Ex post evaluation of a project to improve the performance and management of the public lighting system in Ho Chi Minh City, Vietnam
EX POST EVALUATION OF A PROJECT TO IMPROVE THE PERFORMANCE AND MANAGEMENT OF THE PUBLIC LIGHTING SYSTEM IN HO CHI MINH CITY, VIETNAM

REPORT

_Evaluation carried out by:_

SCE, by a team of experts:

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_December 2011_
The Ministry for the Economy, Finance and Industry publishes impartial evaluations of development assistance activities with an eye to helping them become more effective. The evaluations are carried out in accordance with the principles of the OECD's Development Assistance Committee. They also comply with the Charter of the Société française d'évaluation (French Evaluation Society).

Consequently, the findings, opinions and recommendations expressed in the present report are solely those of the consultants that created it, and do not necessarily reflect the opinions of the Ministry.
Foreword

In April 2010, the Directorate General of the Treasury conducted an ex-post evaluation of an Emerging Country Facility-funded project concerning public lighting in Vietnam. The primary goal of the evaluation was to assess the relevance, quality and management of the project entitled "Improving the Performances and Management of Public Lighting in Ho Chi Minh City".

In accordance with the principles of the Development Assistance Committee, this study is part of France's international commitments to achieving the Millennium Development Goals. The project complied with the 2006–2010 Partnership Framework Document drawn up between France and Vietnam, the key themes of which were defined by Vietnam in its Socio-Economic Development Plan for 2006–2010 (also known as its Poverty Reduction Strategy). The main areas of Franco-Vietnamese cooperation include infrastructures, energy, transport and the environment.

The Emerging Country Facility (RPE) is a project assistance instrument of the Ministry for the Economy, Finance and Industry, managed by the Directorate General of the Treasury. The Fund is an instrument for intergovernmental loans backed by sovereign guarantee, offering financing for projects that both contribute to the recipient country's development and offer opportunities to French firms. Vietnam is one of ten countries eligible for RPE loans with no conditionality as to the existence of co-financing. The Treasury's priority sectors include public transport, energy, drinking water supply and sewage facilities.

The French firm Citelum supplied equipment and technical assistance to Sapulico (the Saigon Public Lighting Company, Ho Chi Minh City's public lighting authority) via a remote management system for 12,000 light points – 10% of the total currently managed by Sapulico.

Following an invitation to tender, the evaluation was awarded to SCE, an independent consultancy, under the supervision of a multidisciplinary steering committee consisting of representatives from the various government departments and agencies concerned (Ministry for the Economy, Finance and Industry, Ministry for Ecology and Sustainable Development, the Government Audit Office (Cour des Comptes) and the French Development Agency) as well as qualified independent individuals.

The evaluation underscores the limited success of the project, which was carried out in compliance with the contract, but was technically incomplete at the time of evaluation. The budget was respected, and no significant discrepancy was found between the planned cost, the cost of the contract and the development costs. The Viennese population reacted positively to the project, and the "showcase" effect appears to be satisfactory at this stage. The leverage effect cannot be properly evaluated at present.

Under these conditions, it is difficult to evaluate the project's expected effects. As it turns out, only a fourth of the lighting devices fitted out are truly remotely managed at present. Despite this, the consultants estimate that, extrapolating from the results of the initial working installations, one can
reasonably expect that the project will, in future, help achieve energy savings of approximately 25%.

The consultants' key recommendations include commissioning a technical audit in a year's time to ensure that the remote management system is functioning correctly, and assigning greater importance to project feasibility studies to ensure that our actions are consistent. They also recommended that the RPE loan application file should include clearly stated objectives and a minimum set of indicators for monitoring completed projects and their effects.

Daniel Perrin

Inspecteur général des finances

Chair of the Evaluation Steering Committee
December 2011

Ministry for the Economy
Finance and Industry

Project to improve the performance and management of the public lighting system in Ho Chi Minh City, Vietnam
Ex-post evaluation
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Project description

This evaluation concerns the project entitled “Improvement of the Performance and Management of the Public Lighting System in Ho Chi Minh City (HCMC)”, which was financed by a €4.5 million loan provided through the French cooperation instrument, the Emerging Country Facility (Réserve Pays Emergents - RPE). The corresponding financial protocol between the Vietnamese and French governments was signed in October 2004.

The project was carried out between March 2006 (signing of the commercial contract) and June 2009 (final acceptance of work). It consisted of the French firm Citelum supplying equipment and technical assistance to Sapulico (Saigon Public Lighting Company, Ho Chi Minh City’s public lighting authority) for the installation of a remote management system for 12,000 light points - 10% of the total currently managed by Sapulico. The scope of the project covered all of the light points operated by Sapulico in the city centre, as well as those along major transportation routes, thus involving 20 of Ho Chi Minh City's 24 districts. An outlying district (sector 11) was also included in the project as a pilot area.

