

PIARC International Seminar Programme

Siem Reap, Cambodia (28 -30 November 2005)

South East Asia Community Access Programme (SEACAP) - P O'Neill (DFID), Y Maini (Transportation Consultant, DFID)

Poverty reduction remains the central goal of global development efforts, and increasingly it is acknowledged that this can be achieved and sustained only through a country's carefully determined growth pattern; governmental development plans need to include policies that are specifically poverty and inequality reducing.

As in many other regions, poor rural communities throughout South-East Asia are constrained in using improved health and education services to become less poor when physical access to those services is beyond them. Farmers may also be unable to get their produce to markets that would buy it, if only they could deliver it. Better physical access to existing health, education and trade opportunities, and freedom of movement, is vital if local communities are to improve their standards of living.

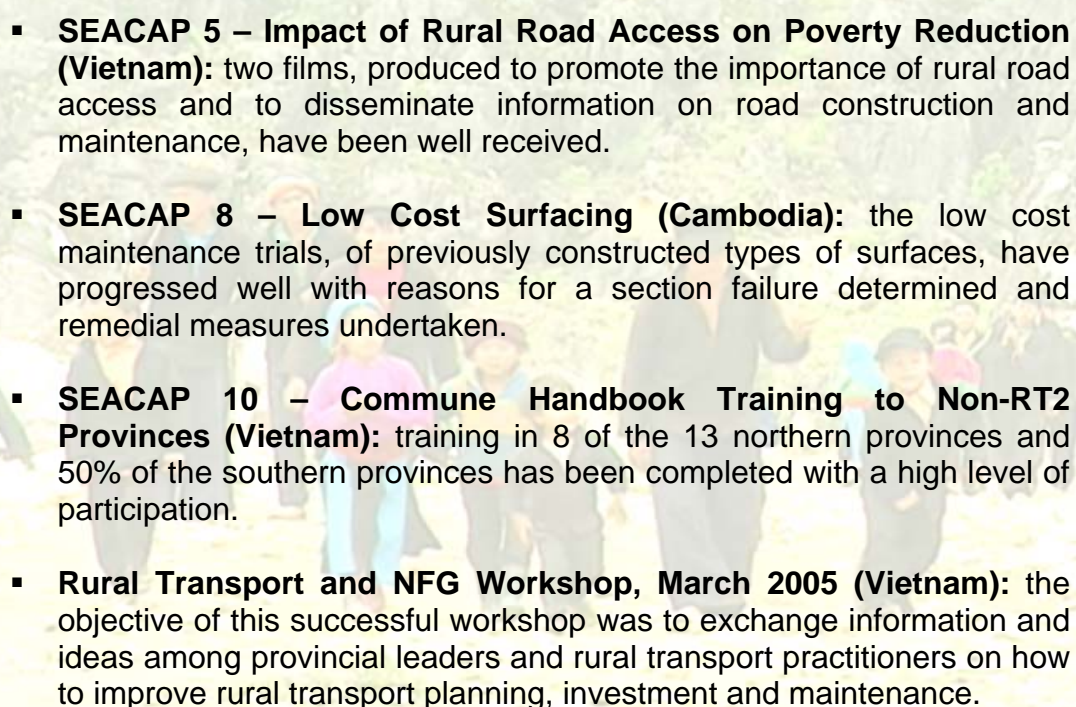
DFID's role in the transport sector is to influence the policy and, related to the management and allocation of resources, to maximise the effects on this sector of sustainable poverty reduction, pro-poor growth and the effective management of gender issues. Accordingly the Department for International Development (DFID) is funding the South East Asia Community Access Programme (SEACAP) and has appointed Crown Agents and the Halcrow Group to oversee this project. SEACAP actively seeks to work with other development partners, including ADB and the World Bank, by providing practical answers for their programmes, and is forging close links with recipient governments.

SEACAP is a poverty targeted rural transport support initiative comprising 24 transport related research projects centred on Vietnam, Cambodia and Laos. The programme's goal is to:

- identify and support the uptake of low cost, sustainable solutions to the provision of rural roads;
- achieve this by providing funding for applied research, its dissemination to implementing agencies and support to help them adopt improved techniques.
- improve sustainability and affordability of rural access, which will lead to improved access to economic opportunities, health and education services; thereby creating opportunities for pro-poor growth and poverty alleviation.

