SEACAP – Dissemination Experience Beyond the Target Countries
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Abstract
SEACAP was devised to fill knowledge gaps in the target countries of Cambodia, Laos and Vietnam in support of rural road and access development. However SEACAP events and outputs have had take-up beyond the target countries. SEACAP has supported practitioners from non-target countries to participate in various SEACAP events, as well as sponsoring target country participants to participate in several international events. Further, SEACAP documentation has been disseminated at regional scope. It is not surprising therefore that the programme has influenced rural road sector activities in other countries. The combination of advocacy for the methods and principles promoted by SEACAP through meetings and international events and the demonstration of technologies has lead to this impact. Lessons may be learned from the influence SEACAP has achieved in two countries in particular – Afghanistan and Sri Lanka.

1. Background
SEACAP was initiated in 2004 and to date has completed more than 23 major projects and has 16 ongoing projects [1] in three primary target countries – Cambodia, Vietnam and Laos. SEACAP interventions are designed to compliment large-scale investment programmes in those countries. To that end SEACAP projects are locally designed and lead to narrow specific knowledge gaps.

Several SEACAP workshops and events have been held and SEACAP practitioners, as well as the Technical Manager, have participated in numerous other international events. These events have often included attendance far beyond the three target countries.

This desk study is to determine the substantive impact, if any, of SEACAP beyond the three primary target countries, quantify the impact and determine the how this impact came about.

2. Impact Beyond the Target Countries
Given the period of operation of the programme and the number of dissemination workshops and events supported there has been impacts beyond the target countries. This conclusion is reached based upon available documentation and the authors personal experience as programme Manager of the UNOPS projects that have used the SEACAP outputs. This paper concentrates on impact of the programme in two specific countries – Afghanistan and Sri Lanka. The rural road sector in both countries has been substantially influenced by SEACAP. In both cases this influence has been on project activities and to some extent Government policy.

There is anecdotal reason to believe that the SEACAP outputs are being taken up by countries such as Bhutan, Liberia and others, however it is difficult to quantify impact of this without detailed investigations as well as documentation which is not readily available.
3. **Scope & Scale of Impact**

In Afghanistan SEACAP directly influenced a series of UNOPS implemented rural access projects (see table 1 below). All of these projects were implemented under the umbrella of the National Emergency Employment Programme (NEEP) – one of four National Priority Programmes of the Afghan Government. This influence increased progressively as the outputs from the SEACAP research projects became available. This process actually began with the SEACAP predecessor - KAR Low Cost Surfacing Programme.

In Sri Lanka a number of UNOPS managed projects were influenced by SEACAP outputs, most notably the large EU funded Community Access Programme (CAP). The table s 1 and 2 below detail the number, value and scope of projects influenced by SEACAP in these two countries:

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Funding Agency</th>
<th>Value (USD)</th>
<th>Outputs</th>
<th>Relevance to SEACAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour Intensive Works Programme (LIWP)</td>
<td>World Bank</td>
<td>8M</td>
<td>Not presented here as works were of an emergency maintenance nature</td>
<td>Limited roll out of demonstration projects for alternative surface options – predominantly related to SEACAP 8 outputs</td>
</tr>
<tr>
<td>National Emergency Employment Programme Rural Access (NEEPRA) - NEEP-1</td>
<td>World Bank</td>
<td>14.73M</td>
<td>998.8Km of road rehabilitation</td>
<td>Initiation of MRRD rural road policy in support of appropriate technology options for road pavements and surfaces – directly related to SEACAP 1 and 8 outputs</td>
</tr>
<tr>
<td>National Emergency Employment Programme European Commission (NEEP-EC)</td>
<td>European Commission</td>
<td>10.64M</td>
<td>204 Km of road rehabilitation to paved standard</td>
<td>Further roll out of pavement and surface options adopted as Ministry of Rural Rehabilitation (MRRD) and Development Standards under aforementioned projects</td>
</tr>
<tr>
<td>NEEPRA extension</td>
<td>World Bank</td>
<td>15M</td>
<td>209.78 Km of road rehabilitation to paved standard</td>
<td>DITO ABOVE</td>
</tr>
<tr>
<td>NEEPRA DFID</td>
<td>DFID</td>
<td>11.75M</td>
<td>192 Km of road rehabilitation to paved standard</td>
<td>DITO ABOVE</td>
</tr>
<tr>
<td>Total Funds Allocated &amp; Approx Km of Roads Rehab. MRRD pre-2007 for Rural Roads [3]</td>
<td>Approx. 84.35M</td>
<td>&gt;1600 Km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Funds committed by World Bank 2007 onwards [4]</td>
<td>112M</td>
<td>&gt;2,000Km</td>
<td></td>
<td>This is now called the National Emergency Rural Access Programme</td>
</tr>
</tbody>
</table>

