**ERASMUS UNIVERSITEIT ROTTERDAM**

ORET Evaluation 2007-2012 – Case Study of the ORET Transaction LK00074

# Upgrading the Disaster Response Network in the Western Province and Selected Urban Areas in Sri Lanka

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# Executive Summary

## *Introduction and Methodology*

The ORET transaction (LK00074) involved the supply of vehicles, equipment, training and technical management support to strengthen the emergency response capacity of Sri Lanka. The total transaction value in the application amounted initially to € 26.2 million and the ORET grant was determined at € 10.6 million, bringing the grant element to 35%. The project was executed by the Dutch company Search and Rescue Systems B.V. (SAR Systems).

The transaction targeted the upgrading of the Disaster Response Network in Colombo, the Western Province and other selected Urban Areas in Sri Lanka. The project was implemented during the period November 2006 to November 2011. The project was aimed at strengthening 18 fire brigades in 15 cities of Sri Lanka. During the appraisal phase of the transaction in 2005, a number of urgent deficiencies in the disaster response network were identified. Local fire brigades were short of fire, rescue and medical equipment and of vehicles. Coordination among local fire brigades was insufficient because of a shortage of a well-functioning organisational and physical communication infrastructure. Equally essential, fire brigades did not have the proper communication equipment necessary for receiving emergency calls from civilians, and had also not been trained sufficiently in responding to emergencies. In general, the expertise for dealing with complex emergencies and disasters was not sufficient. The project addressed part of these issues by training local fire brigades in handling complex emergencies, and by providing them with the necessary equipment and vehicles. In addition, it supported the Colombo Municipal Council Fire Brigade in setting up a Special Response Unit (SRU) to assist other local fire and rescue brigades in the event of major disasters. In order to cope with the lack of training facilities, the project set up a national Emergency Response Training Centre (ERTC). SRU employees assist in the provision of training courses in the ERTC.

The expected impact of the project was a reduction of human loss and injuries and material damage from emergencies. Data show that trauma, mainly from accidents and emergencies, are a leading cause of hospitalisation in Sri Lanka, with most victims being productive adults. A reduction should contribute to enhancing the economic potential of the country. The impact is likely to be higher for communities that face multiple disaster risks, such as the coastal urban areas.

When the transaction was approved, the grant share was initially determined at 40% of the transaction value of € 26.5 million. The non-grant part was covered by a commercial credit provided by Rabobank International and insured by Atradius DSB. At the request of the Government of Sri Lanka the regular financing structure of an ORET transaction combining a grant with a commercial loan, was changed into a concessional loan. The one-off finance cost and the interest charged on the commercial loan (in fact the discounted value of the interest payments over the loan period of ten years with a grace period of two years) were paid from the ORET grant for an amount of € 9,394,518. This raised the total transaction amount to € 30,799,189 and reduced the definitive grant element of the transaction to 35%.

The evaluation of this transaction is based on the following sources of information:

- Relevant documents in the ORET archives, such as the grant agreement, feasibility studies, technical reports, progress reports, and monitoring reports.
- Documents and data provided by the Sri Lankan authorities and other stakeholders in the country.
- Various publications on the situation of the emergency support services in Sri Lanka.
- Interviews with stakeholders in the Netherlands and Sri Lanka in August, September and October 2014.
- Site visits to ten firefighting stations in Sri Lanka in August, September and October 2014.

## *Efficiency*

***Application.*** The period from submission of the application to grant agreement took about ten months, which compares favourably with other applications. The transaction fitted well within the criteria for ORET support. The grant agreement was concluded after having secured additional

commitments from the Government of Sri Lanka, among them an additional annual financial contribution to the fire stations to cover the running costs and safeguards for long-term sustainability, and the guarantee that the stations would be staffed adequately. The project has been executed by the Dutch company Search and Rescue Systems B.V. (SARS) who received the contract by direct award. An independent consultant, SGS, evaluated the the price/quality ratio of the transaction and concluded that the total transaction price was in accordance with market levels.

***Implementation.*** The project has provided equipment and vehicles to 18 fire stations. The distribution of the vehicles was decided in consultation with the Sri Lankan Ministry of Provincial Councils and Local Governments taking into account the nature of the locations of the fire stations and the availability of funds. The Training Centre has been established and the planned 32 trainers have been trained. All senior crew members have received basic training while several others special training at the newly established training centre. The planned number of senior crew members received training during their study visit to the Netherlands. With a few exceptions, all new recruits to the fire stations have received basic training. Training is also provided in-house now by the trainers trained in the Training Centre. Overall, the project was implemented on time within the foreseen project period and budget.

### *Effectiveness*

From a technical point of view the vehicles supplied to the 18 fire stations are of good quality. However, the project provided the same vehicles to all stations regardless of the geography of the location. Some fire station staff officers mentioned that not all vehicles are ideal for the local physical conditions. This is particularly the case for stations located in the hilly areas with narrow roads, such as Dambula and Kandy. As a result, here the vehicles cannot be used as effectively as planned. These physical local conditions should have been considered at the time of procuring the vehicles and distributing them to the various locations.

It was noticed that the provided the communication equipment was rather vulnerable to the hot and humid weather conditions in Sri Lanka. From time to time this hinders the communication with the communication tower in the fire brigade stations, particularly in the Western coastal regions. Another communication problem was that the Defence Authorities did not authorise communication towers to use the necessary bandwidth and frequency for the operation of the communication equipment because of the prevailing civil war situation in Sri Lanka at the time. Fortunately the end of the civil war has improved this situation.

The new training centre has provided either on-site training or training at the centre. The trained personnel have the right attitude and expressed their satisfaction about the training received. Since the project ended, the training centre has continued to offer training, but now only for a fee. The municipalities are, however, somewhat reluctant to pay for the training and have not allocated funds for further training. As a result, the centre is used less effectively than foreseen during design.

The project was expected to generate more than a 1000 extra jobs in emergency response. Notwithstanding the written guarantee of the Ministry of Provincial Councils and Local Governments to that effect, all fire brigades suffer at the moment from a lack of personnel because funds are lacking.

Although the project showed some limitations in implementation, it has certainly contributed to an enhanced capacity of the emergency response network. It has done this by providing vehicles and equipment to 18 fire stations, training the staff in operating the equipment and reacting efficiently and quickly to emergency situations. The project further trained instructors who are currently training local fire station staff and established a training centre that offers the opportunity to follow up. Overall, the reaction capability of a number of fire brigades to respond to emergency situations has increased. However, the fulfilment of important financial and institutional conditions for an effective operation in the future is in doubt, as the government of Sri Lanka has not ensured the provision of adequate funds and new manpower, even though this was promised in the grant agreement.