The research data generated by the programme is being shared with local governments and rural communities. This locally owned data source is being used, in conjunction with local materials, to maintain and sustain rural access and therefore is a key driver in facilitating socio-economic growth and development.

To be fully effective SEACAP needs to maintain full engagement with local society at all levels, from ministry to village, while at the same time demonstrating transparency in its procurement of services – to encourage the widest possible involvement of local consultants. To date, 17 consultancy contracts have been awarded, through the tender process, and these cover research, in all three countries, into every facet of rural access, including appropriate road-construction technologies, the role of the private sector in rural transport, and how best to engender participation and ownership by the target communities. Some examples of achievements in these areas are set out below:

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- **SEACAP 5 – Impact of Rural Road Access on Poverty Reduction (Vietnam):** two films, produced to promote the importance of rural road access and to disseminate information on road construction and maintenance, have been well received.
 - **SEACAP 8 – Low Cost Surfacing (Cambodia):** the low cost maintenance trials, of previously constructed types of surfaces, have progressed well with reasons for a section failure determined and remedial measures undertaken.
 - **SEACAP 10 – Commune Handbook Training to Non-RT2 Provinces (Vietnam):** training in 8 of the 13 northern provinces and 50% of the southern provinces has been completed with a high level of participation.
 - **Rural Transport and NFG Workshop, March 2005 (Vietnam):** the objective of this successful workshop was to exchange information and ideas among provincial leaders and rural transport practitioners on how to improve rural transport planning, investment and maintenance.

Beyond the goal of contributing to a reduction in rural poverty, SEACAP is contributing data and information from its various projects to the Transport Knowledge Partnership, which is a global initiative promoted and funded by various donors, including DFID. The aim of the programme is to be a forum to promote the generation, management, dissemination and uptake of transport research and knowledge by and for developing countries throughout the world.

This paper will look at the outputs from a sample of projects under the SEACAP programme and identify the ways in which they are contributing to the generation of a local and regional database of appropriate technology and knowledge. This resource can be used to repair and maintain the rural infrastructure and achieve the overall objectives of this programme.

Assessment of Existing Road Surfaces in Vietnam (SEACAP 4)

DFID and the World Bank are funding the Ministry of Transport (MoT) second Rural Transport Project in Vietnam. This is providing basic access roads for communities in 40 provinces across Vietnam. Gravel has generally been the surface used on such roads. However it is being increasingly recognised that this is not appropriate in all circumstances. Consequently the Government of Vietnam requested a study of alternative surfacing and DFID agreed to fund a scoping study. This scoping study, together with a full survey, comprises the ongoing SEACAP 4 project.

This project addressed the long term cost effectiveness of gravel. Although gravel is commonly recommended as a surfacing material for roads in developing countries there is very little research on its engineering performance and deterioration. This study assesses these factors in Vietnam's unique conditions.



Gravel Road, Siem Reap Cambodia within 2 years of maintenance ceasing

The main RRGAP investigations, carried out by Intech-TRL, found serious constraints to the use of gravel in most of the studied 16 programme provinces due to factors relating to material quality, material availability, climate, terrain, drainage provision and maintenance. Overall gravel loss figures indicate that around **58%** of the surveyed sites are suffering unsustainable deterioration, while **28%** are losing material at twice the sustainable rate. From the RRGAP investigations, and consideration of other complementary research and knowledge of the performance of gravel roads elsewhere, the following guidelines are proposed for the restriction and use of gravel as a rural road surfacing in the range of conditions experienced in Vietnam:-

It is proposed to **RESTRICT** the use of gravel in the following conditions:-

1. Rainfall and longitudinal gradient:

- Rainfall < 1,000mm/year : restrict use of gravel to road gradients < 6%
- Rainfall 1,000 – 2,000mm/year : restrict use of gravel to road gradients < 4%
- Rainfall > 2,000mm/year : do not use gravel – material loss and erosion are likely to be unsustainable.

2. Materials Haulage

If the materials haulage distance from source to road site is more than 10km, a detailed infrastructure initial and maintenance cost (whole life cost) comparison of gravel and other technically feasible surface options should be carried out. Furthermore, road user costs, and socio-economic consequences that are currently more difficult to measure, such as dry weather dust emissions, local resource use relating to community benefits (employment etc.) and environmental resource consumption factors, should be included in the surface consideration and decision process.

