

# 국외출장 보고서

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2012.10

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# 1. 출장개요

- 출 장 자 : 문정호 연구위원 (국토계획연구본부), 김준기 책임연구원 (국토인프라연구본부)
- 과 제 명 : National Territorial Vision and Strategy for Green Growth towards 2030
- 출장목적 : 르완다 “녹색성장을 위한 국토 비전 및 전략” 연구 수행을 위한 르완다 정부(Ministry of Infrastructure)와의 업무협의 및 현지 조사
- 출장기간 : 2012. 9. 9(일) ~ 2012. 9. 17(월) (8박 9일)
- 출 장 지 : 르와다 키갈리
- 기대효과
  - 르완다 정부 관계자와의 협의를 통해 과업내용 구체화
  - 르완다 현지 실태를 보다 자세하고 정확히 파악하여 연구 수행의 질을 제고
  - 현지 관계자와의 교류를 통하여 인적 네트워크 구축
  - 원내 연구진의 국제컨설팅 역량을 제고하고, 향후 국제컨설팅 사업의 영역을 확장하는데 기여
- 출장일정

일정	출발지	도착지	업무수행내용	접촉인물 (직책포함)
9월9일 (일)	인천	키갈리	인천 출발 키갈리 도착	
9월10일 (월)	키갈리	키갈리	○ (09:00-11:00) 르완다 인프라부처(Mininfra) 방문 및 관계자 접견, 협의 ○ (14:30-16:30) 르완다 주택개발청(RHA) 방문 및 관계자 접견, 협의	- Christian Rwakunda, DG, Mininfra - Esther Mutamba, DG, RHA
9월11일 (화)	키갈리	키갈리	○ (09:30-11:00) 르완다 교통청(RTDA) 방문 및 관계자 접견, 협의 ○ (16:30-18:00) 르완다 에너지물위생청(EWSA) 방문 및 관계자 접견, 협의	- Twagira M. Elias, DG, RTDA - Innocent, Data manager, RTDA - Uwineza Josephine, Railway Project Manager, RTDA - Muyange Yves, CEO, EWSA

일정	출발지	도착지	업무수행내용	접촉인물 (직책포함)
9월12일 (수)	키갈리	키갈리	○ (08:30-09:30) 르완다 주택개발청(RHA) 방문 및 협의 ○ (12:00-14:30) Kamony 지역 현장 탐방, 조사 ○ (15:00-16:00) 르완다 자원청(RNRA) 방문 및 관계자 접견 협의	- Kalimba Innocent, Head of Construction & Legislation Division, RHA - Kamanzi M. Franco, Regulations & Standards unit Coordinator, RHA - Emmanuel Nkurnziza, DG, RNRA
9월13일 (목)	키갈리	키갈리	○ (13:30-14:30) 르완다 에너지관리청(REMA) 방문 및 관계자 접견, 협의 ○ (15:00-17:00)키갈리 시청 방문 및 관계자 접견, 협의	- Donna D. Rubinoff - Senior Advisor, City of Kigali
9월14일 (금)	키갈리	키갈리	(09:00-18:00) 무산제 등 키갈리 외곽 지역 현장 탐방, 조사 - Kivu Power Generation, Gisenyi hydropower Plant, DRC 접경지역 등	
9월15일 (토)	키갈리	키갈리	(09:00-18:00) 무산제 등 키갈리 외곽 지역 현장 탐방, 조사 - Reconciliation Village, Tea Company 등	
9월16일 (일)	키갈리		키갈리 출발	
9월19일 (월)		인천	인천 도착	

○ 회의전경



○ 접 촉 자

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## 2. 주요회의 내용

### ○ 기관별 회의 내용

기관	회의일자	주요회의내용
인프라부처(MINIFRA)	9.10(월)	<ul style="list-style-type: none"> <li>• MOU의 중요성에 모두 동의</li> <li>• 프로젝트에 녹색의 개념을 담는 것이 중요</li> </ul>
주택개발청(RHA)	9.10(월) 9.12(수)	<ul style="list-style-type: none"> <li>• 르완다 국토비전 및 전략의 중요성</li> <li>• 각 기관이 서로 긴밀히 협력</li> </ul>
교통청(RTDA)	9.11(화)	<ul style="list-style-type: none"> <li>• 르완다의 여건을 고려한 계획 필요</li> </ul>
에너지·물·위생청(EWSA)	9.11(화)	<ul style="list-style-type: none"> <li>• 재생에너지 사용의 중요성</li> </ul>
자원청(RNRA)	9.12(수)	<ul style="list-style-type: none"> <li>• RNRA와의 역할 및 협력</li> </ul>
에너지관리청(REMA)	9.13(목)	<ul style="list-style-type: none"> <li>• 환경보호를 위해서는 법체계 마련 및 실제적 대체제 개발 필요</li> </ul>
키칼리 시청	9.13(목)	<ul style="list-style-type: none"> <li>• 르완다 주택수요 추정, UN Habitat 같은 관련 프로젝트 설명</li> </ul>

