

# 해외출장복명서

기 간: 2014. 12. 13 ~ 2014. 12. 17

출장지: 스리랑카 콜롬보

출장자: 조판기 연구위원  
이진아 연구원

## I. 출장개요

1. 출 장 지 : 스리랑카 콜롬보

2. 출장기간 : 2014년 12월 13일 ~ 12월 17일, 3박 5일

3. 출 장 자

| 소속          | 직급   | 성명  | 비고 |
|-------------|------|-----|----|
| 국토연구원       | 연구위원 | 조판기 |    |
| 국토관리·도시연구본부 | 연구원  | 이진아 |    |

4. 출장목적

- ☐ 스리랑카 폐기물관리 담당 부처인 스리랑카 환경재생에너지부(MERE: Ministry of Environment and Renewable Energy)와 중앙환경청(CEA: Central Environment Agency)과의 현지 착수회의 개최 및 과업내용 확정을 위한 업무협약
  - 스리랑카 관계부처 및 유관기관 앞 KSP 사업 소개
  - 스리랑카 고형폐기물관리 현황 소개 (CEA)
  - 스리랑카 정부와 구체적 사업범위 및 과업내용 확정, 향후 사업일정 협의
  - 협의 내용에 대한 Aide-Memoire 검토 및 체결
- ☐ 스리랑카 고형폐기물 관련 현황 파악
  - 스리랑카 고형폐기물관리 관련 정책 및 제도 조사를 위한 자료 요청 및 확보
  - 스리랑카 고형폐기물관리 현황 및 문제점 파악을 위한 논의

5. 출장효과

- ☐ 스리랑카 환경부 및 환경청과 착수보고회 및 Aide Memoire체결을 통한 과업범위 확정 및 원활한 연구수행을 위한 협력적 관계 구축
- ☐ 스리랑카 정부와 후속사업을 위한 상호협력을 통하여 향후 우리기업 진출기회 확보

## II. 출장일정

| 날짜           | 출발지 | 도착지 | 방문기관/<br>장소                  | 주요 수행업무                                                          | 비 고                                                    |
|--------------|-----|-----|------------------------------|------------------------------------------------------------------|--------------------------------------------------------|
| 12.13<br>(토) | 인천  | —   | 인천공항                         | (22:40) 인천 출발                                                    | KE473                                                  |
| 12.14<br>(일) | —   | 콜롬보 | Bandaranaike<br>Int' Airport | (04:10) 스리랑카 도착                                                  | 황선명 차장<br>(한국수출입은행<br>스리랑카 주재원)                        |
|              | —   | —   | 콜롬보<br>시내                    | (13:00 ~ 18:00) 현지실태조사<br>(21:30 ~ 22:30)<br>착수보고회 관련 점검회의       |                                                        |
| 12.15<br>(월) | —   | —   | 스리랑카<br>환경청                  | (10:00 ~ 17:00)<br>착수보고회 및 Aide Memoire체결<br>(18:00 ~ 20:00) 만찬회 | Ruwini<br>Dharmasiri<br>(스리랑카<br>환경청 EDCF<br>Director) |
| 12.16<br>(화) | —   | —   | 콜롬보<br>인근                    | (09:00 ~ 12:00) 현지실태조사<br>(12:00 ~ 13:30)<br>한국대사관초청 오찬회         | 장원삼 대사,<br>표지은 참서관                                     |
|              | 콜롬보 | —   | Bandaranaike<br>Int' Airport | (19:00) 콜롬보 출발                                                   |                                                        |
| 12.17<br>(수) | —   | 인천  | 인천공항                         | (06:10) 인천도착                                                     | KE474                                                  |

### III. 수행사항

#### 1. 착수보고회 관련 점검회의

□ 일 시 : 2014. 12. 14(일) 21:30 ~ 22:30

□ 장 소 : Cinnamon Red Hotel

□ 참석자

- 국토연구원 : 조판기 연구위원, 이진아 연구원
- 한국수출입은행 : 팀장 김영석, 책임연구원 이재원, 책임조사역 송국진,  
책임조사역 황선명(스리랑카 주재원)
- 기획재정부 : 이명진 사무관