3. Traffic

Gravel should not be used for roads with traffic expected to be higher than 200 (4 wheel) motor vehicles per day. For expected motor traffic levels of more than the equivalent of 100 motor vpd, a whole life cost evaluation of gravel and other technically feasible surface options should be carried out.

4. Flooding

Gravel should not be used on roads liable to regular or occasional flooding.

The following **ARRANGEMENTS** should be assured to allow any justifiable use of gravel to be cost affective and sustainable:-

5. Quality Control

There should be improved and adequate testing and quality control arrangements and funding in place to approve gravel material sources, and confirm the necessary quantities for both construction and maintenance needs. Furthermore sufficient material testing must be arranged to ensure that the material placed on site conforms to the specifications and contract requirements, and will not break down under traffic.

6. Drainage

There must be adequate provision in the construction and maintenance of the gravel surface to keep the surface cross fall within the serviceable range of 3 – 7 % to ensure drainage of the rainfall from the road surface. This can be achieved either by mechanical grading or manual reshaping. Soil surfaced shoulders should not be constructed for gravel roads as this risks contamination of the gravel road surface during grading operations, or the trapping of surface water on the road surface. Shoulders must freely drain away from the road surface, and effective side and turn out drainage must be provided throughout the length of gravel surfaced road, and be maintainable.

7. Maintenance

There should be adequate arrangements in place to **fund** and **organise** the ongoing routine maintenance of the road, and particularly the gravel surface, AND the periodic maintenance re-gravelling to restore the material lost due to traffic and rainfall effects.

National Training Programme on Rural Road Management (SEACAP 11)

Programme Objectives:

- To improve the capacity of local authorities in RT2 to manage and maintain their rural road network
- To support RT2 provinces to put in place sustainable systems to manage and maintain their rural network

This programme has now been running for 10 months. It has been working in close coordination with the MoT and Local Governments/Authorities to produce a tailor made package of support to 360 districts. SEACAP manages, delivers and evaluates such training. Training is based on self awareness of road maintenance and delivered in a modular style. This aims to create a diverse competency based approach.

Since the programme commenced it has provided training for over 100 key PDOT trainers in 43 Provinces and training techniques for more than 600 DDOT key trainers. Due to on going demand over 6000 participants from communes have also received training. This has been enabled by the development of 27 modules which are essentially self-taught, through reading materials, discussion, exercises and field practical works under the facilitation of the trainers and supported by training kits.

The programme has had a successful start and it will be developed and driven forwards during the remaining year through a number of recommendations:

- Pursue and promote a active participant approach at district and commune levels
- Move from a supply lead delivery of training to a demand lead
- Consider similar approaches in other capacity enhancing projects
- Promote the exchange of information between programmes by making use of procedures concepts, ideas and avoid duplication
- Utilise the potential of the SEACAP 11 website.
- Focus on ensuring effective trainee participation and analysis of results
- work with regions PDOTs and districts to ensure local support.
- The modular approach has worked well suiting a range of regions and different learning conditions

This project will finish in March/April 2006 at which point results and recommendations will be published as part of an overall evaluation.

For more information visit:
www.vietnamtraining.net



Cambodian Transport Mainstreaming Partnership: Development of Local Resource Base Standards (SEACAP 2 & 19)

SEACAP 2 began in 2004 and will come to completion in December 2005. The focus of this project is to mainstream the information flow between government at all levels and the private sector. This will aid access to research and best practice information relating to the transport sector. A part of this the system would also be used to disseminate national building and resource guide lines and information on the use of local resources. The project would also address capacity building by supporting local professional and educational bodies.

SEACAP 19 is an extension of SEACAP 2 and focuses on identifying locally accessible methods for bridge construction. During SEACAP 2 it was identified that bridges are a significant part of transport infrastructure costs. Common construction used in bridges relies on imported steel and cement. If Foreign exchange is scarce it can seriously inhibit the buying of such items and in turn the long term development of the transport network. SEACAP 19 aims to address the lack of access to safe secure and durable building materials for the poor by researching, developing and disseminating information on the use of traditional locally found resources. Therefore SEACAP 19 will address two challenges:

1. To develop bridge systems appropriate to the needs, materials and skills of recipient communities.
2. To improve access to appropriate building construction for low income households.

To achieve this expertise in this area have been contracted into the project. TRADA has utilised timber and bamboo in a range of developing countries to create appropriate cost effective solutions. Examples of this can be see in the two images below.