※ 부록1 참조

## [부록 1] 주요회의

### 1. Meeting with Christian Rwakunda, Director General Policy & Planning Coordinator, Ministry of Infrastructure (10 September 2012)

#### Participants:

Okju Jeong - SPM , GGGI

Seung Yeoun Lee - PA, GGGI

Jeong Ho Moon - RF, KRIHS

Joon Ki Kim - ARF, KRIHS

Ji-won Youn - R, KICT

Christian Rwakunda - Director General Policy & Planning Coordinator, MININFRA

#### Place/Date:

The meeting started at 9:00am at DG Christain Rwakunda's Office on 10 September 2012

#### Meeting Agenda:

Explanation about work plan and preparation of MoU for collaboration between GGGI and MININFRA

Explanation about proposal for component 1, National Territorial Vision and Strategy for Green Growth, and component 2, Energy Efficient and Affordable Housing

#### Meeting Highlights

Dr. Jeong explained the overview of work plan that GGGI proposed country program in Rwanda, which consists of two components, National Territorial Vision and Strategy for Green Growth (component 1) and Energy Efficient and Affordable Housing (component 2). She also stressed MoU between MININFRA and GGGI to implement successfully the program.

Dr. Moon gave a brief explanation about component 1, National Territorial Vision and Strategy for Green Growth. He also introduced the experience of Korea, National Territorial and Regional Development Policy in Korea

DG. Rwakunda specially pointed out the importance of component 2, Energy Efficient and Affordable Housing. He said that developing new construction materials with local materials was important because imported material accounted for roughly the 40% of construction cost. Also, he addressed how to implement the concepts of green into the project.

#### Conclusion/Next Steps

Green concept should be implemented under realistic consideration when

developing National Territorial Vision and Strategy for Green Growth

MoU will be signed in October or November in 2012 to facilitate collaboration work between GGGI and MININFRA. Also, 2nd knowledge sharing session will be hold in Seoul on the second week of November 2012 (6 days).

For further detailed discussion, another teams including water, energy, construction materials-experts will visit Rwanda on the second week of October 2012.

## **2. Meeting with Esther Mutamba, Director General of Rwanda Housing Authority (10 September 2012)**

### Participants:

Okju Jeong - SPM , GGGI

Seung Yeoun Lee - PA, GGGI

Jeong Ho Moon - RF, KRIHS

Joon Ki Kim - ARF, KRIHS

Ji-won Youn - R, KICT

Esther Mutamba - Director General, RHA

Kalimba Innocent - Head of Construction & Legislation Division, RHA

Kyazze Edward - Head of Housing, Urban Planning & Development Division, RHA

### Place/Date:

The meeting started at 02:30pm at DG Esther Mutamba's Office on 10 September 2012

### Meeting Agenda:

Explanation about work plan and preparation of MoU for collaboration between GGGI and RHA

### Meeting Highlights

Dr. Jeong explained the overview of work plan that GGGI proposed country program in Rwanda, which consists of two components, National Territorial Vision and Strategy for Green Growth (component 1) and Energy Efficient and Affordable Housing (component 2). She also stressed MoU between MININFRA and GGGI to implement successfully the program.

DG Mutamba promised that RHA will collaborate closely with GGGI: Edward is a counterpart of KRIHS and Innocent is counterpart of KICT, and will give comments on MoU by the end of September.

Mr. Innocent mentioned that there is a project conducted by UN habitat, which is related with GGGI's project. Also he will provide a brief explanation about UN habitat project.

Conclusion/Next Steps

All agreed that it is very important to make a national territorial vision and strategy for develop Rwanda. Specially, component 2 is very closely related with ongoing project of RHA. Therefore, RHA will highly support MoU and GGGI's project.

DG Mutamba agree to send representatives from RHA to the 2nd knowledge sharing session in Seoul on November.

For further detailed discussion, another teams including water, energy, construction materials-experts will visit Rwanda on the second week of October 2012.

### **3. Meeting with Twagira M. Elias, Director General Policy, Rwanda Transport Development Agency (11 September 2012)**

Participants:

Okju Jeong - SPM , GGGI

Seung Yeoun Lee - PA, GGGI

Jeong Ho Moon - RF, KRIHS

Joon Ki Kim - ARF, KRIHS

Ji-won Youn - R, KICT

Twagira M. Elias - Director General, RTDA

Innocent - Data manager, RTDA

Uwineza Josephine - Railway Project Manager, RTDA

Place/Date:

The meeting started at 9:30am at DG Twagira m. Elias's Office on 11 September 2012

Meeting Agenda:

Explanation about work plan and preparation of MoU for collaboration between GGGI and RTDA

Explanation about proposal for component 1, National Territorial Vision and Strategy for Green Growth

Meeting Highlights

Dr. Jeong explained the overview of work plan that GGGI proposed country program in Rwanda, which consists of two components, National Territorial Vision and Strategy for Green Growth (component 1) and Energy Efficient and Affordable Housing (component 2). She also presented the importance of collaboration between RTDA and GGGI to conduct the program successfully.