□ 주요 내용

- KSP 사업 업무범위
  - 중앙환경청에서 적환장 설비 건설이 KSP 사업으로 지원되는 것으로 내부보고 문서를 작성하여 제출함에 따라, 스리랑카 재무기획부 및 환경재생에너지부에 업무범위 관련 추가 설명 필요
  - 착수회의 시 KSP 사업에 건설비는 포함되지 않으나 후속사업으로 EDCF·소액차관 연동이 가능함을 명확히 설명하고 업무범위협의 진행 필요
- 파일럿 사업 후보지 선정
  - 최적화 고품폐기물관리·처리시설에 대한 파일럿 사업 대상지로 캔디지역을 고려하고 있으나 스리랑카 정부의 입장 및 기 추진사업과의 연계를 고려하여 대상지역 확정 필요
  - 착수회의 시 파일럿 사업 관련 특정 시설물에 대한 현지수요 및 기타 후보지역에 대한 논의 진행
- Aide Memoire 체결 관련 논의
  - 착수회의 시 업무범위의 관련 합의 도출이 어려울 경우 Aide Memoire 수정 후 서면으로 체결 가능

## 2. 착수보고회 개최

□ 일 시 : 2014. 12. 15(월) 10:00 ~ 13:00

□ 장 소 : 스리랑카 중앙환경청 회의실

□ 참석자

- 국토연구원 : 조판기 연구위원, 이진아 연구원
- 한국수출입은행 : 팀장 김영석, 책임연구원 이재원, 책임조사역 송국진,  
책임조사역 황선명(스리랑카 주재원)
- 기획재정부 : 이명진 사무관
- 스리랑카 환경재생에너지부(MERE) 및 중앙환경청(CEA)

| 소 속                  | 성 명                     | 직 위                     |
|----------------------|-------------------------|-------------------------|
| 스리랑카<br>환경재생<br>에너지부 | B.M.U.D Basnayake       | Secretary               |
|                      | Ajith Silva             | Director                |
| 스리랑카<br>중앙환경청        | D.W. Prathapasinghe     | Chairman                |
|                      | Saranga Alahapperuma    | Director General        |
|                      | K. H. Muthukudaarachchi | Deputy Director General |
|                      | Upal Indrarathna        | Deputy Director General |
|                      | R. Walpola              | Project Director        |
|                      | Ruwini Dharmasir        | Project Director        |
|                      | Saman Fernando          | Director                |
|                      | Manuja Wimalasena       | Director                |
|                      | Sapojinie Jayasekara    | Deputy Director         |

## □ 주요 내용

- 스리랑카 정부 담당자 앞 KSP 개요 소개
  - 정책자문Ⅲ 사업은 건설·인프라 분야와 관련된 종합적인 정책컨설팅을 통해 스리랑카의 발전을 지원함
  - 건설·인프라 프로젝트의 기반이 되는 기본계획, 운영전략 및 역량강화 등을 제공함
- KSP 사업 업무범위 및 후속사업 연계 설명
  - 동 사업의 주목적은 정책컨설팅이며, 설비 건설 등 실질적인 투자사업은 KSP 후속사업으로 추진 가능함
  - 후속사업 지원을 위해 재원조달 관련 자문도 함께 제공되며, 자문결과를 바탕으로 EDCF, 수출금융, 소액차관 등 다양한 경로를 통해 후속사업 연계 방안을 추진할 예정임
- 스리랑카 고형폐기물관리 현황 소개
  - 스리랑카 하루 평균 고형폐기물 배출량은 6400톤이며 생분해성 폐기물이 56.57%로 가장 많은 양을 차지하고 있음
  - 환경재생에너지부는 폐기물 감소, 재활용, 매립시설 건설, 에너지화 등에 관련된 정책과 전략을 추진하고 있음
  - 중앙환경청은 2005년 고형폐기물 관련 지침서(Technical Guidelines on Solid Waste Management)를 마련하고 2007년 고형폐기물관리를 위한 국가 정책(National Policy for Solid Waste Management)을 발표함
  - 중앙환경청에서 담당하는 프로젝트로는 Pilisarua 국가고형폐기물관리 프로젝트, 플라스틱 폐기물 프로젝트, KOICA 프로젝트, EDCF 프로젝트가 있음
  - 동 KSP 사업과 관련하여 생태공원 조성, 저비용 적환장 건설 및 북부지역의 통합관리 시스템 구축 분야에 관심을 표명함
- 파일럿 사업 관련 논의
  - 스리랑카는 현재 바이오가스 발전 및 소각 시설에 큰 관심을 가지고 있음
  - 파일럿 사업은 폐기물처리시설 뿐만 아니라 운반·재활용 시설 등 폐기물관리 시스템 전반에 대한 시설도 함께 고려될 필요가 있음
  - 1월 중순 KSP 연구팀에서 스리랑카 현지답사를 실시할 예정이며 조사내용을 토대로 2월까지 파일럿 사업 대상지역 및 구체적인 업무범위를 확정지을 예정임