A Luxicom\(^1\) system, was installed. Each light point was fitted with an electronic module known as a Lamp Unit (unité de candélabre), adapted to the light's nominal power. The system connects these points via power lines or other means (radio waves, ADSL) with a Central Control Station. A large screen provides real-time information about and control of each point in the network. With the system, users can:

- Turn one or more light points on and off
- Reduce (by up to 50%) the power consumed by one or more light points
- Detect faults with the lights, connections, control and power supply for the light points

\(^1\) Developed by Edelcom (a Citelum subsidiary)
The project's objectives were:

- To improve the energy performance, aesthetics, as well as technical and financial management of the public lighting within the project zone
- To improve the quality of lighting for users of public spaces within Ho Chi Minh City
- To introduce and foster appreciation of French expertise in the area of public lighting among local and national decision-makers

The project as described in the 2003 RPE loan application called for:

- Supply of 10,700 Lamp Units
- Supply of 1233 so-called "intelligent" street lights with integrated Lamp Units
- Supply of 890 Local Command Units for fitting out light point control cabinets
- Supply of other transmitting equipment connected with the system
- Supply of equipment for the Central Control Station (Citègestion et LGS/Luxicom software, computers, large screen, etc.)
- Preliminary studies and travel costs
- Monitoring by Citelum of the installation of the equipment, carried out by Sapulico
- Remote management start-up and programming
- Checking that the installations are working properly after three months' use
- Training Sapulico staff in the use of the software.
- Construction of the Central Control Station as well as the installation of equipment financed and created by the local beneficiary.

In the contract signed between Citelum and Sapulico in 2006, the following differences were noted with the investment stipulated during the loan investigation phase:
- Elimination of the supply of the 1230 "intelligent" street lights
- Supply of only 778\(^2\) Local Command Units
- Apparent decrease in services supplied, training in particular.
- Internalisation of the cost of technical assistance services into equipment costs

The evaluation mission

In June 2010, the SCE consultancy was mandated by the Directorate General of the Treasury to carry out an ex-post evaluation of the project. The purpose of the evaluation was to express an independent, informed opinion of the project, based on the OECD Development Assistance Committee's six criteria: relevance, coherence, efficiency, effectiveness, impact and sustainability.

The evaluation was conducted in three phases:

1. Organisation of the process: retrospective reconstruction of the logical framework and associated indicators, and preliminary data gathering in Vietnam and France
2. Site visit in Vietnam, 10–21 July 2010: this visit allowed us to continue our initial data-gathering efforts through meetings with the project stakeholders (Sapulico and Citelum), local and central Vietnamese authorities, the key players in the sector as well as the various donors that were, to varying degrees, involved (AFD, Asian Development Bank, UNDP)
3. Data analysis, formulation of observations, opinions and recommendations, and drafting of the final report.

The evaluation exercise encountered the following difficulties:

- **Limited access to certain data:**
  - The Consultant was unable to gather certain data (including elements from Sapulico's budget, energy bills and user feedback provided to Sapulico concerning lighting quality following installation of the Luxicom system)
  - Preparation and implementation of the project took nearly a decade: certain documents from the preparation phase, which would have allowed us to better understand the project's evolution, were apparently not kept.

- **The project is still incomplete on a technical level:** even though the last payment was made in June 2009, following final acceptance of the work, the system was still not fully functional one year later, when the evaluation team travelled to Ho Chi Minh City. The installations visited had a certain number of malfunctions, which Sapulico and Citelum were jointly trying to address.

\(^2\) This number is based on the number of control cabinets involved, which itself depends on the extent of the project, which was decided in-between.
partial operability observed did not allow the evaluation team to form a consolidated opinion on the effects and impacts of the project, given that the results themselves were not yet stabilised.

The conclusions contained herein are thus based on an analysis of a project that is not yet fully finalised: after overcoming remaining obstacles, it is likely that the project's results and impacts will be much more positive than those described above, which reflect the current state of the performances of the installed system.

Drafting and investigation of the project: a long preparation period but insufficiently-detailed preliminary studies

An initial draft of the project was drawn up in 2001, based on initial discussions that dated back to 1998. After the loan request was filed with the RPE in October 2003, the Treasury commissioned an independent appraisal, which was carried out in October–November 2003. It was partially based on studies that had been drawn up (in Vietnamese) in 2002 by Sapulico to present the project to the local authorities.

The following points were not examined closely enough during RPE's investigation of the loan request:

- **Assumptions and calculations concerning the expected benefits of the project in terms of energy savings and maintenance improvements**: savings resulting from lower energy consumption for a light point were overestimated. The assumptions concerning the achievable level of savings seem correct, but other parameters were wrong, due to an incorrect interpretation of the studies. These studies also included, for example, over-optimistic projections concerning extended equipment lifetime. This overestimation of the benefits clearly played a role in the assessment of the project's profitability.

