



Global  
Green Growth  
Institute

# The Global Green Growth Initiatives and Policy Support in the Arab Region

**Dr. Chanho Park,**  
*Director - Abu Dhabi Office, GGGI*



# **Introduction of GGGI**

*Pioneering toward Green Growth*

## Vision

Vision

A world-class international organization dedicated to promoting and disseminating green growth worldwide, grounded upon partnerships between developing and developed countries & public and private sectors

## Mission

Mission

1. Mobilizes world-class technical support and builds local capacity for the design and implementation of green growth strategies
2. Provides an international knowledge-sharing platform for developing countries, evidence-based learning and policy innovation
3. Deepening cooperation among developed, developing and emerging economies countries, public and private sectors, and practitioners and scholars



# What is Green Growth?



**Global Green Growth Institute :** “green growth is the new revolutionary development paradigm that sustains *economic growth* while at the same time ensuring *climatic and environmental sustainability*. It focuses on addressing the root causes of these challenges while ensuring the creation of the necessary channels for *resource distribution and access to basic commodities for the impoverished (social inclusiveness)*. Under this new paradigm, new *ideas*, transformational *innovations* and state-of-the art *technologies* will become the major drivers for growth”

**OECD :** “Green growth means fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. To do this, it must catalyze investment and innovation which will underpin sustained growth and give rise to new economic opportunities.”

**UNEP :** “A green economy is one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient, and socially inclusive. In a green economy, growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services.”




# Paradigm shift

Addressing the global challenges requires a **comprehensive rethinking** of our ways of valuing and measuring socioeconomic progress and ecosystem services.

A new paradigm should recognize **inherent value** of environmental protection and social justice in enabling economic growth.

- **Rethinking of Growth Paradigm:**



**Quantity-oriented  
(labor, capital)**  
: more input for  
more output



**Quality-oriented  
(new ideas, innovation)**  
: less input but more output

- **Broadening the concept of “Going Green”:**



**Responding to  
Environmental  
Degradation,  
Climate Change**



Enhancing added value while  
promoting resource efficiency  
and social inclusiveness



## Green growth has become

the central agenda of international fora and leading international organizations.



- ‘OECD Declaration on Green Growth’ signed by ministers from 34 countries (June 2009)
- Published *Towards Green Growth* (May 2011)



- 66th ESCAP Commission Session discussed green growth policy options for the triple crisis of food, fuel and finance (May 2010)
- Actively published green growth-related publications including *Greening Growth in Asia and the Pacific*, *Greening of Economic Growth Series*, etc



- Published *Green Economy Report*, underlining sustainable public policy and investment path on the road to Rio+20 (Feb 2011)

*“We are running out of time. Time to tackle climate change. Time to ensure sustainable, climate-resilient green growth.... **Together, let us tear down the walls. The walls between the development agenda and the climate agenda. Between business, government, and civil society. Between global security and global sustainability.**”*

Ban Ki-moon, at World Economic Forum, Jan 2011



1. Solely dedicated to Green Growth
2. Bridging two different worlds
  - : developing and developed
  - : theory and practice
  - : public and private
3. Sharing the experiences of compressed development (both good and bad practices)
  - : generations of experiences still alive
  - : can offer a wide spectrum of technologies (e.g. from coal briquettes to nuclear reactors )