## Sustainability

***Financial.*** Most local administrations do not have sufficient revenues and depend on central government budgetary allocations. The revenues of the local governments are low compared with the demands from the public for local government services, including for emergency services. The Colombo municipality is an exception. As the largest and best financed municipality, it is able to collect more revenue from companies and institutions than all other local government units. In most of the 18 fire stations the shortage of finance for operation and recurrent costs has resulted in a shortage of required staff, maintenance and repairs.

***Maintenance.*** The shortage of funds had had a direct impact on the maintenance of vehicles and equipment. In several fire stations some of the vehicles and equipment need repair but do not get it. In addition to the financing issue, the local agents and the supplier of the vehicles and equipment are not well equipped to attend to all repairs immediately if needed. The lack of appropriate spare-parts is another issue for some vehicles that are not models commonly used in Sri Lanka. During the visits a couple of other maintenance issues were mentioned by respondents. The imported vehicles do not always confirm to the standards these manufacturers usually maintain for Sri Lanka. Therefore the agents of the manufacturing companies cannot always immediately attend to needed repairs when breakdowns happen. For example, in two fire stations visited one of the vehicles could only be used for limited tasks due to wear and tear in the brake pump which could not be immediately repaired. Similar servicing problems were mentioned for other vehicles with repair needs.

***Institutional.*** The fire brigades are only a small unit of the local government institutions which seem to pay little attention to operational aspects and the personnel of the fire brigades. In an appreciable number of municipalities the importance of keeping their fire brigade prepared and ready to respond to emergencies is not the main priority. Political authorities and senior officials at local level are not everywhere fully committed to the services of their fire brigade or show a lack of understanding for the need to maintain emergency response readiness. This is reflected, for example, in the fact that local governments sometimes requisition fire brigade equipment and vehicles for other purposes.

Fire fighting vehicles also need access to working hydrants to be effective. Many cities have not placed high importance to installing sufficient hydrants. This problem was reported in Colombo, Negambo and Galle as well as in other municipalities. To illustrate: Kandy city now has only three hydrants in place compared to six in the past. Of the municipalities visited, only Nuwara Eliya indicated having five functioning hydrants, all above ground.

Most firefighters and service crews, while appreciating the contribution of the project, pointed out that fire brigades do not receive sufficient attention from local authorities. They feel underappreciated and blame a lack of funds and a lack of understanding of their importance for this. Therefore, the staff of all fire brigades visited were of the opinion that the fire brigades would be better off if they were under the aegis of a department of the Ministry of Provincial Councils and Local Governments. Such institutional embedding would also enable the staff to have a career path, the lack of which is currently a source for disappointment and demotivation. Many officers have served for over 20 years in the same rank and position.

## Relevance

During recent decades Sri Lanka has experienced huge natural disasters. After the dramatic consequences of the tsunami in 2004, discussions were held with international donor organisations about strenghtening the response capability, but these talks mainly focused on short-term actions rather than the comprehensive approach followed in this project. Upgrading the national system of emergency services was considered urgent and was recognised by the government of Sri Lanka, which gave it a high priority.

### *Additionality*

It is doubtful whether a project of this size, comprehensiveness and coverage of regions would have taken place without the financial support from the ORET programme, especially in the light of the financial constraints facing the government of Sri Lanka at the time.

### *Coherence*

The application was preceded by a feasibility study financed from the PESP programme. Non-grant funding for the transaction was insured by Atradius DSB against the risk of non-payment of the debt service, but at a certain cost. The project did not complement other Dutch development cooperation instruments directly nor did it contradict such instruments. The fact that the contractor continued its activities in the country after the project shows that the transaction was to some extent in line with the policy of Dutch trade promotion in South-East Asia.

The primary reason for Sri Lanka seeking a blended loan from ORET lies in its IMF arrangement at the time, which limited the contracting of foreign commercial loans by the country. The blended format of the ORET loan may have been a short-term answer to circumvent that obstacle but it raised the total financing cost of the transaction considerably. It did so because the insurance premium was now calculated over the full amount of the transaction, while bank fees and interest payments were also charged over the higher loan amount. It also raises the question of whether a possible undermining of the debt sustainability framework of IMF/World Bank for Sri Lanka was facilitated.

# 1. Introduction

This report presents the results of the evaluation of an ORET-supported transaction (LK00074) to Sri Lanka. The transaction involved the supply of vehicles, equipment, training and technical management support to strengthen the Disaster Response Network in Colombo, the Western Province and selected urban areas in the country. The total transaction value amounted to € 26.2 million and the definitive ORET grant was determined at € 10.6 million, bringing the grant element of the transaction to 35%. The project was executed by the Dutch company Search and Rescue Systems B.V. (SAR Systems).

This case study is part of the overall evaluation of the ORET programme, covering the period 2007-2012 and beyond. The evaluation is based on the following sources of information:

- Relevant documents in the ORET archives, such as the grant agreement, feasibility studies, technical reports, progress reports, and monitoring reports.
- Documents and data provided by the Sri Lankan authorities and other stakeholders in the country.
- Various publications on the situation of the emergency support services in Sri Lanka.
- Interviews with stakeholders in the Netherlands and Sri Lanka in August, September and October 2014.
- Site visits to ten firefighting stations in the Sri Lanka in August, September and October 2014.

The structure of this report is as follows. After this introduction, the second chapter describes the transaction, its context and the main stakeholders. The third chapter explains the results chain and the methodology used to evaluate the results. The fourth chapter assesses the transaction according to the evaluation criteria efficiency, effectiveness, sustainability, relevance, additionality and policy coherence.

# 2. Project Overview

## 2.1. Context

Sri Lanka frequently suffers from different kinds of natural disasters, such as the 2004 tsunami and regular landslides, fires and floods. During the civil war, which ended in 2009, war damage and terrorist attacks drew heavily on the emergency services. Over time emergencies have become more frequent and the Sri Lanka disaster response network could not keep up with rising demands. Besides natural and man-made disasters, the rising number of traffic accidents due to increasing motorisation also puts pressure on the disaster and emergency response network.

During the appraisal phase of the application in 2005, a number of urgent deficiencies in the disaster response network were identified. Local fire brigades were short of fire, rescue and medical equipment and vehicles. Coordination among local fire brigades appeared to be insufficient because of the lack of a well-functioning organisational and physical communication infrastructure. Equally essential, fire brigades did not have the proper communication equipment necessary for receiving emergency calls from civilians, and had also not been trained sufficiently in responding to emergencies. They had also not been trained in communicating with civilians and coordinating with civilian volunteers how to respond to emergencies. Fire and rescue training centres were only offering standardized training and lagged seriously behind the needs[1]. In general, the expertise for dealing with complex emergencies and disasters was not sufficient.

The project addressed part of these issues by training local fire brigades in handling complex emergencies, and by providing them with the necessary equipment and vehicles. In addition, it supported the Colombo Municipal Council Fire Brigade in setting up a Special Response Unit (SRU) to assist other local fire and rescue brigades in the event of major disasters. In order to cope with the lack of training facilities, the project set up a national Emergency Response Training Centre (ERTC). SRU employees assist in the provision of training courses in the ERTC.