- **Cost of electronic equipment**: although the Budget Directorate found the estimate relatively high during the evaluation of the loan request, and in spite of the fact that the expert made mention of higher costs – some 30% higher than the sales price in France – for a significant portion of the equipment, the explanations given for these higher costs were not checked, and they were approved. No ex-post audit was carried out (the ex ante evaluation was based on 2001 prices, and the commercial contract was signed in 2006) concerning the reality of these claims, and today we may assume that these higher costs should not have existed.
• Factoring in the specificities of the situation in Vietnam and the possible effect on the efficiency and effectiveness expected from the project.

Saving energy, particularly electrical energy, is undeniably a high priority for the Vietnamese government: for the past several years, the country has been experiencing a strong surge in growth that could, in the short term, be slowed by a lack of electricity-generating capacity. However:

- There are much larger sources of energy savings than public lighting, which represents only a very small share of the country's energy consumption. Domestic lighting, for example – or building construction techniques – offer a much wider scope for action. The project as it was carried out could be deemed relevant but not a priority with respect to Vietnam's energy issues.

- Within the public lighting sector, replacing the current street lights – which are outdated and of poor quality – with more efficient photometric versions would result in greater energy savings than those offered by remote dimming. Such a solution would cost less and be much easier to operate. As a matter of fact, this approach was included in the initial design, in the form of so-called "intelligent" street lights offering high photometric performance and remote management by integrated Lamp Unit. However, this option was gradually scaled back in the successive design versions (initially, it concerned all of the remotely-managed light points, and then 3,000 of them, and finally only 1,230 – 10% of the total – in the final approved version).

- The impact of the Vietnamese climate, as well as the impact of failures of the poor-quality electrical system in the downtown area, on the technical performance of the equipment were underestimated. And yet, these factors were the source of most of the failures that the remote management system experienced (and continues to experience). The system is prey to a number of incidents (overvoltage, power line theft, etc.) that affect a network not dedicated to public lighting and which, in addition, is subject to unannounced interventions by operators other than Sapulico. This is clearly a sophisticated technology that is best used as an additional improvement to a network that already meets the highest standards.

Following the approval of the RPE loan and prior to the signing of the commercial contract between Sapulico and Citelum in March 2006, the project was modified yet again: the component calling for the supply of "intelligent" street lights was eliminated entirely, reducing the project to the installation of the Luxicom system for the 12,000 pre-existing lights.

This elimination is unfortunate, because:

1. The benefits of remote management are much easier to achieve with new, high-performance equipment

2. An effort should have been made to demonstrate the importance of installing equipment that was designed to be energy-efficient, in a context in which there is a strong tendency to create outsized infrastructures. The French Ministry for Industry was not mistaken during the examination of the RPE
loan request in December 2003, which described this component as the project's "vital technological showcase".

3. Because of this, all the Lamp Units were installed outside of the street lights and – despite the addition of protective covers – exposed to the weather elements, which is seriously affected their performance.

Lastly, this change was carried out with no corresponding change in services, even though it meant a sharp drop in supplies and a reduced set of objectives for the operation. The French government departments did not raise these facts.

A project carried out in compliance with the contract, but technically unfinished at the time of evaluation

_There was no significant discrepancy between the planned cost, the cost of the contract and the development costs._ Citelum devoted a great deal of effort to training Sapulico's engineers, providing some forty training days, which was three times the volume stipulated in the commercial contract (but which was, in fact, equivalent to the amount stated in the RPE loan request). Technical assistance services provided to get the system up and running were many and varied, and equal to the amount that was initially forecast.

The deadline for withdrawing the funds was extended on two occasions, going from 30 June 2008 to 30 June 2009. _The financial implementation of the project took three years (2006-2009),_ compared with a single year, as originally planned. Given the context however, _this delay is not necessarily surprising_, and did not result in any cost overruns on the French side.

There were several reasons for the delays, including:

- A rise in local contribution costs (which consisted of (i) the construction of a large building housing, among other things, the Central Control Station, and (ii) the installation of the various remote management modules in the lighting network) during execution of the project, following an increase in the price of construction materials. The available funding had to be re-evaluated and resubmitted for approval to the Ho Chi Minh City People's Committee. Together with the slowness of the procurement process in Vietnam, this introduced delays in completing both the Central Control Station and the necessary adjustments and modifications to the network.

- Diverging interpretations of certain contractual clauses by Sapulico and Citelum (particularly with respect to the amount of training to be supplied and the customs clearance of replacement equipment) were the source of sometimes serious tension between the parties. These were finally resolved by reciprocal goodwill and a shared desire to have as fully operational a system as possible. To meet needs and at the request of Sapulico, Citelum was obliged to increase its technical assistance.
Given the incomplete results and effects, it is difficult to currently assess the impacts.