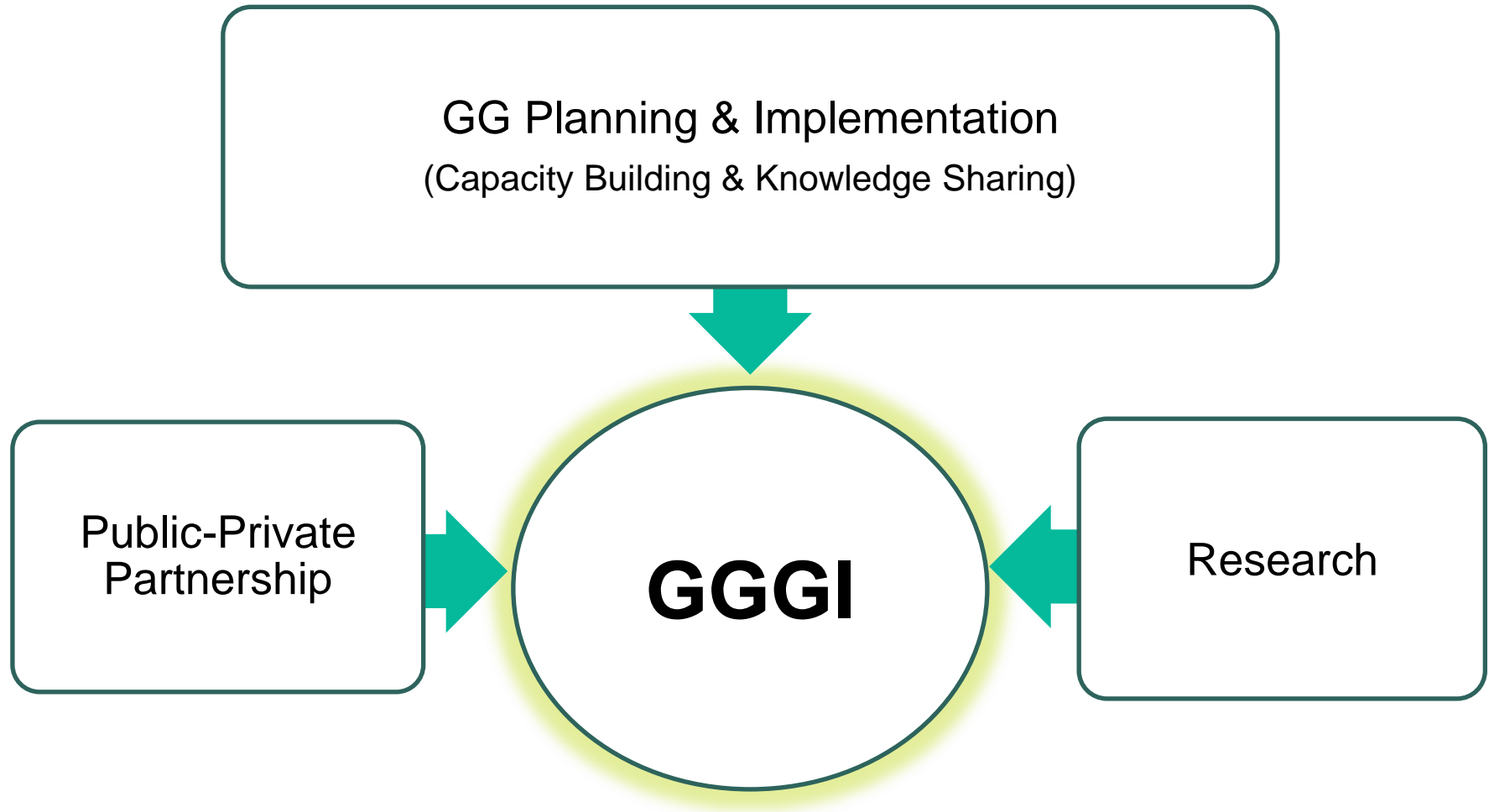




- GGGI hosted the Full Signatories Meeting in Seoul on 19-20 September by gathering the 17 founding members for discussions leading up to the Inaugural Meetings in October. (Mexico joined on 12 Oct.)
- The GGGI has acquired a legal status as an International Organization as of 18 October and has organized the inaugural ceremony on 23 October right after the ministerial meeting of pre-COP of COP18, UNFCCC.