The expected impact of the project was a reduction of human loss and injuries and material damage from emergencies. Data show that trauma, mainly from accidents and emergencies, are a leading cause of hospitalisation in Sri Lanka, with most victims being productive adults. A reduction

[1] Before the transaction/project, such training was only offered by foreign agencies.

should contribute to enhancing the economic potential of the country. The impact is likely to be higher for communities that face multiple disaster risks, such as the coastal urban areas.

## 2.2. The Transaction

### *2.2.1 Location*

This ORET-supported transaction targeted the upgrading of the Disaster Response Network in Colombo, the Western Province and selected urban areas in Sri Lanka. The project was implemented during the period November 2006 to November 2011. It was executed through the Ministry of Provincial Councils and Local Governments. Originally the project was aimed at 15 fire brigades which was later extended to 18 fire brigades in 15 cities of Sri Lanka. The map in Figure 1 shows the locations of the supported fire stations. With a few exceptions, they are concentrated in south-western part of the country.

**Local Government Authorities Assisted Under the Project**

***Municipality Councils:***

- Colombo
- Sri Jayawardanepura
- Dehiwala
- Kandy
- Gampaha
- Kurunegala
- Nuware Eliya
- Galle
- Matara
- Ratnapura Badulla
- Anuradhapura
- Negambo

***Urban Councils***

- Tangalle
- Kalutara
- Horana

***Pradeshiya Sabha***[2]

- Dambula
- Thamankaduwa

### *2.2.2 The Equipment*

The assessment of the application by FMO, at that time the executing agency of ORET, included a technical due diligence. This was executed by the Nederlands Instituut voor Brandweer en Rampenbestrijding (NIBRA). This institute concluded that the intended vehicles were efficient and capable for the tasks they were expected to execute. The other supplies were considered to be adequate and suitable for offering basic firefighting services. The transaction included a three-year spare-parts package and required supplies for the vehicles. The local agent of SAR Systems (*Foresight Engineering*) was made responsible for distributing and managing the spare-parts and for local coordination and support activities. This included amongst others the following tasks:

- Logistics and coordination of technical assistance in Sri Lanka.
- Spare-part management during a period of three years.
- Customs clearance of goods and documentation support to the Ministry of Provincial Councils and Local Governments.
- Provision of local office space and administrative support to the project.

The communication package was considered to be able to meet the basic demand for coordination and communication and to improve responsiveness to disasters and accidents.

[2]Local authorities are divided into three groups: municipal councils, urban councils and Pradeshiya Sabha .

**Figure 1: Map of Sri Lanka**


*Cities with fire stations supported by the project*

### 2.2.3 Technical Assistance

The technical assistance that was part of the transaction can be divided into two main components:

1. *Operational training or user training:* the recipients at the various locations received instructions on how to use the different types of equipment.
2. *Institutional strengthening and capacity building.* The program established a Special Response Unit (SRU), but also included:
   - Assisting fire brigade officials in Colombo in establishing a new disaster management and rescue training curriculum consistent with the international training to be provided.
   - A training of trainers programme to train 32 designated members of the Colombo SRU as certified instructors. This training was partly provided in the Netherlands. These instructors were trained so that they could provide courses in Sri Lanka for rescue organisation personnel.
   - Providing basic design and supervise the development of disaster management and rescue training facilities.
   - Assisting officials and representatives from the contracting authority and the beneficiary in planning, conducting and evaluating stakeholder workshops.
   - Enhancing the safety chain concept and introducing a systematic approach to trauma care.

### 2.2.4 Project Management

SAR Systems acted as the international project coordinator for procurement, logistic services and project management services, including project administrative issues. Its local agent 'Foresight Engineering' guaranteed a continuous presence in Sri Lanka.

### 2.2.5 Project Finance

The transaction was approved on the basis of an initial total transaction value of € 26.6 million with a grant component of € 10.6 million, bringing the grant element to 40% of the transaction value (see Table 1). ORET funded 75% of the one-off financing costs and the costs of capacity building, in line with the provisions of the ORET programme. The non-grant part was covered by a commercial export credit provided by Rabobank International and insured by Atradius DSB against the risk of non-payment.

**Table 1: Financial Package Transaction Proposal**

| Cost Item | Value | Grant | % |
|---|---|---|---|
| Net production costs | 20,131,335 | 7,045,967 | 35% |
| Financing costs | 1,955,839 | 1,466,879 | 75% |
| Technical assistance | | | |
| - Training | 31,200 | 10,920 | 35% |
| - Capacity development | 1,349,345 | 1,012,009 | 75% |
| Agent costs | 1,013,410 | 354,694 | 35% |
| Freight | 310,000 | 108,500 | 35% |
| Contingencies | 125,000 | 43,750 | 35% |
| Profit | 1,691,579 | 592,053 | 35% |
| **Total** | **26,607,708** | **10,634,772** | **40%** |

*Source: Grant agreement proposal*

During the approval process the financial package was changed at the request of the government of Sri Lanka into a concessional loan. It was decided to include the interest charged on the commercial loan (in fact the discounted value of interest payments over the loan period of ten years with a grace period of two years), in the grant. Table 2 presents the final financial package agreed with the government of Sri Lanka which increased the total transaction amount to a € 30.8 million and lowered the grant share to 31%.

**Table 2: Final Financial Package of the Grant Agreement**

| | Value | Grant | % |
|---|---|---|---|
| Down-payment | 3,720,758 | 1,240,253 | 33% |
| Financing costs | 1,955,839 | 1,466,879 | 75% |
| Payment of interest | 3,913,298 | 3,913,298 | 100% |
| Progress payment | 20,834,294 | 2,399,088 | 12% |
| Final payment | 250,000 | 250,000 | 100% |
| Contingencies | 125,000 | 125,000 | 100% |
| **Total** | **30,799,189** | **9,394,518** | **31%** |

*Source: Grant Agreement*

### *2.2.6 Conditionalities of the Grant Agreement*

The project was expected to generate more than a 1000 new jobs in emergency response to be financed from the regular budget of the government, in casu the Ministry of Provincial Councils and Local Governments. The government of Sri Lanka, through the Ministry of Provincial Councils and Local Governments was required to provide a written guarantee that the personnel to operate and manage the equipment would indeed be employed as and when required.

In addition, the Ministry of Provincial Councils and Local Governments and/or the Ministry of Finance had to commit themselves to making up for any budget shortfalls that would arise during the first 12 years of operation of the individual firefighting stations that were targeted in the transaction and of the Special Response Unit. Shortages were estimated to be, on average, an amount of € 70,000 annually for each station.