Table 1: Projects influenced by SEACAP in Afghanistan
### Table 2: Projects influenced by SEACAP in Sri Lanka

<table>
<thead>
<tr>
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<th>Value (USD)</th>
<th>Outputs</th>
<th>Relevance to SEACAP</th>
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</thead>
<tbody>
<tr>
<td>Employment Generating Road Project (EGRP)</td>
<td>United Nations Office for Coordination of Humanitarian Affair (UNOCHA)</td>
<td>0.6M</td>
<td>Approx 4 Km of roads constructed – demonstration of three forms of appropriate technologies for rural roads</td>
<td>Construction of a number of locally appropriate pavement and surface options; unreinforced concrete pavement, granular bases with bitumen emulsion surface treatments and recycled tsunami rubble sub-bases</td>
</tr>
<tr>
<td>Employment Generating Community Access Project (EGCAP)</td>
<td>United States Agency for International Development (USAID)</td>
<td>1M</td>
<td>50,000 days of employment</td>
<td>Direct application of decision models resulting from SEACAP 2 and 8</td>
</tr>
<tr>
<td>Community Access Programme (CAP)</td>
<td>European Union (EU)</td>
<td>39M</td>
<td>2.5M days of employment; 400Km of road rehabilitated to paved standard; Trialing of a maintenance management system; Training of 17 Local Government Offices; Implementation of planning (IRAP) for 17 Local Gov offices</td>
<td>Direct application of decision models resulting from SEACAP 2 and 8; Adoption of specifications output from SEACAP 2 and 8 for application locally; Development of a SEACAP intervention for development of appropriate standards and specifications to feed into the CAP implementation and any future expansion of CAP; Impact on Local Government (Provincial Council) policy for rural roads</td>
</tr>
<tr>
<td><strong>Total Quantifiable Impact</strong></td>
<td></td>
<td><strong>40.6M</strong></td>
<td><strong>&gt; 412Km</strong></td>
<td></td>
</tr>
</tbody>
</table>

SEACAP promotes locally appropriate technologies and decision-making models related to the application of said technologies. These decision-making tools include whole life cost models, maintenance considerations, climatic, material, equipment and human resources available to those tasked with management of rural road networks. This kind of knowledge was needed in both of these countries. Through the dissemination of SEACAP outputs, SEACAP had an influence on policy in support of rural road management.

In Afghanistan, policy for the management of rural road networks is set at Central Government level. Therefore advocacy directed to the Ministry of Rural Rehabilitation and Development (MRRD), the Government Ministry responsible for management of the countries rural road network, was effective in influencing policy. A policy example is that of utilizing local resources for sustainable roads as well as road maintenance trials and funding [4]. This led to alternative paving options and mechanisms for selection of...
appropriate options. This was largely based on reference materials developed by SEACAP in Vietnam. Afghanistan is a country with a large road network and low population to land area ratio, so using Vietnam based materials was by no means an obvious fit.

In Sri Lanka responsibility for the rural road network has been decentralized to Local Government, including policy. Therefore advocacy work was carried out to influence Local Government as well as central Government. One important issue was the application of gravel as the sole rural road surfacing. Central Government lead initiatives already favoured other more durable options and cost effective, however this was often not reflected at local level. SEACAP materials were important in making the case for appropriate road technologies based upon available local resources.

4. Mechanism through which SEACAP Influenced Interventions Outside Target Countries
The following is a detailed chronology of events within each country that lead to eventual uptake of SEACAP outputs. This reveals the mechanism through which SEACAP influenced interventions within each country.

4.1 Afghanistan:
It should be noted that Afghanistan has a far different environment – climate, terrain and material resources than the three SEACAP target countries. However, it was found that many technologies and principles promoted under SEACAP are applicable – i.e. basing on considerations of local environment, whole life costs, maintenance regimes and so on in selection of technologies.

At the time of initiation of the first projects in Afghanistan (2003) SEACAP had emerged out of the DFID KAR programme. SEACAP projects 1, 2, and 4 were contemporary to the Afghan programme of the time. In the Afghanistan projects, the technical assistance teams were certainly aware and to some extent involved in SEACAP. The SEACAP principles were introduced into the initial implementation stage. In designing the access roads a range of appropriate pavement and surface options were considered through the SEACAP principles – even for very basic access.