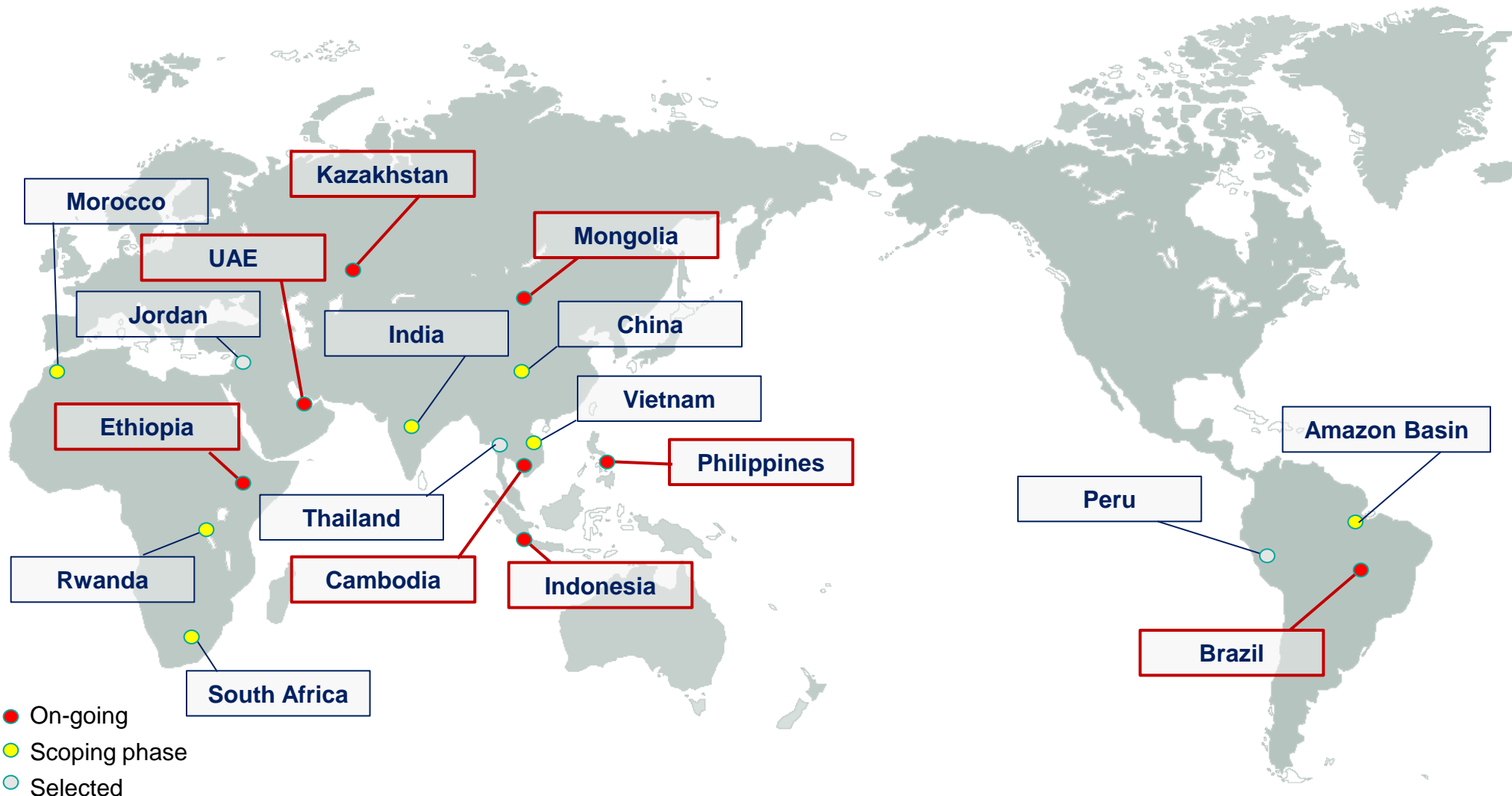


### Working with partner governments and organizations.



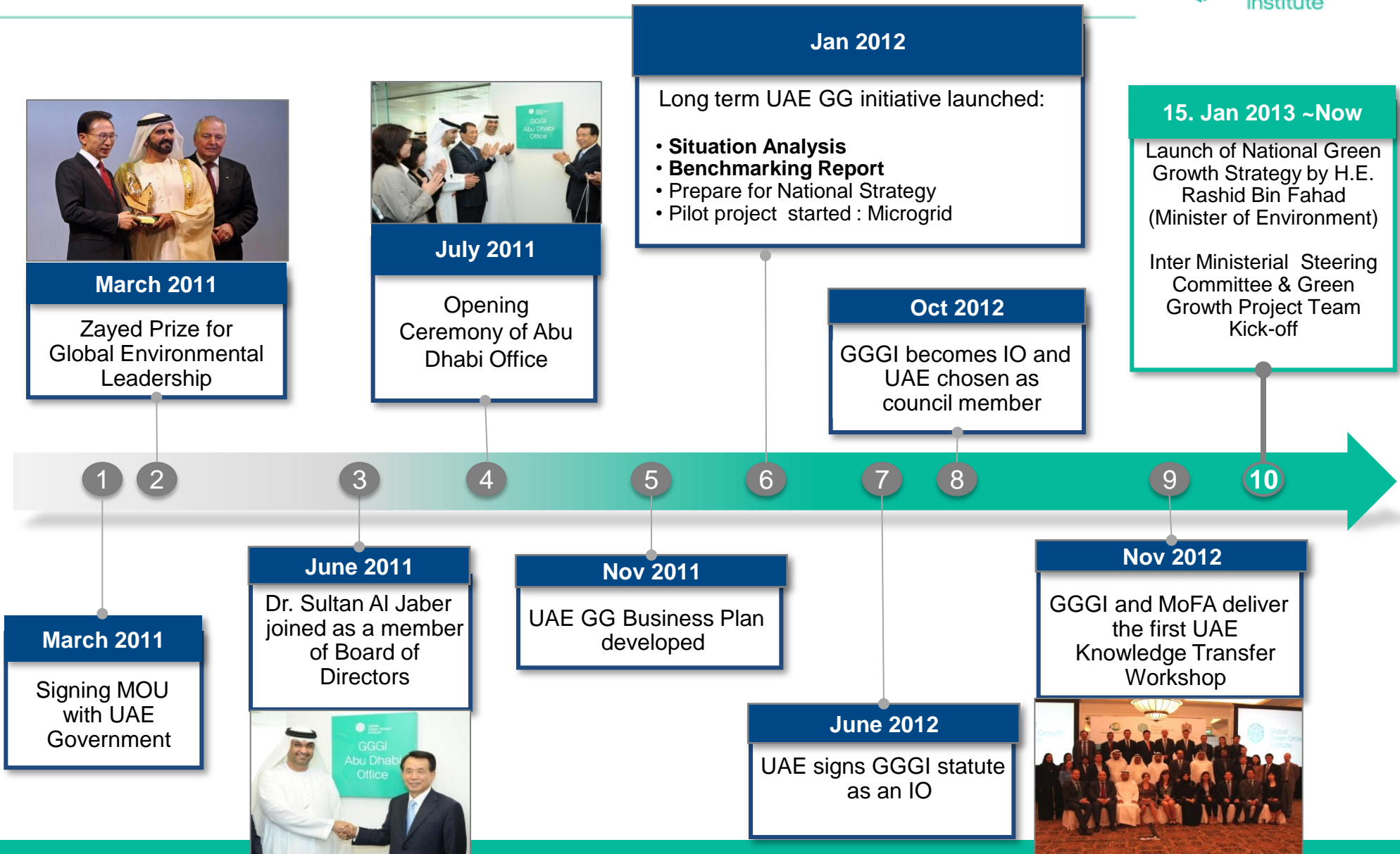
# GGGI Country Programme Portfolio: (Aug 2012)

 17 Countries, 26 Projects



# **UAE Green Growth Project**

# UAE Green Growth Projects



## Green Growth Planning (GGP)

### Policy & Governance

- Propose **regulatory frameworks** for green growth
- Cost benefit analysis for greenhouse gas abatement
- Macro-economic impact assessment (GDP, jobs, carbon footprint etc.)
- Reference international **benchmarks**
- Design proposals for **green growth engines** and investments
- Help develop a **comprehensive Green Growth Master Plan** across economic sectors
- Help establish a **progress-monitoring** and evaluation system

### Data Management

- Identify gaps and needs in current **GHG data set**
- Establish **measurement, reporting, and verification (MRV) system**, applying IPCC guidelines
- Develop **data modeling systems**
- Train officials in **GHG data collection and analysis**

### Capacity Building

- Initiate **knowledge sharing workshops, training programs** and policy dialogue
- Help introduce the concept of green growth across public and private sectors
- Train officials in green growth data collection and progress monitoring

### Pilot Projects

- Build pilot projects in countries as **test-beds** and **demonstration facilities**
- Pilots are **tailored** to address **country challenges**
- Use pilot programs to build capacity, encourage ownership and buy-in

## GGGI's partners:





## Highlight GGGI activities in Local Media

### Local Press (UAE)

«البيئة والتنمية» تطلق الاستراتيجية الوطنية للنمو الأخضر  
 - د. راشد بن فهد  
 - 16 يناير 2013



سجلت الإمارات اليوم انطلاقاً من برنامج «البيئة والتنمية» الذي تطلقه وزارة البيئة والمياه والزراعة، الاستراتيجية الوطنية للنمو الأخضر، بهدف تحقيق التنمية المستدامة من خلال التركيز على المجالات الثلاثة: الاقتصاد، المجتمع والبيئة. وتعد هذه الاستراتيجية من أهم الوثائق التي تضعها الدولة لتحقيق أهدافها الاستراتيجية في مجال التنمية المستدامة.