Dr. Moon gave a brief explanation about transportation strategies of the CNTPs (Comprehensive National Territory Planning) such as construction of Kyungbu Expressway, establishment of 7 X 9 national arterial highway plan, building of high-speed transport network, and so on. He stressed the importance of coordination between economic development and territorial development.

DG Twagira M. Elias described Rwanda's plans related with GGGI's project such as Transport Strategic Master Plan consisting of long term, middle term, and short term-plan and Kigali Transportation Master Plan. He was concerned that macro plan would just remain as a plan without coming to the realization. Also, he pointed out the problems that Kigali city faces such as transportation safety, maintenance of infrastructure, unfriendly pedestrian environment, and so on.

#### Conclusion/Next Steps

RTDA will support GGGI's project and provide related plan and materials including data such as road map, road condition, traffic information and related projects such as railway project and airport project, etc., after finishing MoU sign. Also, RTDA will send representatives from RTDA to the 2nd knowledge sharing session in Seoul on November 2012.

There is a need to establish priorities between transportation infrastructures. There is a need to another visit to Rwanda around November for data collection to analyze land use development and transportation infrastructures

Details discussion and collaborations between GGGI and RTDA will be discussed further.

#### **4. Meeting with Muyange Yves, Chief Executive Officer, Energy Water and Sanitation Authority (11 September 2012)**

##### Participants:

Okju Jeong - SPM , GGGI

Seung Yeoun Lee - PA, GGGI

Jeong Ho Moon - RF, KRIHS

Joon Ki Kim - ARF, KRIHS

Ji-won Youn - R, KICT

Muyange Yves - Chief Executive Officer, EWSA

Keith Kalyegira - Strategic Advisor to Director General

##### Place/Date:

The meeting started at 4:30pm at CEO Muyange Yves's Office on 11 September 2012

##### Meeting Agenda:

Explanation about work plan and preparation of MoU for collaboration between GGGI and RTDA

Explanation about proposal for component 1, National Territorial Vision and Strategy for Green Growth and experience of Korea about CNPs

Meeting Highlights

Dr. Jeong explained the overview of work plan that GGGI proposed country program in Rwanda, which consists of two components, National Territorial Vision and Strategy for Green Growth (component 1) and Energy Efficient and Affordable Housing (component 2)..

CEO Muyange Yves demonstrate a renewable energy usage in Rwanda and electric saving efforts such as usage of LED.

Conclusion/Next Steps

Details discussion and collaborations between GGGI and EWSA will be discussed further the next visit, the second week of October.

## **5. Presentation of RHA project (12 September 2012)**

Participants:

Okju Jeong - SPM , GGGI

Seung Yeoun Lee - PA, GGGI

Jeong Ho Moon - RF, KRIHS

Joon Ki Kim - ARF, KRIHS

Ji-won Youn - R, KICT

Kalimba Innocent - Head of Construction & Legislation Division, RHA

Kamanzi M. Franco - Regulations & Standards unit Coordinator, RHA

Place/Date:

The meeting started at 8:30pm at Rwanda Housing Authority on 12 September 2012

Meeting Agenda:

Presentation about Inventory of Local Building Materials in Kamonyi District

Meeting Highlights

Eng. Kamanzi Franco explained inventory project related with component 2, energy efficient and affordable housing.

Conclusion/Next Steps

RHA will highly support GGGI's project since RHA's project and GGGI's project are closely related and complement each other. Further details discussion and collaborations between GGGI and RHA will be discussed in the next visit, the second week of October.

## **6. Field trip to Kamonyi District (12 September 2012)**

Participants:

Okju Jeong - SPM , GGGI

Seung Yeoun Lee - PA, GGGI

Jeong Ho Moon - RF, KRIHS

Joon Ki Kim - ARF, KRIHS

Ji-won Youn - R, KICT

Kalimba Innocent - Head of Construction & Legislation Division, RHA

Place/Date:

Kamony district field trip from 12:00pm to 2:30pm on 12 September 2012

Meeting Agenda:

Visiting formal laboratory, RULIBAClays Ltd, local housing construction site, and local brick factory

Meeting Highlights

See attached Appendix 3.

Conclusion/Next Steps

RHA will highly support GGGI's project. Further details discussion and collaborations between GGGI and RHA will be discussed in the next visit, the second week of October.