○ Aide Memoire 검토 및 추가 요청사항 논의

- 현재 환경재생에너지부에서 고체폐기물 통합관리 정책 초안을 작성하고 있으며, 초안 검토 및 정책보완을 위한 제언사항/ 피드백을 요청함
- 폐기물관리 관련 최첨단 기술보다는 스리랑카 현지 상황에 적용 가능한 비용효율적 기술에 대한 사례공유 및 도입방안을 요청함
- 폐기물관리·처리시설 입지에 대한 주민들의 반대를 극복하기위해 주민설명회, 공정회 등의 절차준비가 필요함에 따라, 스리랑카 주민들을 대상으로 한 현지 워크숍을 요청함
- 주민교육을 위한 별도의 워크숍 추진은 어려우나 스리랑카 주민 대표를 함께 한국으로 초청하여 역량강화 연수를 진행하기로 협의함

○ Aide Memoire 체결

- 논의된 내용을 토대로 수정된 Aide Memoire 체결 (환경재생에너지부 B.M.U.D Basnayake 차관, 국토연-수은 컨소시엄 대표 조판기 연구위원)

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |
| <p>▲ KSP 소개 발표 및 업무협약</p>                                                           | <p>▲ 착수보고회</p>                                                                       |
|  |  |
| <p>▲ Aide Memoire 체결</p>                                                            | <p>▲ 착수보고회 단체</p>                                                                    |

### 3. 한국대사관 초청 오찬회 및 면담

□ 일 시 : 2014. 12. 16(화) 12:00 ~ 13:30

□ 장 소 : Mango Tree

□ 참석자

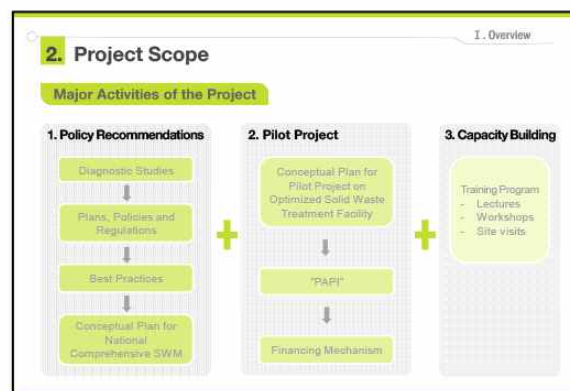
- 국토연구원 : 조판기 연구위원, 이진아 연구원
- 한국수출입은행 : 팀장 김영석, 책임연구원 이재원, 책임조사역 송국진,  
책임조사역 황선명(스리랑카 주재원)
- 기획재정부 : 이명진 사무관
- 한국대사관 : 장원삼 대사, 표지은 참사관

□ 주요 내용

- 스리랑카 KSP 사업 추진배경 및 업무범위 소개
  - 현재 스리랑카에는 고형폐기물을 수집하여 분리, 운반, 처리하는 전반 시스템이 부재하여 폐기물관리 시스템 구축이 시급하며, 폐기물통합관리 부분에 대해 환경부 장관이 한국측 지원을 적극 희망함
  - KSP를 통해 스리랑카 고형폐기물관리 종합계획 및 통합관리 시스템 기본구상을 제공하고 후속사업 연계를 위한 파일럿 사업 실시 예정임
  - 돔베 지역을 커버하는 파일럿 사업을 KOICA에서 진행하였으며, 전국을 4개 지역으로 나눠 위생매립장을 설립하는 EDCF 사업도 진행 중임
  - 여러 기관에서 고체폐기물 관련 사업을 추진하고 있으나 진행 중인 사업에 대한 서로의 이해가 부족하여 상호간 정보교류가 필요함
  - 스리랑카는 주요 공적개발원조 대상국이며 경제협력 파트너로 잠재력이 큰 국가이므로, 스리랑카 KSP 사업 진행 및 후속사업 추진 관련 대사관 측 협조를 요청함



# 부록1 : 착수보고회 자료



## II. Project Execution Plan



1. Policy Consultation
2. Pilot Project
3. Capacity Building

### 1 Policy Consultation

#### Diagnostic Studies

- An overview of Sri Lanka's natural/socio-economic conditions including more detailed studies on regional/urban issues such as land use
- A review of current status on waste generation by region and type, and assessment of existing SWM practices and facilities in Sri Lanka to identify major issues and challenges
- An analysis of the relationship between the implementation of SWM system and spatial planning from a national level to urban and municipal scale

#### Review of Policies and Regulations of SWM

- Policies and regulations of Korea's SWM
- Policies and Regulations of Sri Lanka's SWM