وقد أعلن د. راشد بن فهد، وزير البيئة والمياه والزراعة، عن إطلاق الاستراتيجية الوطنية للنمو الأخضر، مؤكداً على أهمية هذا البرنامج في تحقيق التنمية المستدامة. وتعد الاستراتيجية من أهم الوثائق التي تضعها الدولة لتحقيق أهدافها الاستراتيجية في مجال التنمية المستدامة.

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### GGGI and MoFA explore cooperation on green growth

ABU DHABI: The Global Green Growth Institute's Abu Dhabi regional office, headquartered in Masdar City, has held its first event aimed at exploring mutual cooperation opportunities in the field of green growth on the sidelines of the World Future Energy Summit.

Co-hosted by the directorate of energy and climate change of the UAE Ministry of Foreign Affairs (MoFA), the GGGI's side event included a series of lectures and discussions about the UAE's action plan to develop its national strategy for green growth.

The event also highlighted the institute's vision and the steps being taken to facilitate and enhance cooperation in the field of green growth as well as the lessons derived from the UAE and the Institute.

"The UAE action plan to develop its national strategy for green growth is based on four main pillars – policy development, data management, building local capacity and the development of leading pilot projects in the field of green growth," said Dr. Therk Al-Jabrou, director of the directorate of energy and climate change of the UAE Ministry of Foreign Affairs.

"Achieving green growth requires developing new mechanisms and coordinating local efforts in addition to building national specialised capabilities and providing all the relevant information to help develop the integrated policies and legislation needed to achieve this purpose," he added.

"The Global Green Growth Institute will boost the UAE's efforts to develop its strategy for green growth by working with local stakeholders, aiming to identify the priorities and work progress and



### UAE ANNOUNCES ITS PLAN TO DEVELOP NATIONAL STRATEGY FOR GREEN GROWTH

posted on 16/01/2013 12:00 views



The UAE has announced plan to develop its National Strategy for Green Growth within the next nine months in collaboration with the Prime Minister's Office, the Ministries of Environment and Water, the Foreign Affairs and the Global Green Growth Institute through its Abu Dhabi office at Masdar City.

Dr. Rashid Ahmad bin Fahad, Minister of Environment and Water, made this announcement during a press conference held on the sidelines of the World Future Energy Summit, which brought together Lars Løkke Rasmussen, former Prime Minister of Denmark and the Chair of the Global Green Growth Institute (GGGI) and Dr. Sultan Al-Jaber, UAE Special Envoy for Energy and Climate Change and the Chief Executive Officer of Masdar.

He confirmed that the plan to develop a national strategy will progress within the next nine months.

"We are currently forming a steering committee that comprises of the relevant authorities, which aims to develop a roadmap for implementing the UAE's strategies for green growth to be



### GGGI Council's 2nd session launched at WFEES summit

2013-01-18 15:15:02

WAM ABU DHABI: The second session of the GGGI Council, UAE, 17 January 2013. The second session of the Council of the Global Green Growth Institute (GGGI) was held yesterday in Abu Dhabi on the sidelines of the 20th World Future Energy Summit (WFEES) held in Abu Dhabi from 15 - 17 January 2013.

The meeting was headed by Lars Løkke Rasmussen, the former Prime Minister of Denmark, Chair of the GGGI Council, and Dr. Sultan Ahmed Al Jaber, UAE Special Envoy for Energy & Climate Change, CEO of Masdar.

"Supported by the vision of our wise leadership the UAE has always been an instrumental in adopting and supporting different creative initiatives in all fields. We are honored to be one of the founding members and financially supporting the GGGI and paving the way to develop its plans and programmes which contributed to convert the institute into a leading international organization," Dr. Al Jaber said.

"Held for the first time outside its headquarters in Seoul, hosting the second council meeting of the GGGI in Abu Dhabi indicates our sincere efforts in this direction," Al Jaber added.

The list of participants at the meeting featured a number of officials and representatives of the



### UAE plans green growth strategy

(Wam / 18 January 2013)

The plan is expected to meet environment sustainability standards, and promote the use of green and clean technologies. — Picture used for illustrative purposes

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He confirmed that the plan to develop a national strategy will progress within the next nine months. "We are currently forming a steering committee that comprises relevant authorities, which aims to develop a roadmap for implementing the UAE's strategies for green growth to be completed by the end of 2013. The UAE's action plan focuses on four main pillars including policy development, data management and building local capacity, as well as the implementation of leading pilot projects in the field of green growth," the UAE minister said.

