
인도 타밀나두 지속가능한 도시개발 (TNSUDP) 모델시티
시범사업 - 스마트시티 사업 예비타당성 연구 최종 워크숍 출장
결과 보고서

2016. 1

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I. 해외출장 개요

1. 출장개요

- 과제명:** 인도 타밀나두 지속가능한 도시개발 (TNSUDP) 모델시티 시범사업 - 스마트시티 사업 예비타당성 연구 파일럿 워크숍
- 일시:** 2016년 1월 26일(화) - 1월 30일(토)
- 출장지:** 인도 (첸나이)

과제목적 및 내용

- 인도 타밀나두 지속가능한 도시개발사업(TNSUDP)은 시정부의 거버넌스와 재정안정성 제고를 위한 도시매니지먼트의 새로운 모델 제시를 목표로 세계은행이 추진해오고 있는 사업임
- 세계은행은 TNSUDP 사업의 일환으로 타밀나두 주의 인구 50만 중소도시를 한 곳을 선정하여 모델시티 시범사업을 수행하고자 함
- 상기 모델시티 시범사업은 해당도시 시정부의 역량 강화, 재정안정성 제고, 개발계획 수립, e-거버넌스 및 스마트시티 ICT 도입을 목표로 하며 본 연구에서는 모델시티의 에너지, 수자원, 폐기물, 교통, 방법, 도시인프라 및 공공서비스 관리를 위한 스마트시티 ICT의 도입에 대하여 사업 예비타당성 연구를 시행하는 것이 그 목적임

출장목적

첸나이의 타밀나두 주정부 및 3개 시범도시 (벨로르, 호수르, 에로드) 시정부 담당자와의 최종워크숍

출장자 명단

소속	직급	성명
국토연구원 국토인프라본부	본부장/선임연구위원	이상건
	연구원	권희서
	연구원	조희아

2. 세부일정

월 일 (요일)	출발지	도착지	방문기관	업무수행내용	접촉예정인물	비고
1.26(화)	인천			(13:45) 인천 출발		
1.27(수)		첸나이	타밀나두 주정부	(00:20) 첸나이 도착 (10:00-18:00) 첸나이 주정부 및 시범도시 시정부 담당자들과의 최종워크숍	타밀나두 주정부 및 벨로르/호수르/에로드 시정부 담당자들 왕형근 박사 (세계은행) 남경철 과장 (기재부 세계은행 파견) Shashank Ojha (세계은행 인도오피스) Vikas Kanungo (세계은행 현지컨설턴트) Sundarajan (세계은행 현지컨설턴트) 등	
1.28(목)			타밀나두 주정부	(10:00-16:00) 세계은행 내부 Wrap-up 회의		
1.29(금)	첸나이			(11:35) 첸나이 출발		
1.30(토)		인천		(05:40) 인천 도착		

II. 주요 수행내용

1. Meeting with Directorate of Municipal Administration

- Date and time: 27 January 2016, 11:00
- Venue: Tamil Nadu DMA's office
- Key participants:
 - KRIHS: Dr. Sang Keon Lee, Heeseo Rain Kwon, HeeAh Cho
 - World Bank: Mr. Shashank Ojha, Vikas Kanungo, Hyoung Gun Wang, Kyungchul Nam, Nanya Sudhir



<Meeting with DMA (right)>

DISCUSSION

WB
 We are very aware that e-government modules have been developing within the country. What we would like to propose is all about moving forward, towards the next step, towards the smart city modules. Now it should be about utilizing IT to improve services further.

DMA

Would this be in the form of grants? Would our engineers receive training about this - as a part of the initiative? I would also like to know what part of what you have are so different to what is already available.

WB

We will be attempting to allow for model cities to receive grants. And our main

priority is to bring in experts for the model cities. Yes, your engineers will be trained and as you can see the presentation booklet, you can see that this initiative is not something that is already available. It is the next step. These will also be integrated with the current e-gove. Modules, so there will be no duplicates.

DMA

Whatever technology it is, it should be handled carefully and it should flow along with the existing system.