## 2.3. The Stakeholders

### *2.3.1 The Client*

The Ministry of Provincial Councils and Local Governments was the client for this transaction. It acted on behalf of the local authorities that manage the fire stations. The Ministry of Finance of Sri Lanka was the grantee and the guarantor of the concessional loan. This ministry is also responsible for debt servicing the non-grant part of the transaction value, part of which was financed with a commercial export credit from a commercial bank.

### *2.3.2 The Contractor*

The project has been executed by the Dutch company Search and Rescue Systems B.V. (SARS), which was the only bidder for this project. SARS had experience with an earlier ORET-supported project in Turkey. The training and capacity building activities were executed by ICET B.V., a sister company of SARS. ICET is a consultancy firm that assists countries and organisations in improving their disaster, emergency and crisis management capacity, with a focus on the development of emergency response networks and multidisciplinary training of rescue professionals. For this purpose, it had developed a special training programme called: Systematic Approach to Vital Emergency Response (SAVER). This programme was focused on training technical staff, commanders and disaster managers. Training of instructors was also a part of the programme. Foresight Engineering was the local company, which acted as the representative of SARS in the country, supporting the project in the area of logistics and management of spare-parts.

### *2.3.3 Local Stakeholders*

At the start of the project there was a possibility that a new Ministry of Disaster Management would become responsible for the SRU and the Emergency Response Training Centre (ERTC). However, the structure of this Ministry was not in place yet at the time of the start of the transaction. It was therefore decided that the Ministry of Provincial Councils and Local Governments would become responsible for the transaction. The Ministry of Provincial Councils and Local Governments is responsible for all municipalities in Sri Lanka. At central level, budgets are determined for and allocated to all municipalities, including their budgets for firefighting activities. All fire stations in Sri Lanka are headed by fire stations chiefs who are responsible for the proper operational and financial management of the fire station. They report directly to the mayors of

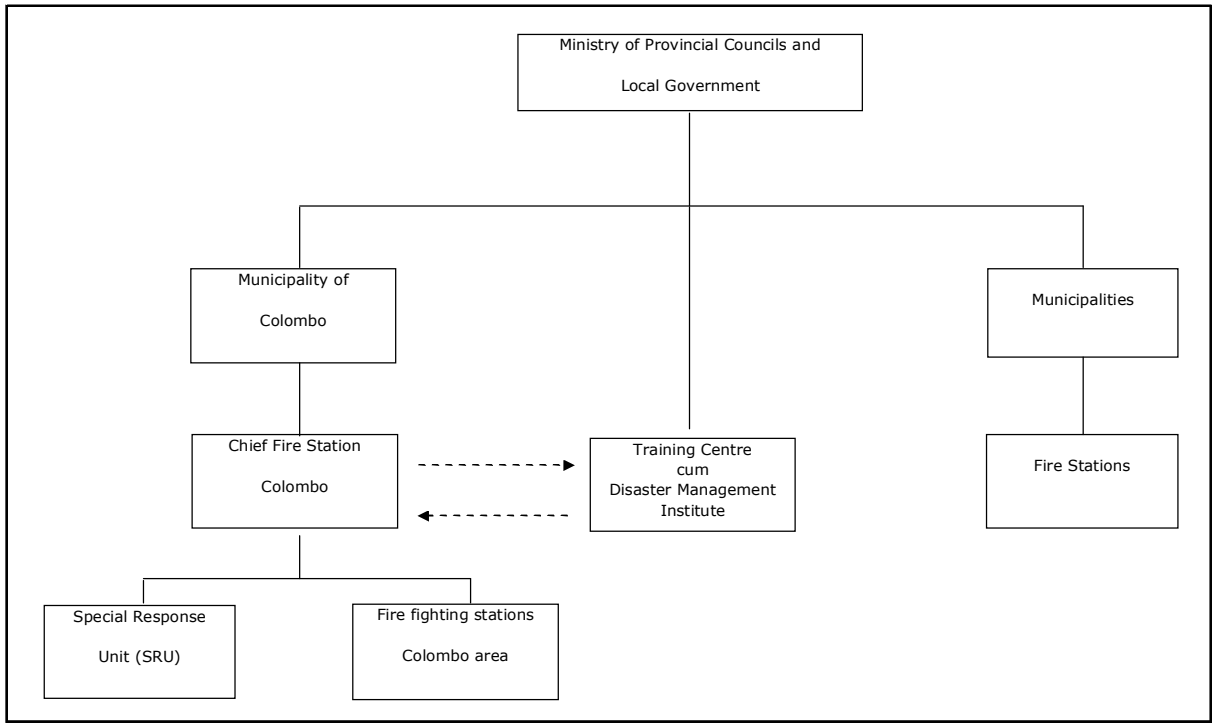
their respective town or city and have regular meetings with them, in addition to the regular written reporting.

The fire station chief of Colombo has more responsibilities because of the size and importance of the Colombo area. This was one of the reasons that the SRU was located in Colombo and falling under his responsibility. There is also close contact with the training institute ERTC, especially since SRU members use these facilities for their training programs.

The technical assistance provided as part of the transaction also covered the institutional set up of the SRU and the training centre. This included the development of a management structure, implementing a management information system and drafting a financing plan for sustainable development of both entities. The SRU was established as a separate entity and also under the management responsibility of the fire station chief of Colombo. At the same time, he remained responsible for a number of firefighting stations in Colombo.

The training centre falls under the direct responsibility of the Ministry. Its director-general reports directly to the minister. The various fire stations are part of each municipality's responsibilities. Figure 2 sketches the mutual relations between the local stakeholders and beneficiaries.

**Figure 2: Relationships between Local Stakeholders**




*Source: Application for the ORET grant*

### 2.3.4 Assisted Fire Brigades

The project has provided equipment, vehicles, training and technical assistance to 18 fire stations in 15 municipalities. The list of local governments that received assistance is shown above. All these municipalities already had functioning fire brigades.

### 2.3.5 RABO Bank International

The non-grant share of the transaction amount was financed by a loan from RABO Bank International. This loan had a length of ten years with a grace period of two years.

# 3. Methods of Evaluation

## 3.1. Result Chain and Theory of Change

The (intended) inputs, activities, outputs, outcomes and long-term results of the project are summarized in Table 3. This results chain helped us to formulate a "Theory of Change" for the project.