### 1 Policy Consultation

#### Case Studies on Best Practices

- Seoul Landfill in Incheon, Korea; Hwacheon Landfill in Jeju Island; Mapo Resource Recovery Facility in Seoul; Nanji-do in Sangam, Seoul; Resource Circulation Special Zones in Jeonju
- Examples from other countries: Landfill in Vienna, Austria; 'Zero-waste City' in Freiburg, Germany; Renewable Energy Plan in San Jose, USA



### 1 Policy Consultation

#### Preliminary Conceptual Plan for National Comprehensive SWM

- Implementation Strategies
  - (Policy) Provide policy directives for waste management based on identified issues
  - (Technical) Suggest treatment methodologies including resource recovery most suitable for Sri Lanka's current situation
  - (Plan) Recommend improvement plans for waste collection and disposal
  - (Implementation) Suggest integrated SWM plan aiming for sustainability
- Short-term and Long-term Strategies
  - (Short-term) Make suggestions based on Korea's experiences applicable to Sri Lanka (refer to the country's technical level indicator)
  - (Long-term) Customize strategies relevant to Sri Lanka's socio-economic development plans with reasonable implementation phases
- Strategies for the development of surrounding areas

### 2 Pilot Project

#### Conceptual Plan for Optimized Solid Waste Treatment Facility

- Site selection
- Site investigation
- Analysis of characteristics and current status of waste treatment by type
- Selection of optimal disposal method and volume
- Analysis of site conditions and expected project scale
- Estimation of total project cost



### 2 Pilot Project

#### PAPI (Preliminary Assessment on Policy Implementation)

- Technical Assessment
- Economic Assessment
- Analysis of cost and benefit, risk/sensitivity
- Assessment of social and economic impacts
- Feasibility review of business plan and future expansion plan
- Conceptual development plan for surrounding areas



II. Project Execution Plan

## 2 Pilot Project

### Financing Mechanism

- Financial Environment Analysis
  - Research on priority areas and scale of development assistance in Sri Lanka
  - Review of public investment status and related policies/procedures
  - Review of financial markets and institutions for project financing
- Financing and Structuring Consultation
  - Review of a range of financing options including EDCF, project financing, buyer's credit and corporate financing
  - Recommendation on optimal financing structure and operational method for the pilot project
  - Explanation on recommendations during the final reporting session



II. Project Execution Plan

## 3 Capacity Building : Training Program

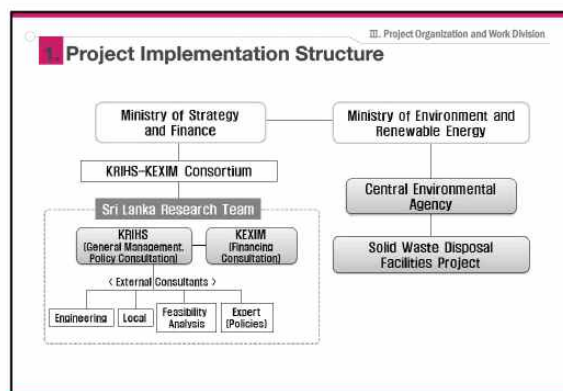
- The capacity building program will be provided for the benefit of the key decision-makers and officials in charge of waste management and spatial planning in Sri Lanka.
- Program Title : *Green Urban Infrastructure and SWM in Korea*
  - Number of Participants : About eight
  - Period : 10 days during February, 2015 (TBC)
  - Programs : Lectures/seminars, site and cultural visits




## III. Project Organization and Work Division



1. Project Implementation Structure
2. Work Division



III. Project Organization and Work Division

## 2 Work Division

| Category             | Name           | (Current) Position, Department                                   | Roles                           |
|----------------------|----------------|------------------------------------------------------------------|---------------------------------|
| KRWIS (7)            | Cho, Panki     | Research Fellow, Urban Planning Division                         | Project Manager                 |
|                      | Kim, Myungsu   | Research Fellow, Urban Planning Division                         | Environmental Plan              |
|                      | Suh, Minho     | Associate Research Fellow, Urban Planning Division               | Urban Planning                  |
|                      | Park, Jungseun | Associate Research Fellow, Urban Planning Division               | Regional Planning               |
|                      | Jung, Gyoung   | Associate Research Fellow, Urban Planning Division               | Research Support                |
|                      | Park, Eunse    | Assistant Research Fellow, Global Development Partnership Center | Coordination                    |
|                      | Lee, Jihui     | Assistant Research Fellow, Urban Planning Division               | Research Support                |
| KEXIM (6)            | TBD            | Assistant Research Fellow, Urban Planning Division               | Research Support                |
|                      | Kim, Youngseok | Director, Overseas Economic Research Institute                   | Financial Environment           |
|                      | Kim, Jyoung    | Research Officer, Overseas Economic Research Institute           | Financial Environment           |
|                      | Song, Nak-jin  | Senior Manager, Financial Advisory & Structuring Team            | Financial Structuring           |
|                      | Jang, Eun-jin  | Manager, Financial Advisory & Structuring Team                   | Financial Structuring           |
|                      | Lee, Jaewon    | Senior Project Officer, KSP Team                                 | Project Coordination            |
| External Consultants | Shin, Minyoung | Project Officer, KSP Team                                        | Project Coordination            |
|                      | TBD            | TBD                                                              | SWM Engineering                 |
|                      | TBD            | TBD                                                              | Feasibility Analysis            |
|                      | TBD            | TBD                                                              | SWM Policies                    |
|                      | TBD            | TBD (local)                                                      | Data Collection/ investigations |