This programme will utilise the information structure put in place by SEACAP 2. It will be disseminated at local, regional and national levels which will include practical demonstrations. It will at all times consider the cross cutting issues of gender the environment and sustainability.



Images: Source TRADA



The Role of the private sector in rural transport (SEACAP 14)

Vietnam is committed to developing a multi-sector economy and that includes the active support for developing a strong and competitive private corporate sector. In that context SEACAP commissioned Mekong Econ Ltd to undertake this study.

The aim of this study is to assess the capabilities and constraints affecting private sector participation in rural transport infrastructure, consultancy and services in Vietnam. The recommendations of SEACAP 14 will feed in to the design of the third rural transport project (RT3) and general Ministry of Transport policy direction.

The programme was conducted over 3 months. It included extensive field trips covering a range of regions, interviews with 22 transport operators and focus groups involving 200 individuals. Traffic count records were reviewed, some moving counts were recorded and transport users at market centres were interviewed.

There are many issues facing rural traffic development:

- Passenger numbers per vehicle per day are reported to be falling.
- Fare dropping contrary to cooperative arrangements.
- Fares rises recently because of oil prices.
- Rises not sufficient to cover rising VOC and business costs.
- Congestion on inter-provincial routes and deteriorating surfaces, slow travel speeds.
- Inter-urban traffic is growing faster than RT traffic, investment at that level
- Corrupt payments are a major cost and distraction in their business.

Vietnam's changing circumstances are favourable to the business sector. However this sector is not yet being utilised by rural transport as nearly all new roads come from special programmes and donors. The remaining contracts are serviced by protected state enterprises. As a result the market is oversupplied and private companies tend not to specialise. Lack of access to small loans further limits their capacity. There are also concerns over the quality and stability of the rural transport market. However the quality of contractors was found to be good over all with technically skilled staff to implement rural transport contracts.

Private Sector in Rural Transport – key Recommendations

Recommendations for GOV

- Reserve work for non-SOEs in all donor programs.
- Enforcing compliance and transparency are effective ways to enable PS participation and development.
- Restrict provinces in contracting unfunded projects, in the proportion of shopping and limited bidding contracts.

Recommendations for Provinces

- Cartels: reduction of influence: a) favour commune-based service operators. b) improve participation and liaison
- Delete capital requirements of bidders.
- Strengthen the role of consultants and community supervisors.

Implications for RT3

- Require community representatives to (i) approve workplans; (ii) participate in bid evaluations; and (iii) conduct and assist consultants in supervision.
- General demand for bigger packages, higher design standards, more sealing and concreting of village roads.
- Provide a special fund for site/spot improvements for local teams.

This study concluded that the private enterprise sector is ready and the legal environment is adequate to increase the role of the private sector in rural transport. However, there may be problems with legal compliance and the unclear delineation of state management and commercial roles.

Community Participation in the rural transport sector (SEACAP 15)

SEACAP 15 was designed to study the kind and range of contributions local people make (to transport and other activities) and the impact of this on livelihoods. In particular the study focused in on the role these contributions play in rural transport, how participation can be increased and how local employment in rural transport can be increased.

Field research was carried out in Loan My and Hoa Hiep communes in Vinh Long province and Tat Thang and Vinh Tien in Phu Tho province. The participation in the second rural transport project has also been reviewed. This produced 32 recommendations which will help the third rural transport project (RT3) stakeholders understand such contributions. It will also help develop simple and clear guidelines for community participation.



Male representatives of average income households discuss recommendations (Vinh Long province).

All people interviewed attach great importance to rural transport. Upgrading of village roads is given an even higher importance than the rehabilitation of commune roads. Fees are paid by even the poor to maintain rural roads. Considering the low income these are often a great burden on family units along with irrigation costs and education fees. People are not unwilling to contribute to Rural Transport however they are hindered by a very limited financial capacity. It is estimated that in Hoa Hiep 20-30% of the population have trouble paying. This can lead to borrowing via high interest loans. Non payment of such contributions can mean they would be denied vital small loans in the future.



A concrete slab village road in Vinh Long province

This research confirms that fixed shares of community contributions exist. It should be noted that these are very complex. Contributions from the government vary in amount and form (some are cash some are materials). In both provinces compulsory labour programmes contribute. Community contributions make up 30% of funding to district roads and 70% of local commune roads. The mechanism for this contribution is determined by environmental, socio-economic and political administrative factors. The impact of such contributions is difficult to assess and requires more research.