**Table 3: Results Chain for the Transaction**

| Inputs | Activities (what the project does) | Outputs (goods and services) | Outcomes | Long-term outcomes |
|---|---|---|---|---|
| ORET Grant and other funding<br><br>Training; Train-the-Trainers<br><br>Equipment and vehicles<br><br>Technical assistance<br><br>Materials for spare parts | Provision of equipment and vehicles for fire and rescue brigades<br><br>Training local fire brigades to become effective fire and rescue brigades<br><br>Development of communication network of 18 fire stations<br><br>Establishment of Special Response Unit (SRU)<br><br>Train SRU staff as certified instructors<br><br>Establishment of Emergency Response Training Centre (ERTC) | A national SRU, able to assist local fire and rescue brigades in large-scale emergency situations<br><br>Upgraded Fire and rescue brigades in 18 locations in 15 cities, with the necessary training and equipment and vehicles in use<br><br>A national Emergency Response Training Centre, providing ongoing training to local and national disaster response professionals | Higher preparedness and quality of emergency and disaster response in 18 locations in 15 cities<br><br>A training centre that ensures ongoing quality improvement of local and national emergency and disaster response<br><br>Better coordination between local fire brigades<br><br>Better communication and coordination with civilians and civilian volunteers in emergency situations. | Less death and disability from emergencies and disasters (including e.g. traffic accidents)<br><br>Less material damage<br><br>Increased sense of security and disaster readiness among local communities<br><br>Contribution to improvement in social and economic conditions, which should result in economic development |

The results chain presents an overview of the main elements of the causal relations that were investigated in this evaluation. First, the project was assumed to enhance the performance of the disaster and emergency response services, and the units that operate the disaster/emergency response network. The overall aim of these improvements was to create an efficiently operating emergency response network with a view to reduce the number of death and disabled people that are caused by emergencies, disasters, traffic accidents, etc. Such a reduction should lead to an improved social and economic climate, which in itself was expected to have a positive effect on the economic capacity in the country, and in particular in the targeted regions and municipalities. However, the performance of such an emergency response network also depends on factors outside the project, such as the availability of financial and human resources, political decisions and changes in the management of the system. Most importantly, the equipment delivered with the support of ORET made up only a part of the upgrading of the national emergency support systems in Sri Lanka, such for example the establishment of a new Ministry of Disaster Management.

An enhanced performance of the emergency response system adds to improved safety in the cities where the equipment is provided, resulting in improved social and economic conditions. However, various other, external, developments have an effect on economic development as well, such as urbanisation, economic growth, and population growth. Therefore it is rather difficult to isolate the impact of the ORET transaction on improved conditions for economic development.

The evaluation of the transaction was conducted according to six criteria: Efficiency, Effectiveness, Sustainability, Relevance, Additionality and Coherence. Below follows a description how these criteria were evaluated.

## 3.2. Efficiency

Efficiency measures how inputs and the way they were used convert into outputs. Therefore this criterion shows the input-output relationship in quantity and quality. Efficiency was analysed on the basis of existing documents of implementing agencies in the project (e.g. dossiers ORET.nl, beneficiary Fire Stations to gather information on realized outputs, supply of equipment and vehicles, and training and capacity building), budget, delays and their causes. Visits to 10 of the 18 fire stations were conducted in July, August and September 2014.

For evaluating the technical aspects of the supplies under the efficiency criterion the following indicators were used, if made available, concerning the functioning of the fire stations. These indicators are also important to analyse the technical sustainability of the project.

- Availability of the vehicles delivered;
- Availability of the equipment delivered;
- Present quality and status of the vehicles and equipment delivered;
- Number of staff trained;
- Status of the training centre.

The institutional analysis included information from the relevant authorities, such as the Ministry of Provincial Councils and Local Governments, the fire station chiefs, and the Special Response Unit (SRU).

## 3.3. Effectiveness

Effectiveness relates the direct results of the intervention (outputs) to the sustainable achievement of policy objectives (outcomes). An intervention is considered effective if the outputs have made a contribution to the intervention's intended objectives. Efficiency and effectiveness refer to the two successive levels in the results chain. Effectiveness was analysed on the basis of in-depths interviews with the stakeholders.

The responsibility for the local emergency services rest with the local and regional authorities and the chiefs of the local fire stations. The evaluation questions here concern especially whether the newly provided vehicles and equipment were actually used by the selected fire stations and whether they enhanced the capabilities of the stations to implement their tasks? At the national level the questions were whether the newly established SRU and Training Centre improved the effectiveness of the emergency response network as a result of the training within the project.

As part of the analysis, interviews with fire station chiefs and local authorities responsible for organising the emergency services were conducted. The institutional analysis was based on in-depth interviews with stakeholders. The fundaments of the discussions were semi-structured questionnaires covering information on technical, financial and administrative aspects of the executing fire stations. These questions aimed to shed light on whether the stations, the SRU and ERTC were working as planned.

## 3.4. Sustainability

The concept of sustainability comprises a number of dimensions that are relevant for evaluating the intervention, such as the financial and technological capacity of the recipient, in casu the fire stations; social and cultural factors affected by the intervention (or affecting the intervention); financial and economic aspects; natural, political, economic and socio-cultural circumstances.

The indicators collected in the interviews supported the analysis on different aspects of sustainability. Financial sustainability was analysed in terms of budgetary allocations from the various levels of government. Institutional sustainability was explored by disentangling the operational process of the emergency services. Technical sustainability was assessed during the visits of the fire stations. Social sustainability was derived by looking at the circumstances in the area of emergency services.

## 3.5. Relevance

Relevance indicates whether the objective of the intervention is consistent with the requirements of the beneficiaries, country needs, global priorities and partners' and donors' policies. Relevance should also demonstrate whether the intervention made a sustainable contribution in achieving the

ultimate objective (the impact). An intervention is regarded valuable or relevant, if it has generated effects that contribute to the ultimate development objective.

The contributions of the different stakeholders to the success of the project and the ultimate development objective were evaluated throughout the study by investigating the communication processes and the cooperation between the implementing and operating institutions.

## 3.6. Additionality

With the criterion of additionality the study wanted to establish whether the transaction would have taken place without the ORET co-funding and/or has fulfilled a catalytic role in mobilising additional finance in the area of emergency response and other investments in the recipient country. Additionality was analysed during in-depths interviews, by exploring a fictitious counterfactual situation of no additional provision of equipment, vehicles and training with interviewees.

## 3.7. Coherence

The coherence criterion is focused on whether and to what extent the ORET transaction contributed, complemented or contradicted other instruments of Dutch development cooperation and foreign (economic) policy.

# 4. Results of the Transaction

## 4.1 Efficiency

### 4.1.1 Appraisal Stage

The submission date of the application was 15 December 2005 and the ORET grant was approved on 29 September 2006. The grant agreement was signed a month later (29 October 2006). The period from submission of the application to grant agreement took about ten months which compares favourably with other transactions in the ORET portfolio under investigation. The transaction fitted well within the criteria for ORET support, although there were some discussions about the financial package of the transaction. The grant agreement was concluded after having secured a number of additional commitments from the government of Sri Lanka. This included additional annual financial contributions to the fire stations to cover the running costs and safeguard sustainability, and the guarantee that the stations would be staffed sufficiently.