## IV. Project Management Plan



1. Cooperation with Relevant Organizations
2. Quality Management Plan
3. Progress Reports

IV. Project Management Plan

### 1. Cooperation with Relevant Organizations

| Categories           | Work Scopes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical            | <ul style="list-style-type: none"> <li>Pilot Project               <ul style="list-style-type: none"> <li>Data collection and preliminary investigations</li> <li>Site selection / analysis</li> <li>Analysis of current waste treatment (volume, types, etc.)</li> <li>Optimal disposal method</li> </ul> </li> <li>Preliminary Assessments               <ul style="list-style-type: none"> <li>Technical assessment (i.e. BATs, Best Available Technologies)</li> <li>Project cost estimation</li> </ul> </li> <li>Development of surrounding areas               <ul style="list-style-type: none"> <li>Spatial planning</li> <li>Land use plan</li> <li>Road networks around the site</li> <li>Perspectives / rendering</li> </ul> </li> </ul> |
|                      | <ul style="list-style-type: none"> <li>Data Collections               <ul style="list-style-type: none"> <li>Policies and regulations</li> <li>Socio-economic indicators</li> <li>Demography</li> <li>Current status of infrastructure</li> <li>Current status of waste generation and treatment volume</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                      | <ul style="list-style-type: none"> <li>Project Feasibility Analysis               <ul style="list-style-type: none"> <li>Economic Assessment</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Local investigations | <ul style="list-style-type: none"> <li>Policy Recommendations               <ul style="list-style-type: none"> <li>Integrated waste management policies and regulations</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Feasibility Analysis |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| SWM Policies         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

IV. Project Management Plan

### 2. Quality Management Plan

- The priority areas for quality management include:
  - Establish objectives and evaluation criteria for quality management
  - Develop standards and procedures for respective outputs and defining the format to be used
  - Quality reviews performed by the KSP project manager and person in charge of the project in Sri Lanka
  - Careful review of documents and outputs
  - Official assessments of the outputs produced during the project to detect errors
  - Continue management of outputs after completion of project
  - Suitability of the respective outputs in each step to be reviewed by involved parties

IV. Project Management Plan

### 3. Progress Reports

- Inception Report** : includes work plans containing project objectives, focus and scope with detailed action plans and implementation system
- Interim Report** : covers details of development and achievements of the project to date, and assesses the areas of improvement for the project with updated action plan for the remainder of the project
- Project Completion Report** : provides evaluation of overall project performance against work plan to evaluate and assess the outcomes of the project with further plans to improve design and operation of the system

### V. Timelines of Activities

- Progress Summary
- Milestone

V. Timelines of Activities

### 1. Progress Summary

| Dates                   | Tasks                                                                                                                                            |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 06/06/2014              | Submission of Project Proposal to CEA                                                                                                            |
| 07/02/2014              | Project Proposal Signed by CEA Director                                                                                                          |
| 08/30/2014              | Submission of Project Concept Paper(draft) to CEA                                                                                                |
| 09/02/2014              | Request for project approval to through Director of CEA to Sri Lanka NPD(National Planning Department) of MoFP(Ministry of Finance and Planning) |
| 10/28/2014              | Advisory Meeting #1 with Seoul Land/ Corporation & Korea Environment Institute                                                                   |
| 10/30/2014              | Meeting #1 with EDCF team from Sri Lanka<br>- 13 Participants including Nandana Bosimendra Handunage (Mayor)                                     |
| 10/31/2014              | Advisory Meeting #2 with Jeju Development Institute and Jeju City                                                                                |
| 11/10/2014              | Meeting #2 with External Consultants (Technical)                                                                                                 |
| 11/13/2014              | Clearance from Sri Lanka NPD and ERD of MoFP                                                                                                     |
| 11/26/2014              | Request for mission clearance to Sri Lanka ERD of MoFP                                                                                           |
| 12/09/2014              | Clearance from Sri Lanka ERD of MoFP                                                                                                             |
| 12/15/2014 - 12/16/2014 | Inception Report Workshop and Aide Memoire Signing                                                                                               |