## **7. Meeting with Emmanuel Nkurunziza, Director General and the Registrar of Land Titles, Rwanda Natural Resources Authority (12 September 2012)**

Participants:

Okju Jeong - SPM , GGGI

Seung Yeoun Lee - PA, GGGI

Jeong Ho Moon - RF, KRIHS

Joon Ki Kim - ARF, KRIHS

Ji-won Youn - R, KICT

Emmanuel Nkurnziza - Director General and the Registrar of Land Titles, RNRA

Place/Date:

The meeting started at 3:00pm at DG Emmanuel Nkurnziza's Office on 12 September 2012

Meeting Agenda:

Explanation about work plan and preparation of MoU for collaboration between GGGI and RTDA

Explanation about proposal for component 1, National Territorial Vision and Strategy for Green Growth and experience of Korea about CNPs

Meeting Highlights

Dr. Jeong explained the overview of work plan that GGGI proposed country program in Rwanda, which consists of two components, National Territorial Vision and Strategy for Green Growth (component 1) and Energy Efficient and Affordable Housing (component 2). Also, she shared the idea of MoU with DG Nkurnziza.

Dr. Moon explained about transportation strategies of the CNTPs (Comprehensive National Territory Planning) such as construction of Kyungbu Expressway, establishment of 7 X 9 national arterial highway plan, building of high-speed transport network, and so on. He stressed that the results of GGGI's project is not an answer but merely an alternatives or suggestions that Rwanda government can choose, therefore, collaboration between GGGI and RNRA is the focal point for the success of the project

DG Nkurnziza agreed the importance of collaborations between GGGI and RNRA, and suggested that RNRA might be a better counterpart than MININFRA since RNRA participated in Rwanda National Land Use Master Plan and MININFRA is more focusing on Urban. He also introduced Thierry Hoza Ngoga as a counterpart

Conclusion/Next Steps

Thierry Hoza Ngoga will provide data used in Rwanda National Land Use Master Plan.

Details discussion and collaborations between GGGI and RNRA will be discussed further.

**8. Meeting with Emmanuel Nkurunziza, Director General and the Registrar of Land Titles, Rwanda Environment Management Authority Portal (13 September 2012)**

Participants:

Okju Jeong - SPM , GGGI

Seung Yeoun Lee - PA, GGGI

Jeong Ho Moon - RF, KRIHS

Joon Ki Kim - ARF, KRIHS

Ji-won Youn - R, KICT

Unknown -REMA

Place/Date:

The meeting started at 1:30pm at REMA on 13 September 2012

Meeting Agenda:

Explanation about work plan and preparation of MoU for collaboration between GGGI and REMA

Meeting Highlights

Dr. Jeong explained the overview of work plan that GGGI proposed country program in Rwanda, which consists of two components, National Territorial Vision and Strategy for Green Growth (component 1) and Energy Efficient and Affordable Housing (component 2). She also stressed MoU between REMA and GGGI to implement successfully the program.

Person who is working in REMA explained about Rwanda's law related with environment protection. She pointed out that although a people who do works such as making bricks needs a certification (it might help to protect environment), problem is that there is a no option to replace plants such as woods to bake bricks or cook food. Also, she mentioned that developed technologies through component 2 should be fixed with Rwanda's situation.

Conclusion/Next Steps

Details discussion and collaborations between GGGI and REMA will be discussed further.

## **9. Meeting with Donna D. Rubinoff, Senior Advisor, City of Kigali (13 September 2012)**

Participants:

Okju Jeong - SPM , GGGI

Seung Yeoun Lee - PA, GGGI

Jeong Ho Moon - RF, KRIHS

Joon Ki Kim - ARF, KRIHS

Ji-won Youn - R, KICT

Donna D. Rubinoff - Senior Advisor, City of Kigali

Place/Date:

The meeting started at 3:00pm at Urban Planning and Construction Office on 13 September 2012

Meeting Agenda:

Explanation about GGGI's work plan

Explanation about proposal for component 1, National Territorial Vision and Strategy for Green Growth and experience of Korea about CNPs

Meeting Highlights

Dr. Jeong explained the overview of work plan and the experience of Korea about CNPs. Dr. Rubinoff explained related project, Housing Market Demand, Housing Finance, and Housing References for the City of Kigali. She suggested reviewing closely related projects such as Rwanda National Land Use Master Plan and UN Habitat project to avoid serious overlap among projects. She also suggested collaboration with UN habitat


Conclusion/Next Steps


GIS data is available and will be provided to GGGI by Enrico Morriello, assistant vice president of Surbana International Consultants Pte. Ltd.

## **10. Field trip to Musanze (14-15 September 2012)**

See attached Appendix 4.

