor development, and needs special and separate attention.

4.335           Visits were made to well-implemented WFP sea-dyke rehabilitation projects in Thai Binh and Nam Dinh provinces, for example. The contractors were responsible for the over-all implementation, on site production and placing of interlocking concrete units and other concrete work. They were using limited amount of skilled labour, medium size concrete mixer, small vibrator, mechanical earth compactor, steel moulds, and standard hand tools. Unskilled local labour was provided through a separate contract. The well functioning implementation was made possible by a proper planning starting already in the design stage.

4.336           As previously indicated the per capita production in the construction industry increased during 1990-97 from 9.7 to 19.3mVND. The value is estimated to come down to 16.2mVND in 1998. The employment figure for 1998 is estimated officially to 1.16m, which indicates an increasing labour absorption in view of the declining GDP of the construction sector. The positive effects of introducing labour-based technology through the two schemes, are estimated over the period of 1999-2003 with the following conservative assumptions:

- the value of per capita production will not decrease any further, but stay around the present high value;
- the percentage of the construction sector of industrial GDP at constant 1994 prices, which has varied during 1990-98 between 22.8% and 25.3% with an average value of 24.3%, will not turn up again but stay between 22% and 23% during the period (first and second models);
- the percentage of the construction sector of total GDP at constant 1994 prices which has come down from 8.2% to 7.6% will not increase again but stay on this level during the period (third model).

4.337 The calculations of estimated sustainable long-term employment creation are shown in Figure 8. They are based on estimations of the future development of the GDP and the industrial GDP<sup>39</sup>, and the above-indicated values. The first two models show an increase over the period of between 465,000 and 485,000 new employment opportunities, while the third model an increase of 322,000 opportunities, or an increase over 1998 employment figure by between 32% and 50% percent.

4.338 It is important that all concerned parties, directly and indirectly involved, at all levels and at all stages have a proper understanding for and are well trained in the use of the labour-based technology, relevant to their involvement. It will be necessary to facilitate the introduction and promotion of the technology, the coordination of institutionalisation of training, and the transfer of international training material. For this purpose, it comes natural to draw on the long and wide experience of the ILO, from several continents during more than twenty-five years in labour-based technology.

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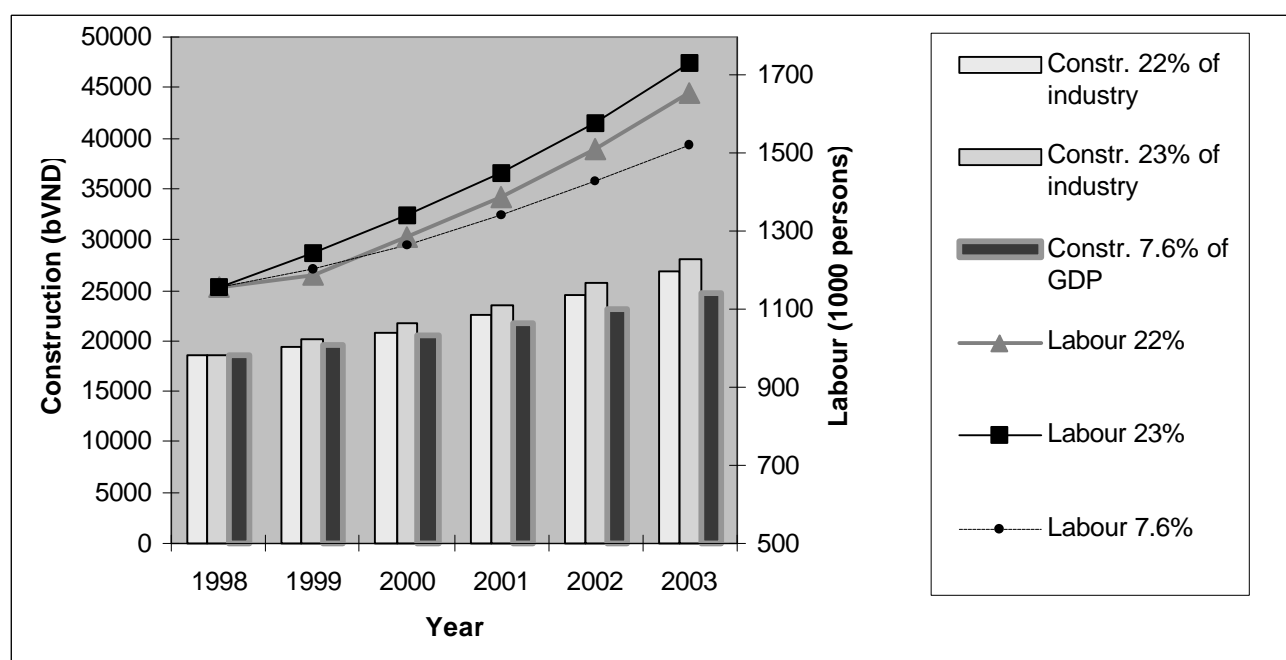
<sup>39</sup> The Economist Intelligence Unit, Country forecast, Vietnam 2<sup>nd</sup> quarter 1999