Trials of different road technologies were implemented. These options were chosen on the basis of locally available materials as well as considering the available (lack of) equipment in country at the time. Under the LIWP and NEEPRA (see table 1 above) projects, demonstration sections of stone paved roads were constructed. Some sections of unsealed Macadam were also constructed. All sections were constructed through community contracts – effectively a force account implementation. Demonstration sections were constructed in the South, the West and the Central Highland. One of these sections was constructed in the high profile location of Bamyan – a World Heritage site.

The NEEPRA project was required to develop appropriate standards and specifications for rural access. The MRRD Minister and executive level staffs were advocated for their support to use the SEACAP approach. These senior officials were receptive and supported using several options for pavements and surfaces as well as the associated specifications for construction. SEACAP documentation was referred to, as well as other
available documentation, for this achievement. Presently, these standards and specifications are still in use.

Succeeding projects, (NEEP-EC and NRAP) lead to mainstreaming of these standards and specifications into practice and allowed further refinement through feedback from implementation. NEEP-EC constructed only paved roads whereas the continuation of NEEPRA and NERAP programs has seen the construction of both paved and unpaved roads, also applying to some extent spot improvements.

Concurrent to the implementation of these projects Afghan Government counterparts, who are key Ministry staff – were assisted by the projects and by SEACAP to attend SPMs and other international relevant international events.

4.2 Sri Lanka:
Initial introduction of SEACAP to stakeholders in the rural transport sector in Sri Lanka was through a UNDP-ILO training Workshop where relevant SEACAP outputs and principles were presented. The presentations were founded largely on SEACAP 1, 3, and 8 outputs. Following this workshop the ILO sponsored a field training exercise to practically reinforce the presentations of the workshop. This was implemented for field staff of the UNDP working in the north of the country. Shortly after implementation of the field training, the project was completed and the staff of the project dissipated. Training was carried out primarily for project engineers.

The first project to use SEACAP outputs was the UNOPS/EGRP. A number of demonstration projects were implemented. A range of options were applied in different parts of the country with differing climates, geography and material availabilities as well as differing maintenance regimes. The demonstration projects were intended to influence the large-scale tsunami reconstruction projects which were operational at the time. These were largely NGO implemented projects which rehabilitated several lengths of coastal roads and constructing roads for newly established housing complexes. The EGRP demonstrated the benefits of the construction methods as well as the durability of the resultant infrastructure. Proven and appropriate technologies were chosen according to the specific situations:

- Unreinforced concrete pavement was constructed in Jaffna – an area with very limited maintenance possibility, very weak subgrades, a lack of good quality crushed stone.
- Reprocessed sub-base with densely graded aggregate base course and emulsion SBST was constructed on the East coast in Batticaloa District - a tsunami affected area with intense rainfall, large volumes of tsunami rubble, limited gravel supplies and very limited equipment supplies at the time (2005). This rubble was reprocessed removing an environment hazard and generating much needed income for tsunami survivors.

Following the EGRP the EGCAP was developed at the request of USAID. Decision models from SEACAP 1 and 4 were applied for the construction of 8Km of concrete-sett urban roads. The concept was initially not well received by the donor whom was not convinced

1 Determined through direct contact with present NRAP staff in Afghanistan
of the technology. Again SEACAP practitioners were called upon to assist with evidence, recording successful application of the technology elsewhere. EGCAP was utilized to advocate to other donors, local and central Government. The implementation of the demonstration projects lead to official letters of endorsement for the methods being issued by three Local Government offices.

Concurrent to the implementation of demonstration projects, key stakeholders, Government and NGO, were invited to attend a number of SEACAP events.

Advocacy to donors resulted in buy-in of the European Union following site visits to the demonstration projects during and after the construction works. This coupled with requests from the Local Government offices responsible for the rural road network lead to the development of the EU/CAP.

Under this programme technology options and associated construction specifications were derived from SEACAP projects completed or nearing completion. This was carried out with the assistance of an expert consultant. The laboratory testing of local materials and material mapping carried out under the previous projects allowed for the SEACAP outputs to be applied as per the local material resources.

In parallel a new SEACAP initiative was developed to be associated with the EU/CAP. This was written into the EU/CAP project proposal and agreed by the donor and the recipient Government office – local and national. Detailed consultations with Government and other stakeholders were held over a prolonged period of time (almost 2 years) to determine the scope of a SEACAP intervention. Unfortunately due to time constraints the project will not launched by SEACAP.

5. Lessons Learned from Experiences
A number of lessons may be taken from the experience of applying SEACAP outputs in Afghanistan and Sri Lanka. While the mode in which the programme influenced interventions in both countries – a combination of continued advocacy, participation in international events and the implementation of demonstration projects – was similar, the impact in each case was greatly different.