At present, only about one fourth of the lights that have been fitted out are truly being remotely managed. The first failures were noted in early 2009: since that time, there have been nonstop joint efforts by Citelum and Sapulico to solve problems with implementation. After the contract period, Citelum and Sapulico signed an agreement to gradually replace the installed Luxicom modules with a second, more robust and high-performance version (known as "V2"). The new equipment and its installation will be paid for by Citelum. When the evaluation was being carried out, these replacements were underway in two of eleven sectors, which were selected as being representative of the problems encountered. They will probably be extended to the entire remotely-managed set of lights. As a result, conclusions as to the reality of energy savings and improvements in maintenance costs due to remote management will only be possible when the modules have been replaced and are operational.

Nevertheless, if we extrapolate the results observed during the evaluation with respect to several cabinets controlling the functional parts of the system, we might reasonably expect that the project will result in energy savings of roughly 25%. In terms of greenhouse gas emissions, and given the sources of electrical energy in Vietnam, this corresponds to the emissions of about 100 light-duty vehicles.

On the other hand, since there has only been sporadic collection of data about the state of the lights, up to now there has been no significant reorganisation of maintenance activities. It should be pointed out that, although this expected benefit (savings associated with streamlined operations) is of vital importance for those managing public lighting in countries where labour costs are high, it is of secondary importance in Vietnam, where energy costs represent 75% of the cost of managing public lighting, compared with roughly 30% in France, for example.³

The public's reaction has been positive: prior to installation of the system, due to a government directive that instructed public lighting managers to make energy savings of 50%, only every other street lamp was lit (the so-called "intercalated" lighting method), which resulted in a noticeable drop in service. In places where the Luxicom system was installed, and based on the anticipated savings, all the light points were put back into service, which led to a drop in user complaints. Moreover, at the remotely-managed light points, energy savings – which were achieved by lowering the supply voltage, which in turn resulted in a drop in the power consumed – were obtained via an imperceptible change in lighting.

The showcase effect of the project is satisfactory: it was given a positive mention in the press, and Sapulico received expressions of interest from other public lighting authorities about the installed technology. In recent years, the United Nations Development Programme (UNDP) has been conducting a project designed to improve the efficiency of public lighting in Vietnam (VEEPL: Vietnam Energy Efficiency Public Lighting). This project contributed to the promotion of the RPE project by encouraging Sapulico to set up site visits and speak about the project during conferences organised for provincial public lighting authorities and

³ Currently, the price per kilowatt hour for public lighting is very similar in France and Vietnam, roughly the equivalent of 4-5 centimes.
associated decision-makers. The project was also presented during a conference on energy efficiency organised in Hanoi in 2008 by AFD and ADEME. Nevertheless, whether this effect will endure is largely dependent on the satisfactory implementation of version V2.

*We cannot currently state that the project has had significant repercussions* (leverage effect). Given the strong interest by certain municipal utilities and Sapulico's stated intention to extend the system to the entire set of light points it manages in Ho Chi Minh City, there is potentially a significant market for the Luxicom system, if it proves to be reliable. This is all the more true since certain significant initial fixed costs have already been taken care of (the Central Control Station, software that will handle up to 100,000 light points, training for staff, etc.). However, one major roadblock to expanding remote management of public lighting is the availability of local funds for this type of investment, which are lacking and rarely used to finance the purchase of equipment from abroad. Official Development Assistance funds are (and theoretically will remain) little used for public lighting, which neither donors nor the government considered to be a priority.

The project certainly has a trailblazing and innovative aspect, in that it is preparing Sapulico for handling advanced public lighting management tools. There is concern, however, that it will not achieve on its own the critical investment mass required to trigger use of the recommended technology on a larger scale.

In recent years, Citelum has indeed managed to enter certain markets, both in Vietnam (lighting for monuments) and in the larger region (remote management equipment and delegated management of public lighting in Kunming, China), no doubt thanks to the Ho Chi Minh City project, but many other factors may have played a role. At any rate, the industrial repercussions are minimal.

*On the other hand, remote management skills are an asset for public-service delegation contracts in which services play an important part.*

*The transfer of the skills required to operate the system was effective.* Sapulico's engineers acquired the necessary know-how, and are now in position to use the sophisticated Luxicom remote management system on a point by point basis. Nevertheless, this skill level is still insufficient for them to handle, without the assistance of Citelum, the many current and future technical difficulties. Moreover, Sapulico staff members are not aware of – or do not see the need for – the possibilities for fine-tuning that the system offers: power reductions are the same for all street lights, whereas it would be possible to adapt the power to the specific circumstances of each location (very reduced lighting for secondary roads, variations based on levels of activity, etc.).

*There are some concerns as to the project's viability.* Each year, Sapulico's budget is allocated by the municipality of Ho Chi Minh City. According to Sapulico, this does not allow for the purchase of equipment from abroad, and therefore replacement parts for equipment that is defective or reaches the end of its lifecycle.