**Figure 8: Estimated Employment Generation in Construction Sector 1999-2003**  
(Three models based on GDP at constant 1994 prices)

Estimated values	(1998)	1999	2000	2001	2002	2003
Industry and construction (I&C) (bVND)	81989	87728	94571	102137	111329	121905
Real growth rate (%)	8.6	7.0	7.8	8.0	9.0	9.5
Constr.GDP/labour (mVND)	16.2	16.2	16.2	16.2	16.2	16.2
Constr. 22% of I&C (bVND)	18674	19300	20806	22470	24492	26819
Labour (C. 22% of I&C) (thousands of persons)	1156	1191	1284	1387	1512	1656
	100%	103%	111%	120%	131%	143%
Constr. 23% of I&C (bVND)	18674	20177	21751	23491	25605	28038
Labour (C. 23% of I&C) (thousands of persons)	1156	1246	1343	1450	1581	1731
	100%	108%	116%	125%	137%	150%
Gross Domestic Product (bVND)	244676	255442	268980	284850	303365	323691
Real growth rate (%)	5.8	4.4	5.3	5.9	6.5	6.7
Constr.7.6 % of GDP (bVND)	18674	19496	20529	21740	23153	24705
Labour (C.7.6%of GDP) (thousands of persons)	1156	1203	1267	1342	1429	1525
	100%	104%	110%	116%	124%	132%

	1990	1991	1992	1993	1994	1995	1996	1997	1998	Average
% Constr. of I&C	24.5	23.7	23.1	24.1	25.1	24.9	25.3	25.0	22.8	24.3
% Constr. of GDP	6.1	6.0	6.2	6.7	7.3	7.5	7.9	8.2	7.6	7.0

Source: GSO, EIU, and Elaboration





## 5.00 EMPLOYMENT GENERATION PROGRAMME

### 5.10 Rational

5.11 The focus for **short-term temporary employment creation** should be construction interventions with a minimum use of equipment and an optimum use of local labour directly benefiting from the services in rural communes identified by the Government. The infrastructure components from the resources of sixteen programmes are channelled under the framework of the HEPR. The total value in 1999 is 1,500bVND including the 410bVND of the Poor Commune Programme. This generates approximately 59m workdays. The budget for next year will be 1,100bVND generating approximately 43m workdays.

5.12 Labour opportunities can be maximised by introducing and implementing labour-based technology for **long-term sustainable employment creation** through two schemes in the infrastructure construction sector. Three models show a generation of 322,000, 465,000 and 485,000 new employment opportunities during 1999-2003, while using a minimum of well-identified equipment at the same output standards as equipment-intensive technology.

5.13 At all levels of governance - but primarily in the district and communes - an increased absorption of labour targeted at the poor shall reduce poverty and achieve regular maintenance of public sector infrastructure. This will increase the quantity and general quality of total work output with an overall resulting decrease in unemployment rates and maintenance costs. And expenditure required for additional and replacement equipment in the construction industry sector can be rationalised and free scarce hard currency resources for high priority investments. This will allow smaller and lesser equipped construction firms to take on labour-based projects and prosper.