Many people continue to have concerns over the future quality of motorable gravel roads as they have begun to degrade over time and resources for major maintenance are barely available locally.

Barriers to community participation in motorable roads

- Local people lack skills and technical knowledge to be directly involved
- Authorities state that information about roads should come through the commune authorities (however, this study finds that the commune authorities themselves often know very little)
- There are no funds for participatory mechanisms
- The notion that the Grassroots Democracy Decree is implemented satisfactorily (i.e. people can report inaccuracies in road projects to the relevant authorities)
- Transport authorities prefer to follow provincial procedures rather than donor procedures (RT2 project guidelines are not used as they are regarded impractical. There are no funds and no clear responsibilities of the stakeholders)

Sources: SEACAP 15; based on interviews with provincial and district authorities

Key Issues are addressed through 32 recommendations

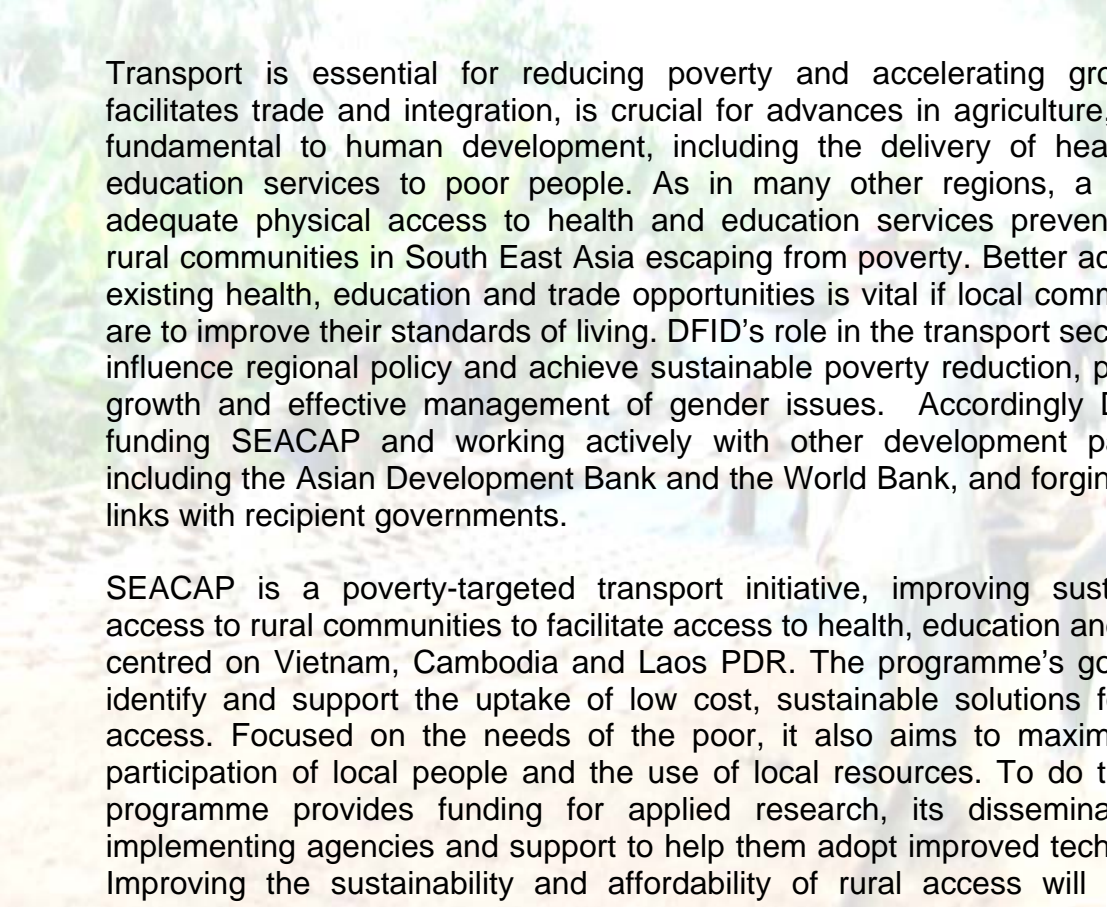
The Key Issues are:

- Participatory planning and management
- Involvement of rural communities in motorable road projects
- Compensation policies
- Local peoples knowledge about transport
- RT3 deals with motorable roads only
- Provincial transport policies and decisions versus poverty reduction strategy