The service life of the equipment under Ho Chi Minh City's climate and technological context is unknown. We have seen that the first-generation Luxicom modules have proved to be far more vulnerable than was predicted; the improved version (V2) that is currently being installed is expected to be more robust, but this remains to be seen. In addition, Sapulico is not responsible for repaying the loan granted by the French government, which comes directly out of Ho Chi Minh City's budget. The proper functioning of the system has little or no impact on the funds allocated by the city, which lessens the incentive to optimise it.
Key recommendations of the evaluation team

After getting a good grasp of the results and possible impacts of the project, and given the fact that its incomplete state did not allow us to carry out an ex-post evaluation in the true sense of the term – our work is more comparable to a "mid-course" assessment – the evaluation team recommends that a supplementary technical audit be carried out following the complete installation of the second version of the Luxicom system. This should be followed by a feedback workshop attended by the project's participants and the major stakeholders in the sector, which would provide a better grasp of the future prospects of this technology as well as future sources of financing.

Given the limited resources of the RPE, although it is certainly relevant and sensible for the French government to assist Vietnam in its efforts to control energy spending and greenhouse gas emissions, it is legitimate to question whether official development assistance funds are best used in the public lighting sector, and even more whether remote management is the appropriate technology to be promoting in this way – regardless of its intrinsic qualities.

In light of what we have learned, we would like to propose the following options for improving the effectiveness of future projects.

Over and beyond the major strategic orientation set for the RPE, the evaluators would like to suggest that the Directorate General of the Treasury, its economic departments and other stakeholders in French assistance (AFD, SCAC) take an in-depth look at the strategy (in terms of both policy and resources) they would like to implement in a given country and given sector. It seems that RPE-funded projects are often identified by French firms eager to gain access to emerging markets. Of course, this approach is a legitimate one, but the relevance of these firms' proposals should be assessed in light of a strategy that fully takes into account the specificities of the region in question. Adapting to the local context and needs should be a key criterion when selecting projects that are candidates for RPE assistance.

The Directorate General of the Treasury, which is responsible for implementing the cooperation instrument that the RPE would like to be, should expand its management tools:

1. - When the project is being prepared:
   a. We recommend that the RPE loan application should include a set of clearly-stated objectives and a minimum set of indicators for monitoring completed projects and their effects: for this, a "logical framework" – a tool used by all ODA donors – should be drafted during the preparation of the project.
   b. Independent appraisals should be provided with more resources (expert(s) time), which is currently not the case, in order to provide an in-depth analysis of the applicants' draft projects, in terms of both technical and socioeconomic feasibility. Moreover, the selection criteria should be made more stringent in order to ensure as much is possible the independence of this expertise (no recent relations with the firm introducing the project, a panel of experts in certain cases, etc.).
c. This case illustrates the fact that changes in the project design between the approval of the RPE loan and the signature of the commercial contract should be monitored by the French government, in order to avoid any non-compliance. A report on the conformity between the approved project and the contract signed with the Project Owner should be considered. This is not a question of prohibiting any changes in design, but rather of acknowledging them, seeking the reason why, approving them if need be and preventing them if not – and, in any case, taking note of them.

2. During project execution:

a. Monitoring the project on a fairly regular and systematic basis in order to anticipate some of the difficulties that may arise during execution, in contrast with the reactive approach currently employed

b. In particular, introduce monitoring of a limited number of key indicators (process, outcome, effects, etc.). This task, which is certainly time-consuming, could be considered as assistance provided to the Project Owner, and thus possibly subcontracted by the local embassy's Economic Department.

c. We also suggest requiring the RPE loan beneficiaries (the main French contracting firm and the local recipient of assistance) to submit interim progress reports, as well as a report at the end of the project. Every retrospective evaluation should be able to benefit from such documents, without being exempted from an in-depth analysis of the facts. One could rightfully expect that this would save time and provide additional details during the course the evaluation.

Regular gathering of relevance information about the project would improve traceability of both activities and decisions, and facilitate handover during a change in management, which frequently occurs given the average post-occupancy time within the embassy's Economic Department. Finally, it would be advisable for the Directorate General of the Treasury and the Economic Department to have the same level of information about a project's status – for this, ongoing communication mechanisms need to be defined.

A declining percentage of the total cost of the project could be earmarked for financing preparation and monitoring activities. It is difficult to suggest a rule, but the current practice appears to be insufficient with respect to commonly accepted standards, and certainly with respect to needs.
### Appendix: Evaluation grid for project results