5.14 Of course it is important that the official environment exists for providing a positive framework to the application of labour-based technology. There are no incentives to the construction industry to substitute equipment investment with labour employment nor it could be argued in a "free market" should there be. But labour-based construction is widely practised in Vietnam even by large construction firms and it would not seem too difficult to introduce some positive discrimination contract terms in favour of those willing to sacrifice equipment productivity advantages (if they indeed exist) in favour of labour.

5.15 At the present moment, there are no decrees or other official statements directing or official guidelines assisting the line ministries, which generate infrastructure constructions, to optimise labour absorption in the implementation stage. This is an area that requires much more work and discussion to convince Government of the advantages of the approach. The best way to move the debate forward would be to trial and demonstrate the technology with a labour-based project.

## **5.20 Delivery Strategy**

5.21 Whether considering a short term temporary or long term sustainable labour-based employment generation programme it would be sensible to carry out a clearly targetted and staged approach. The process should be divided up into a series of discrete delivery packages possibly along the following lines:

### **Stage I - Preparation**

- Provide support to MOLISA and the technical line ministries in preparing the draft guidelines on targetted labour absorption in areas concerning the construction sector. Undertake initial labour productivity survey to determine fair and reasonable and competitive labour productivity work-norms. Undertake also a review of the changes, if any needed for an “enabling environment” for the targetted programme;
- In consultation with the relevant Government authorities identify an initial intervention programme of say one or two years duration to serve as a “test bed” for a much larger and cyclic programme. The advantages with this approach is that “wrinkles” in the project planning (particularly the establishment of an acceptable institutional framework) and the delivery process could be identified at the beginning and promptly “ironed out”;
- Mount a joint ILO/Government study to work out the implementation details of the initial programme and prepare a fully costed plan of action that could be put to parties interested in collaboration. In particular the institutional structures and implementation mechanism must be agreed with the relevant line ministry, the provincial and district peoples committees and the technical departments;
- Identify the key role players at national, provincial and district levels and put in hand a training needs assessment and training programme in labour-based construction technologies in collaboration with a selected university or research institute; and,
- Conduct a joint initial rapid participatory rural appraisal (IRAP) in the proposed project area and identify the target beneficiaries and agree a “shopping list” of worthwhile and prioritized infrastructure interventions. Secure the support of the target communities through their district and commune representatives.

### **Stage II - Planning**

- Draft a detailed initial programme implementation plan in collaboration with the national, provincial and district representatives. The plan would be based initially on the preparatory data gathered through a local level participation planning (IRAP) and would be firmed up and integrated with sectoral approaches as the project progresses;

- Present and agree the outline project plan with the Government line ministry, provincial and district representatives and the collaborative partners. Draft the necessary letters of agreement and ratify. Carry out a simple baseline survey against which project performance could be evaluated;
- Run a training programme at the selected university or research institute and instruct key project personnel in appropriate labour-based design and construction methodologies. Prepare the project implementation and quality control manuals and the necessary technical, management and environmental guidelines; and,
- Identify appropriate micro enterprises and see how these could be used to promote a “small scale” business culture based on labour-based construction and maintenance works. Prepare and run a training programme for interested and qualified parties.
- Review contract packaging and procurement arrangements to ensure a more transparent and competitive environment, better targetting of programmes (for SSN and infrastructure needs purposes) and the achievement of programme objectives.
- Secure the allocation of funding from regular and other budget sources in order to mainstream the improved labour-based work method.