2. Workshop with Commissionerate of Municipal Administration of Tamil Nadu, Commissioners of three target cities (Vellore, Erode, Hosur) and Urban Local Body officials

- Date and time: 27 January 2016, 11.00-13.00
- Venue: CMA conference room
- Key participants:
 - KRIHS: Dr. Sang Keon Lee, Heeseo Rain Kwon, HeeAh Cho
 - World Bank: Mr. Shashank Ojha, Vikas Kanungo, Hyoung Gun Wang, Kyungchul Nam, Nanya Sudhir
 - CMA officials, Commisiones of three target cities, and ULB engineers, etc.



<Final Workshop>

DISCUSSION

WB
 Today's program is all about focusing on how to model three cities for other cities of Tamilnadu (TN). The main objective is to take these model cities towards the smart city concept. The smart city programs are very ambitious and many cities of TN has already submitted SCP.
 More specifically, what we are doing here through this Korean technical assistant is taking our model cities to the next level, beyond 29 modules. Korea has one of the top smart city components in the world, and known as one of the global practices.

Basic idea of the project is to consult matters (existing challenges) of the model cities and to provide smart solutions. Today we would like to seek your opinions on

whether we are on a right track. Then, future steps should be agreed, as well as discussing matters regarding the funding.

- Dr. Sang Keon Lee's presentation on 'Detailed Project Report: TNSUDP Smart City Solution for Model Cities Component' (KRIHS)

WB

Please make any comments. Let's start with Vellore first. Highlighted areas are selected as priority sectors. Are we in line with your requirements?

Vellore

Is it possible to have one more priority? Transportation and mobility is a prime concern in Vellore. Other priorities are okay.

WB

Transportation is a big area. Which specific problem are you referring to?

Vellore

Internally, there is huge traffic congestion and there are too many small lanes. Traffic policies also need more CCTV cameras. I think it is also very important to educate my public about traffic regulation. For any scheme to be effective, understanding is required.

I have proposed transportation-related policy as one of the pan city solution for SCP. One concern is that transport is directly under the authority of transport department.

Another problem relates to waste. Solution required is... to let people informed of when collection is going to occur.

Is it also possible to have waste collected from each household? People do not like keeping their waste in front of their houses. I do not know what solutions you may have, but it would be nice if you can provide ICT solutions for these.

CMA (e-gov engineer):

We already have waste management as a part of e-government module. We have set routes. There exist a practical problem because we lack DPR in waste vehicle management.

In terms of online grievance system, we have complete system for this, which can be used in all three model cities. We do not, however, have solution for industry promotion. It should be developed and integrated with other systems.

With regards to civil participation, we will have citizen portal that will cover what you have proposed. I need information on how civil participation solution will be used through the portal we already have.

Erode

The priority sectors of our city can said to be citizen interaction, pollution, and water

CMA

We have solution for water supply. This is a solution to receive information through radio channel, provide connection, disconnection, etc. These facilities are available along with collection of charges. It can all be integrated with other solutions such as SCADA.

WB

There is still no mobile based application for water supply. We would like to bring everything together to help the management of water supply.

Hosur

Top three priorities are: 1. Transportation, 2. Citizen interaction, 3. Administration

KRIHS

Thank you for the feedback.

We have distributed DPR prior to the workshop. If you see that material, we have already described, in detail, of 23 smart city solution. We have recommended the highest priority solutions. With your feedback, we should be able to finalize it.

WB

Based on the feedback, for phase 1, we would like to select three priority areas to implement. The technical specification is available in DPR level. We have to find ways to implement selected solutions. It is expected for the first phase to take approximately 12 months. For all 3 phases to be completed, it will take 3-4 years (to complete all solutions).

KRIHS

For first three months, we would need to take process of customizing. We need to prepare, step by step plan. Once we have customized the solutions, then we can move onto constructing basic design for the solution. Providing hardware, software will follow.