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td><strong>Relevance</strong></td>
<td></td>
</tr>
<tr>
<td>Relevance of objectives</td>
<td>In line with the priority policy of saving energy</td>
</tr>
<tr>
<td>Quality of investigation of project and feasibility study</td>
<td>Significant underestimation of the difficulties posed by the climate and the technological context</td>
</tr>
<tr>
<td>RPE eligibility criteria</td>
<td>At the cost of an overestimation of both the benefits and the costs</td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td></td>
</tr>
<tr>
<td>Technical execution</td>
<td>Many difficulties overcome</td>
</tr>
<tr>
<td>Financial execution</td>
<td></td>
</tr>
<tr>
<td>Project monitoring by the French government</td>
<td>A lack of procedures and systematic monitoring indicators</td>
</tr>
<tr>
<td>Quality of monitoring and maintenance</td>
<td>Technical assistance services in conformity with contract</td>
</tr>
<tr>
<td>Satisfaction of the beneficiary</td>
<td>Prestigious operation for Sapulico, but with mixed results for the public</td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td></td>
</tr>
<tr>
<td>Technical performance</td>
<td>Currently many failures. Situation should hopefully improve after new version of Luxicom is installed</td>
</tr>
<tr>
<td>Financial performance</td>
<td>Higher equipment costs that were difficult to justify, and a drop in services provided without a corresponding drop in the budget</td>
</tr>
<tr>
<td>Timetable respected</td>
<td>Delays within standard limits</td>
</tr>
<tr>
<td><strong>Coherence</strong></td>
<td></td>
</tr>
<tr>
<td>Internal coherence with French aid instruments</td>
<td>Urban infrastructures and reducing greenhouse gases are French aid priorities</td>
</tr>
<tr>
<td>External coherence with the GEF and the UNDP</td>
<td></td>
</tr>
<tr>
<td><strong>Sustainability</strong></td>
<td></td>
</tr>
<tr>
<td>Financial sustainability</td>
<td>Sapulico will maintain the operational budget for the system, but has no funding for purchasing replacement parts from abroad.</td>
</tr>
<tr>
<td>Adoption and mastery of the techniques employed</td>
<td>Despite training efforts and interest by Sapulico staff</td>
</tr>
<tr>
<td>Technical assistance and after sales service</td>
<td>Citelum intends to make the system as operational as possible by financing the shift to the version V2</td>
</tr>
<tr>
<td>Transfer of French technology and know-how</td>
<td>Remote point-by-point management is an advanced technology with which Sapulico is now well acquainted</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td></td>
</tr>
<tr>
<td>Economic impacts for the beneficiary country</td>
<td>Public lighting is a very small portion of the country's spending on energy</td>
</tr>
<tr>
<td>Technical impacts for the beneficiary country</td>
<td>Transmission of sophisticated know-how</td>
</tr>
<tr>
<td>Institutional impacts for the beneficiary country</td>
<td>Currently no organizational impact nor impact on operational strategies (maintenance)</td>
</tr>
<tr>
<td>Social and environmental impacts</td>
<td>Very low for the moment; potentially higher if the system is expanded</td>
</tr>
<tr>
<td>Appreciation of French technology and know-how</td>
<td>Provided the remote management system proves to be operable on a long-term basis</td>
</tr>
<tr>
<td>Leverage effect for French firms</td>
<td>Provided the remote management system proves to be operable on a long-term basis</td>
</tr>
<tr>
<td>Key:</td>
<td></td>
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<td><strong>Relevance, Efficiency, Effectiveness, Coherence</strong></td>
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<tr>
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<tr>
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<td><img src="image8" alt="Highly unlikely" /></td>
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<tr>
<td><strong>Impact</strong></td>
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<tr>
<td><img src="image9" alt="Very high" /></td>
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<tr>
<td><img src="image10" alt="Fairly high" /></td>
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<tr>
<td><img src="image11" alt="Fairly low" /></td>
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<tr>
<td><img src="image12" alt="Insignificant" /></td>
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## Appendix: Summary of recommendations

### OPERATIONAL RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Finding</th>
<th>Opinion</th>
<th>Recommendation</th>
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<tbody>
<tr>
<td>The description of the project did not have a logical structure which explicitly linked objectives to activities - nor did it have monitoring indicators (for processes, outcomes, effects, etc.)</td>
<td>The absence of an explicit analysis of the issue - as well as the proposed solutions - is a roadblock to systematic and careful follow-up</td>
<td>1. Introduce the use of commonly accepted planning instruments such as the logical framework, and give the objectives of the operation, verifiable indicators, and the means for measuring those indicators</td>
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<td>The pre-project studies carried out did not sufficiently assess whether the project was a good fit given the climate and the technological context (ii) Additional undue costs (UDC) were approved</td>
<td>The preliminary investigation of the project was not provided with: (a) All of the desirable guarantees of neutrality (b) Enough resources to fully explore the important aspects of the cost structure (source, margins, etc.)</td>
<td>2. Ensure the quality of the ex-ante evaluation by: - Refining the criteria for selecting external experts in order to ensure their independence - Requiring more in-depth economic studies - Devoting the necessary time and resources to a detailed examination of the draft project.</td>
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<td>Significant modifications of the project were carried out (elimination of “intelligent” street lights) with no change to the budget although these changes reduced the service provided; these did not provoke a reaction from the Treasury departments, or, if there was a reaction, it was not followed up and any trace of it has been lost.</td>
<td>Any structural modification to the programme, even if the budget does not change, requires a revalidation, at least at the level of the Economic Department. This is even more the case if the objectives are modified (which cannot be detected if they are not explicitly stated - see recommendation no. 1).</td>
<td>3. Require the Economic Departments to issue a statement of compliance of the commercial contract with the approved project, which should be submitted to FININTER. If there is a discrepancy, it should be analyzed and its consequences evaluated and approved - or not - by the Economic Departments.</td>
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<td>Monitoring by the Economic Department was reactive in nature. It was done in response to requests by the stakeholders, but, in the absence of any sort of guidelines, it was done unsystematically and without any possibility of anticipating difficulties. Although the expert report</td>
<td>The lack of indicators and of a periodic reporting obligation - or even an obligation to meet - was detrimental to the Treasury having a good understanding of the progress of projects and a correct appreciation of whether the objectives had been met</td>
<td>4. Provide the Economic Departments with both the methods and the means to monitor (or subcontract the monitoring of) RPE-funded projects. In particular: - Set up Steering Committees that bring together the stakeholders at key project phases - Oblige the contracting parties to submit periodic progress reports</td>
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recommended periodic meetings with the stakeholders, these did not take place except in times of crisis.