V. Timelines of Activities

### 2. Milestone

| Major Tasks               |                                                                            | 2014 |    |    |    | 2015 |   |   |   |   |   |   |
|---------------------------|----------------------------------------------------------------------------|------|----|----|----|------|---|---|---|---|---|---|
|                           |                                                                            | 9    | 10 | 11 | 12 | 1    | 2 | 3 | 4 | 5 | 6 | 7 |
| Prep                      | Project Proposal Signed by CEA<br>Submission of PCP (KRWG → CEA)           |      |    |    |    |      |   |   |   |   |   |   |
| Research                  | Preparation for Inception Report                                           |      |    |    |    |      |   |   |   |   |   |   |
| External Consultants      | Contracts (includes Terms of Reference)                                    |      |    |    |    |      |   |   |   |   |   |   |
| Inception Report          | Inception Report Workshop &<br>Aide Memoire Signing<br>Site Investigations |      |    |    |    |      |   |   |   |   |   |   |
| Research                  | Preparation for Interim Report                                             |      |    |    |    |      |   |   |   |   |   |   |
| Interim Report & Training | Interim Report Workshop<br>Training Program                                |      |    |    |    |      |   |   |   |   |   |   |
| Research                  | Preparation for Final Report                                               |      |    |    |    |      |   |   |   |   |   |   |
| Final Report              | Final Report Workshop & Senior Policy Dialogue                             |      |    |    |    |      |   |   |   |   |   |   |
| Final Assessments         | Project Assessments and Reviews<br>Submission of Final Report              |      |    |    |    |      |   |   |   |   |   |   |



## 부록2 : 착수보고회 참석자 명단

### Attendance

Inception meeting on  
Policy Consultation for Green Urban Infrastructure Development:  
Focusing on Solid waste Management in Sri Lanka.

Date : 15<sup>th</sup> December 2014

Venue : Board Room Central environmental Authority

|    | Name                        | Institution & Designation              | Signature |
|----|-----------------------------|----------------------------------------|-----------|
| 1  | B.M.U.D. BASNAYAKG S/MOEBNG |                                        |           |
| 2  | D.W. Prathapasinga          | Chairman - CEA                         |           |
| 3  | K.H. Muthukrishnan          | DDG (EPC) / CEA                        |           |
| 4  | ASITH SILVA                 | DIRECTOR / POLICY, PLAN, MGMT. OF ENV. |           |
| 5  | R.W. Jayasinghe             | Project Director (PILS)                |           |
| 6  | RUVINI DHARMASIRI           | Project Direct (EDCF)                  |           |
| 7  | KIM, YOUNG SEOK             | Director, KEXIM                        |           |
| 8  | Song, Kuk-jin               | Senior manager, KEXIM                  |           |
| 9  | Yam Hyang Hee               | EDCF PA PM                             |           |
| 10 | Josh Lee                    | KEXIM                                  |           |
| 11 | Sarath Jayasinghe           | PA (EPC)                               |           |
| 12 | Sarath Jayasinghe           | PD (EDCF)                              |           |
| 13 | Mangis Wimalasiri           | D (Legal) - CEA                        |           |
| 14 | Upali Indrarathna           | DDG / HRD, Admin, Fin.                 |           |
| 15 |                             |                                        |           |
| 16 |                             |                                        |           |
| 17 |                             |                                        |           |
| 18 |                             |                                        |           |
| 19 |                             |                                        |           |
| 20 |                             |                                        |           |