### 4.1.2 Outputs

Prior to implementation, at the request of the Sri Lankan authorities it was decided to increase the number of fire stations to be provided with equipment from 15 to 18. The project indeed supplied 18 fire stations with equipment and vehicles, however, without increasing the total number of equipment and vehicles. The local governments that received assistance are mentioned above. All these authorities already had functioning fire brigades.

The activities and supplies of the project were in line with the agreement and included:

- Support for the establishment of a Special Response Unit (SRU).
- Support for the establishment of a "Disaster Management Institute" cum rescue training centre with home based fire station.
- Support to expand the base fire and rescue capacity in the northern-central, central, western, and southern provinces of Sri Lanka.
- Training of 32 instructors/trainers, who were staff of the SRU.
- Supply of the following vehicles with equipment to the fire stations outside Colombo:
    - Fully equipped ambulance (Toyota)
    - Multidisciplinary rapid intervention vehicle (Mitsubishi)
    - Water carrier (bowser) (Isusu)
    - Aerial platform 17.5 meter (Volvo)
    - Double cab (Toyota)

In addition to the equipment/vehicles, the following items were also delivered to the Colombo fire station, which is also responsible for running the SRU

- Trailer pump (Zigeler) tender.
- Command and control vehicle.
- Hook arm truck.
- Workshop supplies.
- Inflatable rescue boat.
- Personnel protective equipment & clothing.

The distribution of the vehicles was decided in consultation with the Ministry of Provincial Councils and Local Governments, taking into account the nature of the location of the fire stations and the availability of funds. Because of the extension of the number of fire stations, some fire stations received fewer vehicles than originally planned. The Nuwara Eliya Municipality Fire Brigade did not receive a Water Tender with equipment and a water tank. Dambulla Pradeshiyasabaha fire brigade did not receive an Aerial Platform.

Computer and control centre software was also provided to all fire brigades. Other equipment consisted of a voice recorder, a public address system, a power generator, station bells/turnout lights, communication equipment for all vehicles, helmets and boots, etcetera. The delivery of the vehicles and additional equipment went smoothly and the activities specified in the contract were carried out and realised on schedule and within the foreseen budget.

### 4.1.3 Training

The training centre has been established and the planned 32 trainer-instructors were trained. All senior crew members received basic training while several others received special training at the

newly established training centre at Wellawatte, Colombo. With a few exceptions, all new recruits of the fire stations received the basic training. Training was and currently is also provided in-house by the trainers taught at the Wellawatte Training Centre. As planned, several senior crew members received training during their study visit to the Netherlands. Overall, the project was successfully implemented and provided the expected training and facilities in time within the project period.

### 4.1.4 Price-Quality Ratio

An independent consultant, SGS, evaluated the price-quality ratio of the transaction and concluded that the total transaction price was in accordance with market levels. As indicated elsewhere in this report, the fire station staff generally rated the vehicles and equipment as of good quality. They were, however, not in a position to judge the contract prices paid for the equipment and vehicles. Yet, some of them noted that the vehicles at some locations do not fully match local conditions and that some equipment, particularly the communication equipment, was not resistant to the hot and humid weather conditions in Sri Lanka.

## 4.2 Effectiveness

Effectiveness is the extent to which the outputs of the transaction have contributed to the sustainable achievement of policy objectives (outcomes). In this case, the services of the emergency response network in Sri Lanka contributed to achieving the transaction's expected results or objectives for the inhabitants and companies in Sri Lanka.

### 4.2.1 Vehicles

From a technical point of view, the vehicles supplied to the 18 fire stations are of good quality. However, the project provided the same vehicles to all stations regardless of the geography of the location. Some fire station staff officers mentioned that not all vehicles are ideal for the local conditions, particularly in the hilly areas with narrow roads, such as Dambula and Kandy. As a result, here the vehicles cannot be used as effectively as planned. This also limits the possibility to mobilise vehicles from other locations for support in emergency situations if needed. These physical local conditions should have been taken into account at the time of procuring and distributing the vehicles to the various locations.

During the visits, a couple of maintenance issues were mentioned. The chassis and the engines of the vehicles are common brands in Sri Lanka, such as Toyota, Mitsubishi, Volvo and Isusu. These brands are represented by agents in Sri Lanka. However, the bodies of the vehicles were produced abroad and do not always confirm to the standards that manufacturers maintain for Sri Lanka. Therefore the agents of the manufacturing companies cannot always immediately attend to the repairs when breakdowns of components of the body happen. For example, in two of the fire stations (Dambulla and Negambo) visited, one of the vehicles could only be used for limited tasks due to wear and tear in the brake pump. The pump came from a South-African manufacturer and is not serviced by Toyota, Sri Lanka, which indicated needing six months to get a replacement. Similar servicing problems were mentioned for other vehicles when repairs are needed. In several stations the hydraulic pump needed repairs but there is no service facility available. In two of the visited fire brigades the Aerial Platform vehicle was not operational because of the problem of being unable to find an expert to do the repairs. Further, there were some minor complaints: in one vehicle daily maintenance takes a long time because of the problem of reaching the battery or checking the oil level due to the location of the battery and the oil-stick. These minor concerns could, however, become serious in case of an emergency when time is of the essence.

### 4.2.2 Equipment

It was noticed that the provided communication equipment was vulnerable to the hot and humid weather conditions in Sri Lanka. From time to time this hindered the communication with the communication tower in the fire brigade stations. This is particularly the case in the western coastal regions. In contrast, the equipment remains in good condition at Nuwara Eliya, situated at 2000 meter above sea level in a relatively cool climate. Such problems limit the preparedness of the emergency services. Similar problems related to the physical conditions in Sri Lanka damaged the helmets and the boots supplied by the project. In conclusion, the climatic factors have not been sufficiently taken into account at the time of procuring these supplies.

Another external problem was that the Defence Authorities did not authorise the communication towers to use the necessary bandwidth and frequency for the operation of the communication equipment because of the prevailing civil war situation in Sri Lanka. Therefore, once the vehicles

were more than a kilometre away from the station, communication equipment failed to function. Fortunately, with the end of the civil war, this situation has improved.

### 4.2.3 Special Emergency Response Calling System

The project was expected to create one emergency number calling system for all fire brigades. A national 110 number was activated at the beginning to establish a national system of calling for assistance. Presently, the system works only in Colombo-Jayawardanepura municipalities. If civilians want to contact the other fire stations to report an emergency, they still have to use the regular telephone number.

### 4.2.4 Training of Personnel

Initially, training was given to all personnel, including the new recruits. The Wellawatte Training Centre provided either on-site training of the fire stations or training at the Wellawatte Centre. The trained personnel have the right attitude and expressed their satisfaction about the training received. After the project period the training centre has continued to offer training courses but only for a fee. The Municipalities, Urban councils and Pradeshiyasabahas are, however, somewhat reluctant to pay for these trainings. Therefore up-grading of skills has become an issue. Most local governments have not allocated adequate budget funds for further training. This issue needs to be resolved by either having the Wellawatte Centre provide the training for free or local government institutions allocating sufficient funds for the training of the fire brigade personnel. As a result, the centre is used less effectively than foreseen during the design of the transaction.