[부록 2] 발표자료 (KRIHS, GGGI)




 Global Green Growth Institute

# National Territorial Vision and Strategy for Green Growth

*Proposal for Component 1*

**Jeong Ho Moon & Joon Ki Kim**  
Research Fellows  
Korea Research Institute for Human Settlements

## Contents



- I. Background
- II. Objectives
- III. Work Activities
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- V. National Territorial and Regional Development Policy in Korea (Referential Presentation)

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## I. Background

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### I. Background



- Former developing countries like Japan and South Korea are now shifting to Green Growth, and alter existing infrastructure into "greener" ones.
  - In order to realize sustainable growth, they pay the price second time now.
  - Low carbon development could cost more and may conflict with economic development policies.
- The newcomers like Rwanda need to adopt customized green strategies from the early stage of industrialization and urbanization.
- Green national development strategies should be paralleled with territorial or spatial strategies and planning.

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## I. Background



- The Rwandan government wants to lift Rwanda into middle-income range by 2020, skipping over the industrialization stage and transforming Rwanda into a service economy like Singapore.
- Despite all the obstacles, Rwanda has not a few advantages.
  - Rwanda is landlocked, hilly, and crowded country of which territory is only 26,338<sup>km<sup>2</sup></sup>
  - Rwanda is less graft-ridden than Greece or Italy (Transparency International).
  - The country is business friendly and ranks 45th in the World Bank's index of the ease of doing business
  - Property rights are strengthening, and cleanliness is no small part of the advantages

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## I. Background



- National territorial strategy is inseparable with “Vision 2020,” “Economic Development and Poverty Reduction Strategy (EDPRS),” “Rwanda National Land Use Development Master Plan (Swedesurvey, 2010).”
- Economic approaches in those vision and strategies are to be dealt within the scope of real territorial implementation.
  - Also, national territorial strategies are to be embraced with the green growth approaches previous strategic documents such as “National Strategy on Climate Change and Low Carbon Development for Rwanda (SSEE, 2011).”
  - They would become more practical when they are properly combined with national territorial strategy and regional and local options.

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## II. Objectives

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## II. Objectives



This project will be a territorial reflection and reinterpretation of the Rwanda's vision and economic approaches to be a knowledge-based economy in the future, that is,

**the “East African Hub of Knowledge-Based Economy,”  
in the 2030s**

- First, it will propose a well-organized territorial and regional development vision. Especially it will explore two different options
  - “Kigali-centered compact metropolitan development” and
  - “One big green city network” to be a foremost knowledge-based economy hub in East Africa

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## II. Objectives



- Second, it will propose smart transport and logistics network options.
  - Rwanda is an inland, small and dense country without a sea port. Surrounded by Tanzania, Congo, Uganda and Brundi, Rwanda needs to arrange a very careful and smart logistics strategies.
- Third, it will propose urbanization management guidelines.
  - It is crucial for the central government and metropolitan authority to prepare a solid set of urban planning and city management guidelines for long-term green growth.
  - Also, considering the unique geo-demographic facts of Rwanda, a nation-wide compact city-town network could be posited.

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## II. Objectives



- Fourth, it will propose a set of sectoral strategies focusing particularly on
  - regional (district) industrial development,
  - energy infrastructure, and water utilization and management.

These sectoral strategic options should be dealt with the territorial vision and strategies, transport and logistics, urbanization management, and so on.

- Fifth, it will propose implementation and governance strategies.
  - Foremost prerequisite for decent and efficient territorial planning is legislative and institutional setting and implementation and coordination system.

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## III. Work Activities

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### III. Work Activities



- **Preliminary research**
  - Literature review on existing documents and materials (information collection).
  - Field survey and in-depth interview with Rwandan officials and professionals.
- **Proposition of territorial and regional development vision**
  - Territorial diagnosis, analysis of territorial issues and potentials.
  - Arrangement of options for rational distribution of national resources and smart infrastructure provision.
  - Positing a tentative long-term national territorial development vision and formulation of strategies for growth poles (cities) and rural area development, or cities and town network.

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### III. Work Activities



- **Smart transport and logistics network options**
  - Analysis of transportation network and logistics and assessment of modal options in the context of green growth strategies.
  - Positing a tentative national level transportation axis planning (up to outbound network).
  - Formulation of infrastructure provision strategies.
  
- **Urbanization management guidelines**
  - Proposition of a set of urban planning and city management guidelines for long-term low carbon green growth.
  - Positing a nation-wide compact city-town network blueprint.
  
- **Regional industrial development strategies**
  - Analysis of regional industrial properties and potential, energy and water resource.
  - Positing regional or district level industrial specialization strategies.

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### III. Work Activities



- **Energy development and provision strategies**
  - Analysis of future energy consumption and energy development potential.
  - Positing energy infrastructure provision strategies.
  