### **Stage III - Implementation**

- Mobilise a joint ILO/Government programme implementation team and set up the field offices, project management and financial procedures. Procure or hire the required equipment, small tools and supporting provisions. Commence the detailed site topographic and construction materials surveys. Carry out the required social surveys and expand the work undertaken during the initial rapid participatory rural appraisal;
- Through the provincial and district departments set up a management structure to control and supervise day to day project implementation. And at the national level set up an inter-ministerial supervisory committee as well as individual committees in the line ministries to provide overall guidance and supervision. The committees would ensure that programme emphasised labour-based construction and maintenance methods progressed in harmony with national development policy. Members of the Inter-ministerial committee could be drawn from the member line ministries, technical and research agencies, ILO, UNDP and the collaborative partners including academe and the private sector.
- Firm up the project sites selection with the community representatives and prepare the detailed designs, contract documents and bills of quantities. As appropriate execute the works either through direct labour contracts with the district and commune peoples committees, SOE construction companies or private sector contractors. In parallel with the construction works identify and make provision for future maintenance procedures; and,

- Put in train the development of the selected micro enterprises and provide training, technical and financial support where necessary.

#### **Stage IV - Evaluation**

- Based on the results of the baseline survey evaluate the success of the initial programme and in particular quantify the benefits in terms of employment generation and economic uplift. Identify strengths and weaknesses and prepare an initial programme achievement report; and,
- Workshop the programme phases with the participants and all other parties working in the rural development sector. Draft a joint project outcome statement and a set of guidelines that contain all the lessons from the initial initiative and which could be applied to and mainstreamed in regular government programmes for a much larger labour-based infrastructure construction component.

5.22 The initial programme could quite possibly be established for the planning phase together with the existing ILO project “Start and Improve Your Business” in Hanoi but the sooner it becomes operational in the field the better and this would mean attachment to a technical ministry. Management support and direction would be able to be provided from the ILO regional project in Bangkok “ASIST-Asia Pacific”.

#### **5.30 Risks and Uncertainties**

5.31 The demand by some line ministries to centre projects carried out in the provinces and districts in Hanoi at the national level can seriously hamper delivery. Experience has show that this causes communication problems and obscures the chain of command. It is much more sensible to locate a project in the province/district and maximise the use of local universities, training establishments, contractors, equipment and small tools manufacturers and service providers generally.

5.32 It has not proved easy to “move” a donor related project out of Hanoi as liaison with the project agencies and donors is carried out by the line ministries centrally and not surprisingly they want to maintain a close watch on developments. But if a rural development project is to succeed it must be designed, managed and implemented at least at the provincial level and preferably at the district level. A useful but expensive compromise that has worked in the past is to locate the project in the province or district and maintain a small “liaison” presence in Hanoi to engage the line ministries and keep them abreast of progress.

5.33 To facilitate the wider and improved use of labour-based work methods implement successfully, the traditional role of the “contract” will have to be redefined. A situation where everyone down has a “commission” is unsustainable as by the time a project is implemented there is too little left in the budget. An example of this is the construction of potable water tanks in certain Province where the concrete mix is so lean they leaked from day one. The contractors say that by the time they pay all the required “commissions” there is not enough money left for cement and proper supervision<sup>40</sup>. So any future labour-based construction project must have transparent financial and accounting systems in place that reflect the reality of the situation. Government acknowledges that “leakage” is endemic and sapping the lifeblood out of the nation so any procedures for containing this would at least be outwardly welcomed. To underline Government’s concern there is a department concerned wholly with anti corruption and anti smuggling.

5.34 There are also numerous small private sector contractors working in the provinces but the quality of their outputs is generally inconsistent. They find it difficult to compete with the SOE construction companies and they are subjected to the normal “commission” procedures. It might prove difficult breaking the control the SOE construction companies hold in the provinces and the districts and therefore competition and contractor choice may not be easy to achieve.

5.35 One final concern is that the sharing of resources and facilities is not widely practised by the technical departments at the provincial and district level. They each tend to insist on having their own facilities (i.e. soils laboratories, sets of survey equipment, computer software packages, vehicles, etc.) which proves inefficient and wasteful of resources. Even when they share project facilities purchased through externally funded sources it is often only after a consultancy “commission” is paid.

5.36 In the final analysis however, the overall benefit of a programme for the wider and improved use of labour-based work method in the infrastructure and sectors outweighs the current administrative and transparency concerns, which indeed impact much more seriously on less employment intensive development strategies which would result from the use of equipment-based work methods.

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<sup>40</sup> Ha Giang Rural Development Project, IFAD, I G Harmond Associates, dated April 1998

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