## 부록3 : Aide Memoire 체결문건

COLOMBO, SRI LANKA

### AIDE MEMOIRE

2014 KSP Policy Consultation III:  
Green Urban Infrastructure Development: Solid Waste Management in Sri Lanka

December 15<sup>th</sup>, 2014

#### I. INTRODUCTION

1. A joint mission<sup>1</sup> ("the Mission") composed of representatives from the Korea Research Institute for Human Settlements ("KRIHS") and Export-Import Bank of Korea ("Korea EXIMbank") Consortium ("KSP consultants") as the government agencies for the Knowledge Sharing Program ("KSP") Policy Consultation III visited Colombo, Sri Lanka from December 15<sup>th</sup> to 18<sup>th</sup> to launch 2014 KSP Policy Consultation III "Green Urban Infrastructure Development: Focusing on Solid Waste Management in Sri Lanka" Project ("the project"). The Mission held discussions with the officials<sup>2</sup> of the Government of Sri Lanka ("GoSL").
2. The objectives of the mission were to discuss the detailed work scope with the parties related to the project and carry out interviews with officials of Central Environmental Authorities of Sri Lanka ("CEA") and other related experts and organizations to examine the needs, demands and current conditions of the Solid Waste Management System ("SWM") in Sri Lanka.
3. A meeting for discussion of the Project was held on 15<sup>th</sup>, December 2014. This Aide Memoire reflects the discussions held with the GoSL and is subject to how the related parties collaborate in implementing and managing the Project. This document is not legally binding but is only intended to procure a minute of the discussion held.

#### II. PROJECT OVERVIEW

4. **Background:** SWM in Sri Lanka is a crucial issue and has become a nation-wide concern due to an increase in waste generation from population growth. The current disposal method used for approximately three-quarters of solid wastes generated in metro areas is open dumping. The disposal methods such as open dumping and simple burning have potential to cause serious social and environmental problems. While Provincial Councils have been responsible for the management of solid wastes under the 13th Amendment to the Constitution of Sri Lanka, approximately half of

<sup>1</sup> The Mission included TBD

<sup>2</sup> Refer to Appendix 2 for the list of key persons met by the Mission

municipal budget is spent for traditional waste disposal methods. While few pilot projects to improve landfill facilities have been executed in Sri Lanka, such projects have not yet been successful to help utilize wastes as valuable resources and develop a comprehensive SWM system that can be integrated into sustainable urban infrastructure.

5. **Objectives:** Despite national initiatives and various solid waste treatment projects implemented by multilateral development banks and development aids, Sri Lanka still needs to devise a comprehensive SWM system from collection to energy recovery in order to implement more effective policies and adopt relevant technologies. Subsequently, system supported by policies and regulations will need to be integrated into green urban infrastructure coordinating with spatial plans. In order to mitigate complexities involved in waste disposal, waste management in general needs to take comprehensive and integrated approaches. The project aims to share Korea's experiences, which exemplify the utilization of green urban infrastructure to revitalize and regenerate urban spaces.
6. **Expected Outcome:** The expected outcome of the project is the policy consultation, including but not limited to technical consultation, that provides comprehensive improvement strategies for Sri Lanka's SWM system.
7. **Outputs:** The outputs of this project consist of three parts: (1) Policy Recommendations, (2) Preliminary Assessment of Policy Implementation ("PAPI") (3) Capacity Building Program.
  - (1) Policy Recommendations
    - (i) Diagnostic Studies on Current SWM and Conditions of Surrounding Areas in Sri Lanka
    - (ii) Case Studies on Korea's Experiences and Best Practices
    - (iii) Policy recommendations on the improvement of National Policy Formulation on SWM and Development of Surrounding Areas
  - (2) Pilot Project & Preliminary Assessment for Policy Implementation ("PAPI")
    - (iv) Technical and economic assessment for the implementation of the most optimal SWM/waste treatment facility (i.e., sanitary landfill) will be conducted as a potential pilot project. PAPI will select strategic site, propose optimal facility, provide initial scoping and costing, analyze technical and economic viability, assess social and economic impacts and propose conceptual development plan for surrounding areas. Priority project area will be selected based on the diagnostic studies, policy recommendations and other planned activities.



(3) Capacity Building Program

- (v) Capacity building support for the SWM through customized training programs and workshops for key government officials from the GoSL

**8. Activities:** The research team will complete following activities to achieve the objectives of the project, and bring impact and deliver outputs.

**(Activity 1) Diagnostic Study on Current SWM and Conditions of Surrounding Areas in Sri Lanka**

A review of current status on waste generation by region and type, and assessment of existing SWM practices, facilities and related policies in Sri Lanka will be conducted to identify major issues and challenges. In addition to enhancing the sustainability of SWM practices in Sri Lanka, the relationship between the implementation of SWM system and spatial planning from a national level to urban and municipal scale will be analyzed. Existing policies and legislative measures will be reviewed to identify potential areas to improve SWM system with development of surrounding areas.

**(Activity 2) Case Studies on Korea's Experiences and Best Practices**

Korea's experiences and knowledge on SWM will be analyzed to provide practical solutions to improve the SWM system in Sri Lanka. Much of the research efforts will be placed to introduce Korea's experiences and best practices on the development of the SWM system and integration of the system into urban infrastructure in alignment with regional and urban spatial plans. Also, detailed qualitative study will be conducted to review Korea's relevant policies, infrastructure and technologies most suitable to Sri Lanka.