It should be noted that there is an important difference in the evolution of the projects and programmes in Afghanistan and those in Sri Lanka. Afghanistan has an umbrella programme of investment in the road and rural road sector. Whereas the projects in Sri Lanka were tied together by a single implementation consultant (UNOPS). This had ramifications for how the programmes evolved and how consequently SEACAP influenced the programmes.

In the case of Sri Lanka two projects constructed demonstrations of the appropriate technologies to high standards. This was done intentionally, although it should be noted this was possible since the projects had dual purposes – employment generation and infrastructure.

In the case of Afghanistan, although the programme for rural roads was designed in partnership among the Government, World Bank and Consultants, no funds were allocated and there was no freedom to re-allocate for demonstration or trials. Rather, any demonstration sections had to be constructed within the constraints of the existing
project which had employment generation as the principle objective. The technical aspects were to some extent of less priority than the employment generated impacts. Thus while advocacy for SEACAP methods was initiated from the onset in Afghanistan, no specific funds were available for demonstration.

Contrary to this in Sri Lanka dedicated funds were directed towards both demonstration and advocacy from early 2005. In this regard the demonstration activities in Sri Lanka were much more successful in generating support of the appropriate Government stakeholders. Whereas in Afghanistan ad-hoc demonstrations were far less effective and in one case even counterproductive.

A critical lesson here is that if all three partners – the Government, the Donor and the Implementing Consultant do not have similar objectives and/or knowledge of the rural access infrastructure issues, the SEACAP outputs and principals are far less likely to be successfully taken up.

5.1 The Role of Workshop / Seminars
Advocacy played a critical role in ensuring uptake of the principals and outputs of SEACAP. Advocacy for the methods is required to be continuous and early. In the case of Afghanistan advocacy was initiated through technical assistance teams from the beginning. Advocacy was initiated early in Sri Lanka also.

It should be noted that during the time period described in this paper (early 2005 to present in the case of Sri Lanka, and early 2003 to present in the case of Afghanistan) both countries experienced general elections, which lead to changes in staff in counterpart Government institutions. Therefore advocacy measures are required both to start early and to be continuous. Further, in both cases advocacy was reinforced through demonstration of the proposed technologies.

5.2 The Role of Demonstration Projects
Advocacy alone through presentations and workshops can be reinforced through appropriate site visits. Visits during the actual construction of trial or demonstration sections was found to be very beneficial for stakeholders of all levels. These visits can be used by the Government to direct donors, as well as training sites for their own staff. What has been found to be critical with the implementation of demonstration trials was:

1. Geographical location – sections must be located such that stakeholders can visit the sites with relative ease
2. Quality of construction – must be of the highest possible quality or else the demonstration section will defeat its own goal
3. Time of construction – should be timed prior to major projects starting up if possible and after training or advocacy workshops

Taking the case of the early implementation of demonstration sections in Afghanistan, the implementing consultant (UNOPS) was capable of constructing stone paved roads to appropriate standards. However, the donor was more focused on the employment generated by the programme at that stage of the programme and constrained the demonstration activities. This led to a poorly implemented demonstration site and adversely affected Government support for a highly appropriate technology.
5.3 **Tools for Advocacy**

Certain SEACAP outputs have been directly used for advocacy to donors and Government. Most notably SEACAP 4 has been utilized in Sri Lanka to convince donors of the consequences of blanket application of gravel surfacing as the only option for rural roads. This was particularly relevant in post tsunami Sri Lanka where many NGOs were constructing gravel roads to a poor quality standard in the tsunami affected coastal areas.

When advocating the uptake of the methods stakeholders inevitably requests data on previous application. This was found to be the case for the EGCAP as well as for the EU/CAP in Sri Lanka. Methods portrayed as state-of-the-art are often perceived as risky by funding agencies, many of whom do not have the necessary and relevant technical expertise.

Thus databases of the number of Km, value of projects, experiences of projects and cost estimate models made easily accessible for practitioners would be a most useful advocacy tool. This data should preferably not be limited to the three target countries.

It has been mentioned that a number of SEACAP documents may be used and have been used for advocacy purposes when trying to influence projects. It therefore stands to reason that the SEACAP documentation should be readily available for such purposes and easily accessible to varying audiences through executive summaries. The current SEACAP webpage should therefore be greatly improved to achieve this goal.

**References**

1. [www.seacap-info.org](http://www.seacap-info.org)
5. Tech brief 496, Ensuring Basic Access, World Bank