- **Water resource management strategies**
  - Analysis of water resources and assessment of strategic options in the context of green growth.
  - Positing water utilization and management guidelines.
  
- **Proposition of implementation and governance strategies**
  - Analysis of current legislative and institutional setting and conditions
  - Positing priorities of legislative and administrative upgrade measures
  - Proposing implementation system of territorial planning and governance system among national, local, public, private actors and stakeholders.

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## IV. Schedule

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### IV. Schedule



The consultancy will be conducted for the duration of seven months, from September 2012 to March 2013.

Work activities	Approximate completion date
• Preliminary research	30 Sep. 2012
• Territorial development vision	30 Nov. 2012
• Transport and logistics network	31 Dec. 2012
• Urbanization management	31 Jan. 2013
• Industry, energy and water	31 Jan. 2013
• Implementation and governance	28 Feb. 2013

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## V. Referential Presentation

National Territorial and Regional Development Policy in Korea

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Thank you very much

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## Overview of Work Plan

September 2012  
Kigali, Rwanda

### Phase 1: Structure



#### Component 1

##### National Territorial Vision and Strategy for Green Growth

- Assess overarching vision for national territory
- Propose strategic guideline for competitive and sustainable urban network to be combined with the provision of principal infrastructure such as:
  - *transportation, energy, water resource, habitat and urban development*
- In-depth analysis of energy policy

#### Component 2

##### Energy Efficient and Affordable Housing

- R&D on new construction material based on local availability and usage of different materials
- Suggest institutional and legislative guidelines for energy efficient and climate resilient housing

## Comp.1 National Territorial Vision and Strategy for Green Growth: *Baseline Questions*



- National territory constitutes a prime element to construct a united democratic and inclusive Rwandan identity
  - ➔ *What can be **Rwanda's territorial advantage**?*
- “Rwanda is still a low urbanized country and has a unique opportunity to set the standards for sustainable urban development that most African countries fail to do at the moment”
  - ➔ *How to achieve **sustainable urban development** throughout the country? The territory will be transformed, urbanized and more polarized?*
  - 20% (2010) -----➔ 35% (2020)
  - ➔ *How to provide necessary infrastructure to Kigali and to correct the imbalance between Kigali and other urban centers?*

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## Comp.1 National Territorial Vision and Strategy for Green Growth: *Focus*



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## Comp.1 National Territorial Vision and Strategy for Green Growth: *Leading principle*



- “**Green Growth** is a means to foster economic growth and development while ensuring that **natural assets** continue to provide the resources and environmental services on which our well-being relies”
- National territory is a valuable natural capital and resources accommodating human settlements and economic activities

➔ *A territorial vision and strategy is an effective tool to maximize Rwanda’s territorial potential and address the challenges in mitigating GHG emissions, adapting to climate change, and supporting inclusive economic growth*

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## Comp.1 National Territorial Vision and Strategy for Green Growth: *Following the example of Korea’s CNTP*



- Comprehensive National Territorial Plan (CNTP) is Korea’s foremost spatial plan to keep up with economic, social and other changes
- ❖ ***The Framework Act on National Territory:*** “CNTP represents the leading comprehensive and long term plan designed to meet future economic and social changes regarding the **use, development and preservation of national territory**. The CNTP deals with the overall aspect of the national territory and presents directions for its long term development”
- The Korean Government combined economic development with territorial policy

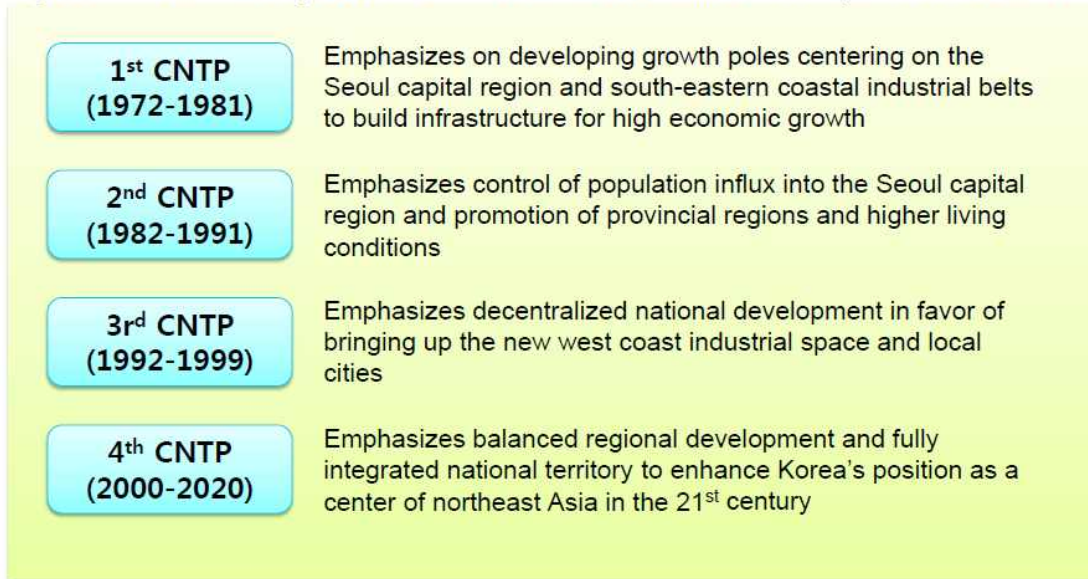


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## Comp.1 National Territorial Vision and Strategy for Green Growth: *Following the example of Korea's CNTP*