I would like to emphasize that customizing procedure is extremely important. Each city have their own conditions and the system designer should know exactly, and understand deeply of the conditions of the city. This will be a period of adjustment. After the implementation, we will have unit test period. Then the overall test period.

WB

WB team can provide technical solutions to you. But to make things happen, we need to have your willingness and leadership. One problem with smart city solution is that,

you need to be working with multiple agencies, and multiple parts of the city needs to come together. The control room will involve various partners, various agencies, etc. As ULB, you need to take the lead.

Networking will connect various stakeholders. Smart solutions is asking how you will collaborate with other parties.

There are largely three key pillars required. Funding side, technical side, and organization side (institutional).

- Presentation - IT team 'Design, Development, Implementation and Maintain the Centralized e-Governance for ULBs in Tamilnadu'

CMA

E-government is to allow all ULB services accessible to the common man from everywhere. We are in the process of implementing 29 modules in an integrated manner. For all three model cities - 11 of the modules should be implemented by February, and by May, all 29 modules should be implemented.

3. Wrap up meeting with Directorate of Municipal Administration

- Date and time: 28 January 2016, 10.45
- Venue: DMA's office
- Key participants:
 - KRIHS: Dr. Sang Keon Lee, Heeseo Rain Kwon, HeeAh Cho
 - World Bank: Mr. Shashank Ojha, Vikas Kanungo, Hyoung Gun Wang, Kyungchul Nam, Nanya Sudhir



<TNSUDP team photo>

DISCUSSION

DMA

Regarding the identified sectors, not all of these come under the municipality administration (e.g. transport and urban mobility). This is under the authority of an entirely different agency. Only Transport department is able to handle it. We wouldn't understand how it works.

If however, we can be taken up with Transport department and this could perhaps be done.

Disaster is also managed at a national level. National Disaster Act was established in May 2015. There exists a state disaster commissioners, who are designated disaster authority. I think disaster-related ICT solution may perhaps be implemented in a

national level, not a local level.

WB

My question is, how do you think this will happen under smart city initiative? We are not only looking at three model cities, and it is all about taking a step further. Can we access SCP of model cities? There must be some solution for disaster within SCP?

DMA

Every district has disaster management program. Municipality is a part of the entire network.

WB

Should we focus on areas in which municipality can construct independently?

DMA

You should consider about the connection. It cannot stand alone. We have related things in 29 modules.

WB

I believe some solutions that we have provided are not covered by the 29 modules (for example, leakage or SCADA)

DMA

We are constructing the distribution network. These are simple system that can be done easily. Our people are used to simple system. How would the new system managed by our people?

KRIHS

SCADA in this presentation is based on Korean experience. In order to work out specifics, we would need to take the process of tailoring.

DMA

Can I have more write ups? More detailed explanation of the system and how the mechanism work? My interest is always water. As far as urban projects are concerned, it would be on water and sewerage

CMA

Issues regarding non-revenue water is also our priority concern.

IMACS

What can be done by bringing the best practice, from Korea, is drawing in additional things to create and monitor the system. Identifying additional components are required to improve the system. This will definitely add value.

For example, I understand that the vehicle side is done for waste, but routing and scheduling has not been done yet. This is something that we can bring in.

DMA

So adding up is what you are trying to do? Is there any possibility in creating these add ups without any additional expenditure?

WB

When we are moving away from e-gov. modules to smart concept, it will be automated, not manually intercepted. This means the hardware cost will occur, which is the costly part.

DMA

As far as administration, citizen interaction, and industry promotion, there surely be no additional cost? If you could introduce outcomes and benefits, model city funds can be spent on bridging the projects.

To sum up, perhaps add-up can be done for the portal, based on 29 modules, in cooperated to existing system. This will come at a small cost, I believe. For water, sewerage, and waste, please review our current DPR and provide technical feedback.

WB

What is important to note is that whatever we are doing under this project, this is a part of Korean green growth project. This means, in order for the fund to be available, a clear commitment that something will actually be implemented.

DMA

There are various projects coming up. You can give your inputs in how to make these projects more effective and work along with existing plans.