### 4.2.5 Staffing of the Fire Stations

The project was expected to generate more than a 1000 new jobs in the area of emergency response. The Ministry of Provincial Councils and Local Governments provided a written guarantee to hire adequate personnel in order to operate and manage the equipment as and when required. The grant agreement expected the presence of a full crew consisting of three shifts per day in each station. However, this aspect is the most neglected condition since all fire brigades suffer from a serious lack of personnel. Table 4 shows the staffing issue in each station visited (ten out of 18).

**Table 4: Staffing of Fire Brigades**

| Visited | Fire Brigade | Identified Positions | Number on Post |
|---|---|---|---|
| 1 | Kandy (2 Units) | 101 | 52 |
| 2 | Gampaha | 65 | 54 |
| 3 | Galle | 24 | 16 |
| 4 | Negambo | n.a. | n.a. |
| 5 | J'Pura Kotte | 67 | 55 |
| 6 | Dambulla | 36 | 13 |
| 7 | Wellawatte | 27 | 27 |
| 8 | Kalutara | 57 | 49 |
| 9 | Dehiwala | 45 | 37 |
| 10 | Nuwara Eliya | n.a. | 9 |

Several fire stations do not have a fire chief in charge. Even in a larger city such as Kandy, the fire station is very much understaffed and is lacking a fire chief for a long time now. The Nuwara Eliya Fire brigade recruited and trained many volunteers due to the serious lack of staff. This station is also not fully equipped as some vehicles that were initially allocated to this station, were re-allocated to other stations as a result of the decision to equip 18 rather than 15 stations. One reason for the lack of trained personnel is the attrition rate among the staff and the government policy of granting two years leave to employees to work abroad but without ensuring replacement. In several fire brigades one in three trained fire fighters has taken leave to work overseas. Staff of the fire stations mentioned that their salaries were not comparable to what they could earn in the private sector in the country or abroad.

## 4.3 Sustainability

### 4.3.1 Financial Sustainability

Most local governments do not have sufficient revenues and depend on the central government budgetary allocations and grant funds. The revenues of the local governments are low compared to

the demands from the public for local government services including emergency services. As a result, regular maintenance and timely replacement of equipment lag behind what is needed. The Colombo municipality is an exception in this regard because it is the largest and the best financed municipality with a higher revenue collection than all other local government units.

In some locations, authorities are considering to market certain services of their fire brigades, such as training staff of local government institutions and companies how to react and evacuate in case of an emergency, in order to generate some revenue. With constructive guarantees in place, local government authorities could earn more revenue from their fire brigades, if they were allowed to conclude fire protection service delivery contracts with local commercial firms. In many locations, industries, hotels and large commercial establishments are obligated to ensure a standby service for firefighting. Particularly garment industries, industrial plants and investment projects need this kind of service. Such initiatives are lacking in general. Gampaha Municipal Council (GMC) is the only one the evaluator came across having a system of raising revenue in place by offering this service to local industries. GMC is collecting an annual fee for emergency protection from the industries and hotels in the council area and the broader catchment area of the fire brigade. This raises reasonable amounts of revenue and sustains the operation of its fire brigade. All other fire brigades and respective Local Government Institutions do not have such a mechanism in place to be able to earn revenue, with the exception of charging a small fee for service delivery. The Nuwara Eliya Fire Brigade is located in the tea cultivation area where tea factories are prevalent. Since tea factories are quite vulnerable for fire, the municipality could negotiate service contracts for a fee.

### *4.3.2 Technical Sustainability*

As mentioned above, some vehicles and equipment in several fire stations need repairs. The local agents and the supplier are unable to attend to all repairs. The lack of spare-parts is an issue because some vehicles are not models commonly used in Sri Lanka. These units were either assembled in the Netherlands or elsewhere and the local agents find it difficult to find the needed spare-parts. Similarly, there is a lack of manuals that could assist in doing relatively simple repairs.

The vehicle with the aerial platform is out of order in two fire stations that were visited. Kalutara Urban Council reported that the Aerial platform is not operational for the last one and half years. The Dehiwala fire brigade reported that its platforms are not fully operational because some operating systems do not work properly. The hydraulic pumps of several fire vehicles need repairs. The Volvo dealer can do the repairs of the vehicles but most auxiliary equipment comes from different suppliers and cannot be serviced by Volvo. If the maintenance issue is not paid urgent attention, vehicles may not be ready to serve in case of emergencies.

The rapid intervention vehicle in Gampaha also has maintenance issues since some equipment does not function properly anymore. The Dambulla fire brigade indicated that some equipment has to be operated manually because of maintenance issues. The Kalutara fire brigade indicated that it has a maintenance problem with the water tender and its equipment. It has been taken to the Isusu dealer but it was unable to fix the problem yet. The Kalutara fire brigade also reported that computer software needs to be updated.

Fire fighting vehicles need access to working hydrants to be effective. Many cities have not placed high importance to installing sufficient water hydrants. This problem was reported in Colombo, Negambo, Galle and other municipalities. Modern hydrants are more efficient and effective but the local government authorities still need to identify the key places where they have to be installed and put into operation. The fire-fighters pointed out that in most municipalities there were more hydrants functioning a few years ago. To illustrate: Kandy city now has only three hydrants in place compared to six in the past. Of the municipalities visited, only Nuwara Eliya indicated having five functioning hydrants, but all above ground.

### *4.3.3 Institutional Sustainability*

***Commitment of Political Leaders and Senior Officials***

Fire brigades form a small unit of the local government institutions which seems to get very little attention, particularly their operational aspects and personnel. In many fire brigades the importance of keeping the unit prepared and ready to respond to emergencies at all times is not the highest priority. Apart from funding issues, the neglect is also reflected in how the equipment is put to use and vehicles allocated to the fire stations. As an example, Kalutara fire brigade vehicles are often used for other purposes than firefighting. The aerial platform has been used frequently

for other purposes, such as cutting and pruning of trees, changing traffic light bulbs, etcetera. As a result, the only vehicle available has now broken down leaving none for its primary task of firefighting. The double cab has been taken over by the Urban Council and not available to the fire brigade. The electricity generator installed in the rapid intervention vehicle that supports the functioning of all other equipment in the vehicle, was removed and is now used in the Urban Council building as a back-up to deal with occasional power-cuts.

These examples show a lack of understanding or even worse, ignorance of the importance of having a fire brigade prepared and ready to handle emergencies and disasters. Dambulla Pradeshiysabha often uses the double cab to drive the politicians and senior officials around. The double cabs of the Nuwara Elya and Galle fire brigades haven also been taken over by the municipality to support their day to day running. In the Galle and Nuwara Eliya fire stations the power generator is used by the municipality office as a back-up in case of a power cut, not realising that the particular type of generator is a special unit designed for the rapid intervention vehicle. Taking specialised equipment from such a vehicle that has so much installed equipment dependent on this generator causes serious concern for the response readiness of the vehicle.