**(Activity 3) Policy Recommendations on the improvement of National Policy Formulation on SWM and Reference Manual for Development of Surrounding Areas**

Based on the findings from Activity 1 and 2, the KSP team will formulate a set of policy recommendations for the development of National Policy on SWM in alignment with the country's national and urban plans. The policy recommendations will (i) focus on translating Korea's experiences applicable to the situation of Sri Lanka; (ii) determine the appropriate SWM System tailored to Sri Lanka; (iii) devise the National Integrated SWM Master Plan to establish the National Policy on SWM system in conjunction with spatial planning; (iv) present best available and cost effective technology/methodology concerning SWM; (v) suggest financing options to mobilize capital for strategic implementation of the SWM system; and (vi) propose measures to operate the SWM system in an efficient and effective manner. The policy recommendations will also define the role of municipalities and supportive policies such as tipping fee for the



maintenance of the comprehensive SWM system.

#### **(Activity 4) Pilot Project and PAPI**

Based on the diagnostic study on the current status of SWM in Sri Lanka and policy recommendations for the National Policy on SWM, the PAPI will be conducted for the implementation of the most optimal SWM/waste treatment facility on the selected priority project areas identified through policy consultation activities. More specifically, the PAPI will include the following:

- Data Collection and Site Investigation
  - Review of socio-economic dynamics, status of national territorial and urban spaces and relevant development plans and regulations (i.e., review of existing infrastructure, land use and waste management plans for proposed project site).
- Preliminary Technical Assessment
  - Site selection and surveys, measuring of geological and environmental conditions
  - Simulation of waste generation volume
  - Review of waste treatment method and determination of the most optimal SWM/waste treatment facility
  - Waste collection and transport networks and basic installation plan for SWM/waste treatment facility
  - Feasibility review of business plan and future expansion plan
  - Conceptual development plan for surrounding areas
- Preliminary Economic Assessment
  - Estimation of total project cost, financing options and plans
  - Analysis of cost and benefit, risk/sensitivity
  - Assessment of social and economic impacts

#### **(Activity 5) Capacity Building Program**

The capacity building program will be provided for the benefit of the key decision-makers and officials in charge of waste management and spatial planning in Sri Lanka. The KSP team will organize the training programs and workshops composed of a series of discussions about the diagnostic studies (Activity 1) and the case studies (Activity 2) to facilitate communication between the research team and Sri Lankan counterparts. The capacity building program will also include lectures by Korean experts, site visits and meetings with Korean government authorities and company representatives. It aims to not only deliver valuable opportunities for officials from Sri Lanka but also receive in-depth feedback and inputs on Activities to ensure high quality consultancy service relevant to the Sri Lankan context, therefore, maximizing the effectiveness of KSP research results.

### III. PROJECT SCHEDULE

9. In order to comply with the objective of the KSP III initiative, the mission agreed with the GoSL the following next steps:

#### A. Interim Report and Capacity Building Program

- i. KSP consultants will submit an interim report including the results of diagnostic study and case study to GoSL by the end of January 2014. GoSL will review the report and provide any required feedback or suggestions.
- ii. The joint team will invite 8 officials from GoSL to South Korea for the purpose of sharing Korean expertise in establishing and utilizing a SWM. The invitees will experience the state-of-the-art SWM system.

#### B. Final Report and Workshop

- i. KSP team will deliver a final report of detailed and specific guidelines and action plan for improvement of Solid Waste Management system. The draft report will be submitted in English by the end of May, 2015. The draft will be carefully reviewed by GoSL until the Final Workshop. The final version of the Final Report will be submitted no later than end of July, 2015.
- ii. The joint team will hold a large-scale Knowledge Sharing Workshop in Colombo, Sri Lanka at the end of the project for the purpose of sharing the Project outputs and knowledge to the relevant officials of the GoSL.

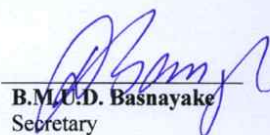
10. The Mission wishes to express its sincere appreciation to the GoSL for the productive discussions, cooperation and assistance extended to the Mission during its stay in the Sri Lanka.

11. The activities and the details of the project shall be decided and may be amended after mutual consultation between the two implementing agencies; CEA & KSP team.

This Aide Memoire was prepared by the Mission, confirmed by GoSL, and signed on 15<sup>th</sup> of December in Colombo, Sri Lanka.



**Panki Cho**  
Project Manager  
Land Management and  
Urban Planning Division  
Korea Research Institute  
for Human Settlements



**B.M.U.D. Basnayake**  
Secretary  
Ministry of  
Environment &  
Renewable Energy