- Make the final phase of payment dependent on the submission of an end-of-project report
- Allocate the necessary resources for regular monitoring of the project, by involving outside experts in the monitoring as need be.

RECOMMENDATION FOR THE RPE'S STRATEGY

<table>
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<tr>
<th>Observation</th>
<th>Opinion</th>
<th>Recommendation</th>
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<tr>
<td>Projects are frequently identified and developed by the firms that undertake them and promote them to both Economic Departments and local authorities. In such a context, commercial aggressiveness may play just as big a role in prioritizing projects as the relevance of those projects within the framework of cooperative strategies (Partnership Framework Documents) and – even more to the point – how suited projects are to local needs.</td>
<td>Although private-sector initiative is important, for the sake of coherence, the project objectives must be fully compatible not only with the general strategy of cooperation with the beneficiary country, but also with the priorities laid down within the framework of a sectorial strategy – agreed upon with the appropriate authorities in the country as well as with the various ODA stakeholders (AFD, SCAC, Decentralised cooperation)</td>
<td>The Directorate General of the Treasury, its Economics Departments and other French ODA stakeholders should take an in-depth look at the strategy (in terms of both policy and resources) that they would like to implement in a given country and given sector. This should include identifying priority intervention areas for each sector, defined in agreement with national authorities for that sector. Whether or not a project falls into one of these priority categories should be a major selection criterion.</td>
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Appendix: Evaluation Steering Committee

Members of the Steering Committee for the ex-post evaluation of an RPE-funded project in Ho Chi Minh City in the area of public lighting

1. Chair:
   • Daniel Perrin, *Inspecteur général des finances* (IGF)

2. Steering Committee Secretary:
   • Frédéric Bobay, Assistant Head of Development Activities Evaluation Unit (UEAD), Directorate General of the Treasury

3. Ministries:

   **Ministry for the economy, Finance and Industry (MINEFI)**
   • Benoît Chervalier, Head of Development Activities Evaluation Unit (UEAD), Directorate General of the Treasury
   • Anne-Sophie Dessillons, Assistant to the Head of the Project Assistance Office (FININTER2), Directorate General of the Treasury
   • Thomas Gosset, Head of the Project Assistance Office (FININTER2), Directorate General of the Treasury
   • Paola Brucker, Assistant to the Head of the Asian and Pacific Asian Affairs Office (BILAT3), Directorate General of the Treasury
   • Hervé Sarnelli, Assistant to the Head of the Hanoi Economic Department, Directorate General of the Treasury
   • Henri Devys, Sector Attaché, Hanoi Economic Department, Directorate General of the Treasury
   • Katalin Bokor, Development Activities Evaluation Unit (UEAD), Directorate General of the Treasury

   **Ministry for Ecology and Sustainable Development**
   • Gilles David, Head of Export Support Office, Directorate of European and International Affairs
   • Anais Jacquel, Export Support Office, Directorate of European and International Affairs

4. French Development Agency (AFD):
   • Jean-David Naudet, Head of Unit, Evaluation Office
   • Dominique Richard, Energy Production

5. Natixis:
   • Philippe Michaud, Director, Institutional Affairs Department
   • Bernard Lemperiere
# Appendix: Evaluation quality grid

Ex post Evaluation of a Project to Improve the Performance and Management of the Public Lighting System in Ho Chi Minh City, Vietnam

Steering committee members’ aggregated rating results on the evaluator’s work

The appreciation of the evaluators’ work for each evaluation is performed in the form of a grid of ten criteria filled by each member of the steering committee. This grid is based on five rating scales: “−−” very poor, “−” insufficient, “=” mean, “+” good, “++” very good.