Political and senior policy makers must realise the need and the value of the fire brigades. As the economy grows, the service sector and industries widen, a fully functioning fire brigade is a necessary stand-by system to have. If there are only a limited number of calls or not even a single incident of disaster in a given month, this does not rule out its importance.

***Lack of Coordination and a Career Path***

Most firefighters and members of the service crews, while appreciating the contribution made by the Dutch project, confirm that the firefighting units are not receiving enough attention from the local authorities. Therefore, all interviewed staff officers preferred the fire brigades to become a Department of the Ministry of Provincial Councils and Local Governments. If this Ministry were to deploy the personnel and resources to the municipalities, urban councils and Pradeshiyasabas, this would also allow the staff to have a career path. The lack of it currently disappoints and demotivates the staff, many of which have served over 20 years in the same rank and position.

Other problems are:

1. The large size of the catchment areas that most fire brigades have to serve. For instance, the territory covering a stretch of more than 100 kilometres between the Gampaha and the Kandy fire brigade, with many sub-urban housing areas, has no service unit in place. From Panadura to Galle there is also no service unit.
2. Lack of a national plan: the Ministry of Disaster Management or the Ministry of Provincial Councils and Local Governments should have a national plan that covers the deployment of fire brigades to deal with disasters and to do rescue operations. This was pointed out by many officials who were interviewed.

The project has much added-value for the national disaster management system in general. All fire stations and all fire workers who were interviewed expressed their appreciation. In all major events and disasters they could respond faster and more effectively. However, the fire fighters also strongly feel that the fire brigades should be placed under a national government department and shielded from the political interference of local government in order to stop abuse of vehicles and equipment. It would also create more opportunities for a career path for the employees.

## 4.4 Relevance

The effectiveness and efficiency of firefighting does not rest completely on the presence and quality of the vehicles, equipment and the personnel. In this respect the following observations are presented. In general all fire brigades are called upon to do various rescue operations and tend to road accidents, forest fires in certain locations (Nuwara Eliya, Dambulla), and fires in factories, hotels and shops. Certain fire brigades have 15–30 calls per month. Galle reported having 35 incidences in one quarter. Therefore the alertness and readiness to respond to emergencies without delay depends very much on the maintenance of vehicles and equipment and the availability of necessary accessories. The Damubulla fire brigade recently managed a big accident where the rapid intervention vehicle came in handy to expand the crushed vehicle window frame to rescue the driver and the front seat passenger. If the generator had not been in the vehicle, that operation would have failed. This would have been the case in Nuwara Eliya or Dambulla as the necessary conditions are not being maintained by the political and administrative officials of the local government.

During the last decades Sri Lanka has experienced natural disasters. This requires an efficient working emergency network to be able to limit the number of casualties and human suffering. The ORET transaction aimed to assist in building this capacity, particularly in the urban areas in the south- western part of the country, which are often hit by natural calamities, making the upgrading of the emergency services extremely relevant and urgent. This was also recognised by the government of Sri Lanka which gave a high priority to improving the emergency response system. Although the project showed some limitations in practice, it has certainly contributed to enhancing the response capacity of this network. The capability of emergency response units to react on emergency situations has clearly increased. In spite of these improvements, some issues remain outstanding. The issue mentioned most often during this evaluation is the lack of a quick and effective response when equipment and vehicles need to be repaired. Main reason for this is the general lack of spare-parts or problems finding the right spare-parts. Another issue mentioned during the visits to the fire stations is that the local governments pay too little attention maintaining an adequate emergency system. This is especially reflected in the lack of personnel of the fire stations and the use of equipment and vehicles for non-emergency related activities. The primary reason for this is that in general too few funds are allocated to these services.

## 4.5 Additionality

Although improving the emergency response system was a high priority of the Sri Lankan government, it is doubtful whether a project of this size and comprehensiveness in the covered regions would have taken place without support from the ORET programme. After the dramatic consequences of the tsunami discussions were held with other international donor organisations about support for upgrading the emergency response network. However, these discussions were mainly focused on short-term actions instead of the comprehensive approach followed by this project.

The appreciation of the project by the local authorities is also reflected in the follow-up activities of the applicant company in the country after completing the project. SAR Systems built a 25-seat emergency response call centre that is part of the new headquarters of the Ministry of Disaster Management that was opened by H.E. President Rajapaksa in 2013. It is the nodal communication point of the projects implemented by SAR Systems during the past decade in Sri Lanka

## 4.6 Coherence

The project neither complements nor contradicts other Dutch development cooperation instruments. In view of the fact that the contractor continued its activities in the country after the project shows that the transaction supported to some extent the policy of trade promotion in South-East Asia.

## Annex 1: Site Visits and Persons Interviewed

| Location | Date of Visit | Officer Interviewed |
|---|---|---|
| Kandy Fire Station | 09th September 2014 | Mr. Dias (Acting Fire Chief)<br>Phone: 94-812204844/ 94-776931975 |
| Gampaha Fire Station | 15th September 2014 | Mr. S. Karunaratne , Fire Chief<br>Phone: 94-33-222-9166 |
| Negambo Fire station | 15th September | Mr. Wijesinghe (Fire Chief)<br>Phone:94-31-222-4063/ 94-777942986 |
| Dambulla Pradeshiyasabha Fire Station | 16th September 2014 | Mr. Ratnapala & Mr. Sampath (Acting Fire Chief) 94-66-2283775<br>94-72-3430623 |
| Jayawardanepura, Kotte Fire Station | 18th September 2014 | Mr. Handagama (Fire Chief)- 94-71-8377057, 94-2874701 |
| Wellawtte Training Centre & Fire Brigade | 18th September 2014 | Namla Dissanayake & Team of Trainers; 94-710250055 |
| Kalutara Urban Council Fire Brigade | 22nd September 2014 | Mangala Wijeyagunawardena,<br>(Officer In-charge)<br>9471-8579622, 94-34-2228080 |
| Dehiwala Municipality Fire Station | 22nd September 2014 | Mr. Jayawardane , Municipal Officer Oversees fire brigade<br>Mr. U Samantha(Fire Chief)<br>94-724130670 |
| Nuwara Eliya Fire Station | 25 September 2014 | Subramaniam (Fire Chief)<br>94-723431447, 94552222121 |
| Galle Fire Station | 30 September 2014 | Siri Kumara, Fire Officer, 94-912244445 |
| Ministry of Local Government | Ms. Sajee Sagarika | 94-11-2303723 |
| Colombo Municipality Fire Chief | Only telephone conversations as she was not available | Mr. Rohitha Fernando<br>0777537889 |