- Since the first plan made in 1972 to the fourth in 2000, the CNTP has provided the blue print of the national territorial development of Korea



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## Comp.1 National Territorial Vision and Strategy for Green Growth: *Following the example of Korea's CNTP*

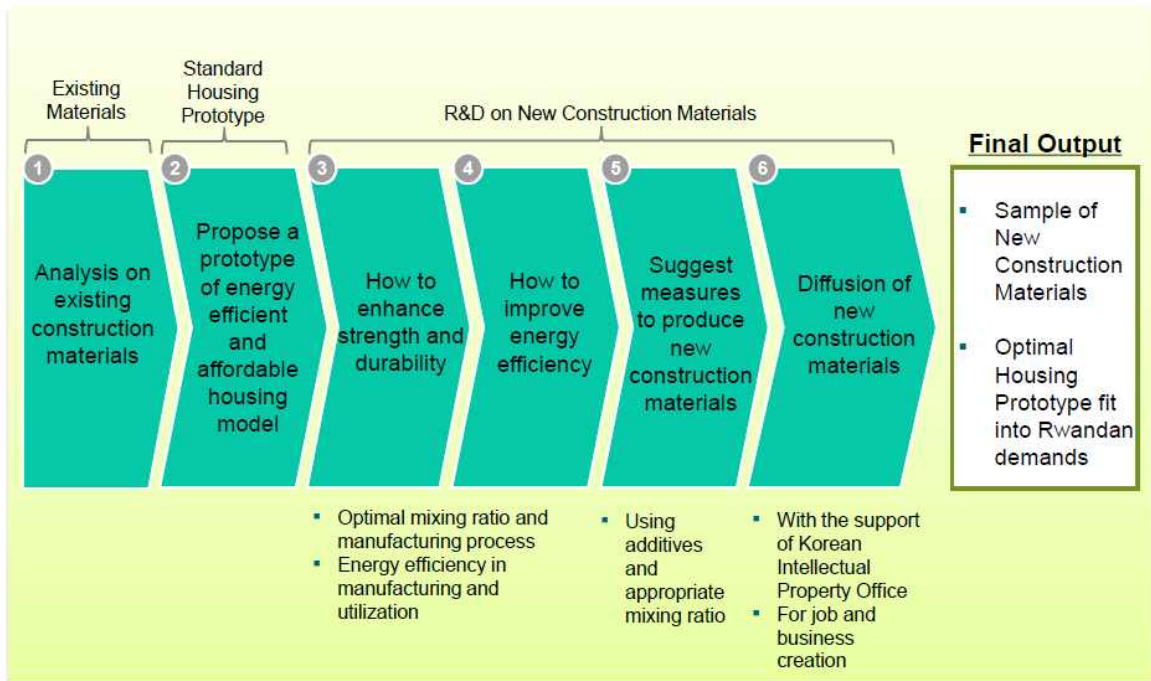


### Vision, Goals and Strategies of the Revised CNTP (2006-2020)



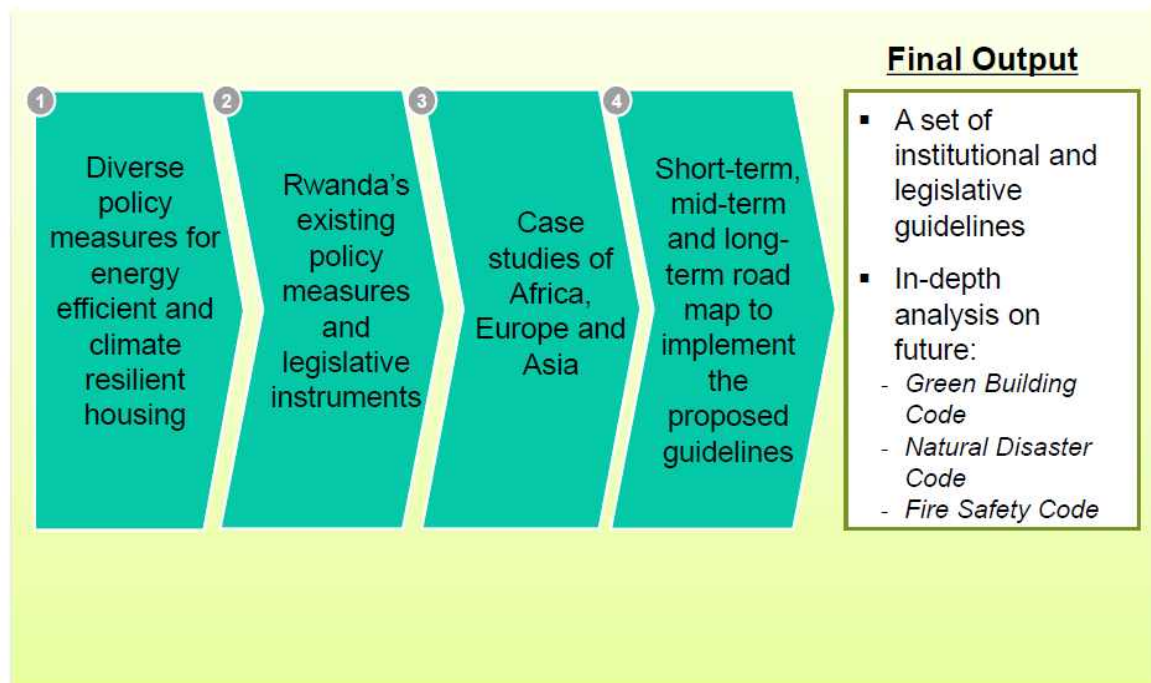
8

## Comp.2 Promote Local Construction Materials for Energy Efficient & Affordable Housing in Rwanda



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## Comp.2 Build Institutional and Legal Framework for Energy Efficient & Affordable Housing in Rwanda

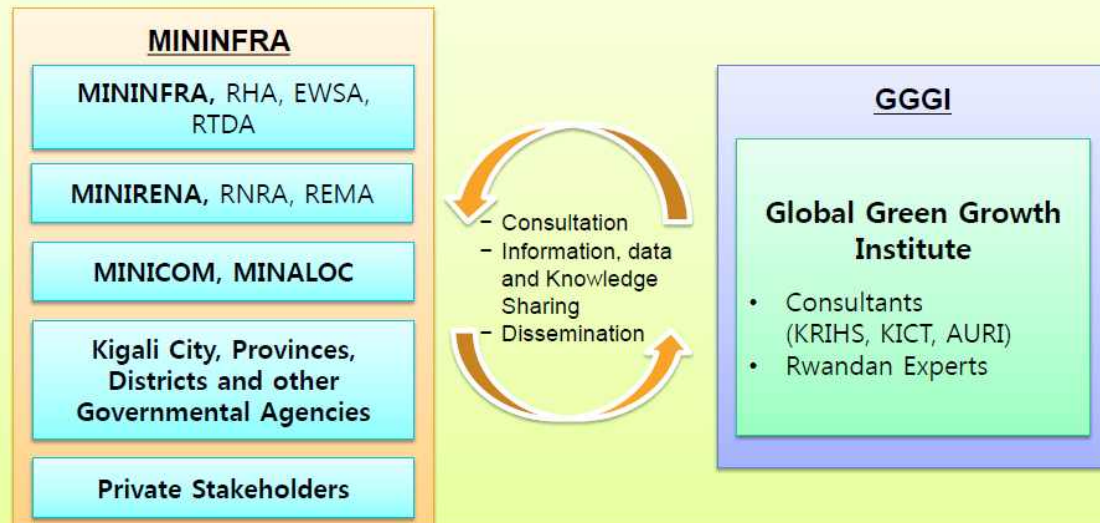


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## Project Governance: Who and How to Implement the Program



- MoU Signing : MININFRA and GGGI
- Working Group Meeting with members from responsible authorities
- Consultation Meeting: Inception/ Interim/ Final



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## Dissemination: How to make Rwanda a leading country in Green Growth



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[부록 3] Field Trip - Kamonyi District



< Formal Research Laboratory >



< RULIBAClays Ltd >



< Local Housing Construction Site -1 >



< Local Housing Construction Site -2 >



< Local Brick Factory -1 >



< Local Brick Factory -2 >

[부록 4] Field Trip - Musanze



< Kivu Power Generation >



< Gisenyi Hydropower Plant >



< Primus Beer Company >



< Rubava Nyabihu Tea Company >



< Hot Spring >



< Reconciliation Village >



< Border between Rwanda and Congo >



< Main Road >

[부록 5] Rwanda Transportation



<Motor Bike Taxi>



<Mini Bus & Stop>



<National Main Taxi Park Nyabugogo>



<Intercity Bus>



< Arterial road -1 >



< Arterial road -1 >



<Parking Problem>



<Congested Road>