It allows assessing the performance of the evaluators’ work according to each criterion. Thus, each member of the steering committee appreciates personally and as impartially as possible the quality of the work. The set will give a synthesis of aggregated scores to provide an effective quality and relevance indicator. In case of disagreement between the committee members, the points of discrepancy are detailed in the comments. The collegiate notation allows highlighting the focal points, that is to say, the eventual division of opinion about the evaluated action. In doing so, the grid can provide an objective picture of a subjective perception of the evaluation’s quality.

**General rating: 4.43/5**

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1. | Rationale, purpose and objectives of an evaluation | -- | - | = | + | ++ |
|  | The report describes why and for whom the evaluation is undertaken and why it is carried out at a particular point in time. The evaluation’s purpose is in line with the learning and accountability function of evaluations. The objectives of the evaluation specify what the evaluation aims to achieve. |  |
|  | Average rating: 4.6/5 |  |
|  | Comments: The evaluation showed that the project wasn’t completed. |  |

2. | Evaluation scope | -- | - | = | + | ++ |
|  | The scope of the evaluation is clearly defined (issues covered, funds actually spent, the time period, types of interventions, geographical coverage, target groups, etc.). The evaluation report assesses the intervention logic and distinguishes between findings at different levels (inputs, activities, outcomes and impacts). The evaluation report applies the five DAC criteria. The criteria applied for the given evaluation are defined in unambiguous terms. If a particular criterion is not applied this is explained in the evaluation report, just as any additional criteria applied. |  |
|  | Average rating: 4.6/5 |  |
|  | Comments: The field of the evaluation is clearly defined and the difficulties met have been quickly set out. |  |

3. | Context | -- | - | = | + | ++ |
|  | The evaluation report provides a description of the policy context relevant to the development intervention, the development agency’s and partners’ policy documents, objectives and strategies. The evaluation report provides a description of the institutional environment, the socio-political context as well as the implementation arrangements. |  |
|  | Average rating: 4.3/5 |  |
|  | Comments: The objectives of the Emerging Country Facility (RPE) are clarified as well as the institutional context. |  |

4. | Methodology | -- | - | = | + | ++ |
|  | The evaluation report describes and explains the evaluation method and process and discusses its validity and reliability. The choices are justified and limitations and shortcomings are explained. Relevant stakeholders are involved in the evaluation process. The evaluation report indicates the list of the consulted stakeholders, the criteria for their selection and describes stakeholders’ participation. The evaluation report explains the selection of any sample. |  |
|  | Average rating: 3.9/5 |  |
|  | Comments: The method presented during the invitation to tender has been implemented. |  |
5. Information sources

The evaluation report describes the sources of information used in sufficient detail. The evaluation cross validates and critically assesses the used information sources and the validity of the data using a variety of methods and sources of information. Complete lists of the interviewees and the consulted documents are included, to the extent that this does not conflict with the privacy and confidentiality of participants.

Average rating: 4.0/5

Comments: The evaluator team made noteworthy efforts to find out the essential information for replenishing some of the elements from the logical framework in spite of the difficult access to the data.

6. Independence

The evaluation report indicates the degree of independence of the evaluators; possible conflicts of interest are addressed openly and honestly. The evaluation team (gender balanced and including local consultants) disposes of various qualifications and is able to work freely and without interference. Cooperation and access to all relevant information is assured.

Average rating: 4.5/5

Comments: The evaluator team was independent, high quality, and with appropriate combined skills.

7. Evaluation ethics

The evaluation process shows sensitivity to the participants’ welfare and is undertaken with integrity. Anonymity and confidentiality of individual informants should be protected. Evaluation team members should have the opportunity to dissociate themselves from particular judgments and recommendations. Any unresolved differences of opinion within the team should be mentioned in the report.

Average rating: 4.7/5

Comments: The communication between the consultants and the members of the steering committee was very productive although results happened to be somewhat limited.

8. Quality assurance

Stakeholders are given the opportunity to comment on findings, conclusions and recommendations. Quality control is exercised throughout the evaluation process.

Average rating: 4.3/5

Comments: There were regrets not to hold the final workshop on evaluation results. This decision was however taken by the members of the Steering Committee considering the timing of the results.

9. Relevance of the evaluation results

The evaluation’s findings are relevant to the object being evaluated and the purpose of the evaluation. The evaluation is conducted and results are made available within the allocated time and budget.

Average rating: 4.7/5

Comments: The evaluation was conducted in accordance with the allowed schedule. The members of the steering committee share the view that this is a quite outstanding study.

10. Completeness

The evaluation report answers all the questions detailed in the scope of the evaluation. The evaluation report contains an executive summary. The evaluation presents conclusions, recommendations and lessons learned separately and with a clear logical distinction between them.

Average rating: 4.7/5

Comments: The analysis is quite detailed, useful and operational, especially considering the recommendations.
Ex post evaluation of a project to improve the performance and management of the public lighting system in Ho Chi Minh City, Vietnam