Recommendations include:

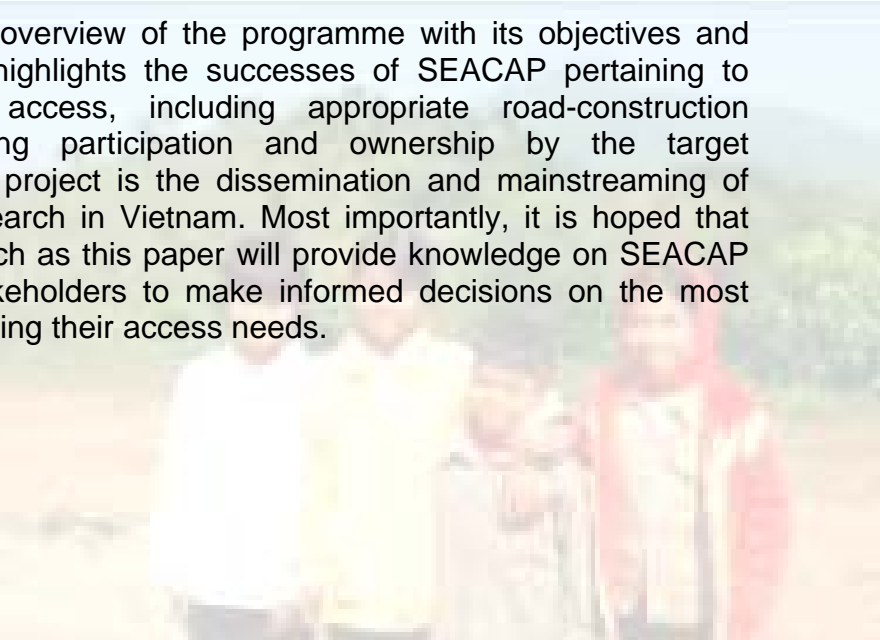
- Develop the understanding of community participation
- Review participation procedures at all levels
- Review guidelines thought out the sector
- Improve monitoring through out the sector
- Use valuable local knowledge
- Involve the local poor
- Create a greater understanding of the road management issues with in local communities.
- Utilise World Bank documents on best practice
- Review compensation policy
- Increase funding for rural roads
- Contract people from the locality
- Expand RT3 to include 2-wheel village roads
- Evaluate the impact on the environment
- Utilise materials available locally

SUMMARY



Transport is essential for reducing poverty and accelerating growth. It facilitates trade and integration, is crucial for advances in agriculture, and is fundamental to human development, including the delivery of health and education services to poor people. As in many other regions, a lack of adequate physical access to health and education services prevents poor rural communities in South East Asia escaping from poverty. Better access to existing health, education and trade opportunities is vital if local communities are to improve their standards of living. DFID's role in the transport sector is to influence regional policy and achieve sustainable poverty reduction, pro-poor growth and effective management of gender issues. Accordingly DFID is funding SEACAP and working actively with other development partners, including the Asian Development Bank and the World Bank, and forging close links with recipient governments.

SEACAP is a poverty-targeted transport initiative, improving sustainable access to rural communities to facilitate access to health, education and trade, centred on Vietnam, Cambodia and Laos PDR. The programme's goal is to identify and support the uptake of low cost, sustainable solutions for rural access. Focused on the needs of the poor, it also aims to maximise the participation of local people and the use of local resources. To do this, the programme provides funding for applied research, its dissemination to implementing agencies and support to help them adopt improved techniques. Improving the sustainability and affordability of rural access will lead to improved access to economic opportunities, and health and education services; thereby creating opportunities for pro-poor growth and poverty alleviation. This programme commenced with seven separate but complimentary pieces of work which have now expanded to twenty-four in all three countries. The combination of individual projects demonstrates a response to local demand and a comprehensive multi-level approach with high expectation of the results being mainstreamed into national practice.



This paper presents an overview of the programme with its objectives and goals. The paper also highlights the successes of SEACAP pertaining to every facet of rural access, including appropriate road-construction technologies engendering participation and ownership by the target communities. One such project is the dissemination and mainstreaming of rural road surfacing research in Vietnam. Most importantly, it is hoped that published information such as this paper will provide knowledge on SEACAP activities and assist stakeholders to make informed decisions on the most appropriate ways of meeting their access needs.