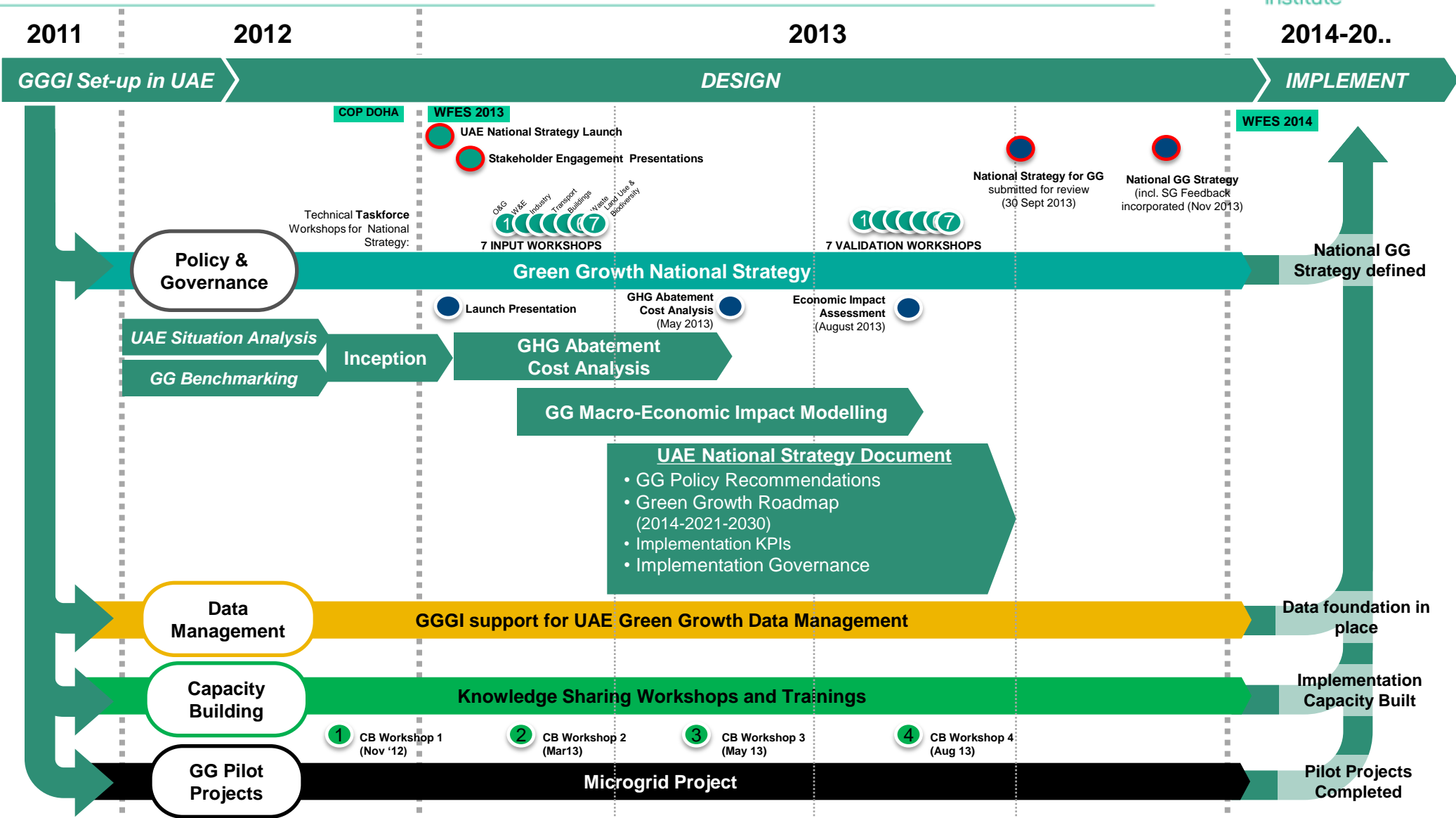
For his part, Dr. Al Jaber said: "The UAE is proud of its active involvement in supporting the activities of GGGI in the region through its regional office in Masdar City, as well as sharing experiences with international partners by hosting Abu Dhabi Sustainability Week."

"Today's announcement is the start of the UAE's efforts to create a long-term national programme for green development and demonstrates the vision of our wise leadership in achieving a better future through securing sustainable economic growth and prosperity for the people of the UAE," he added.

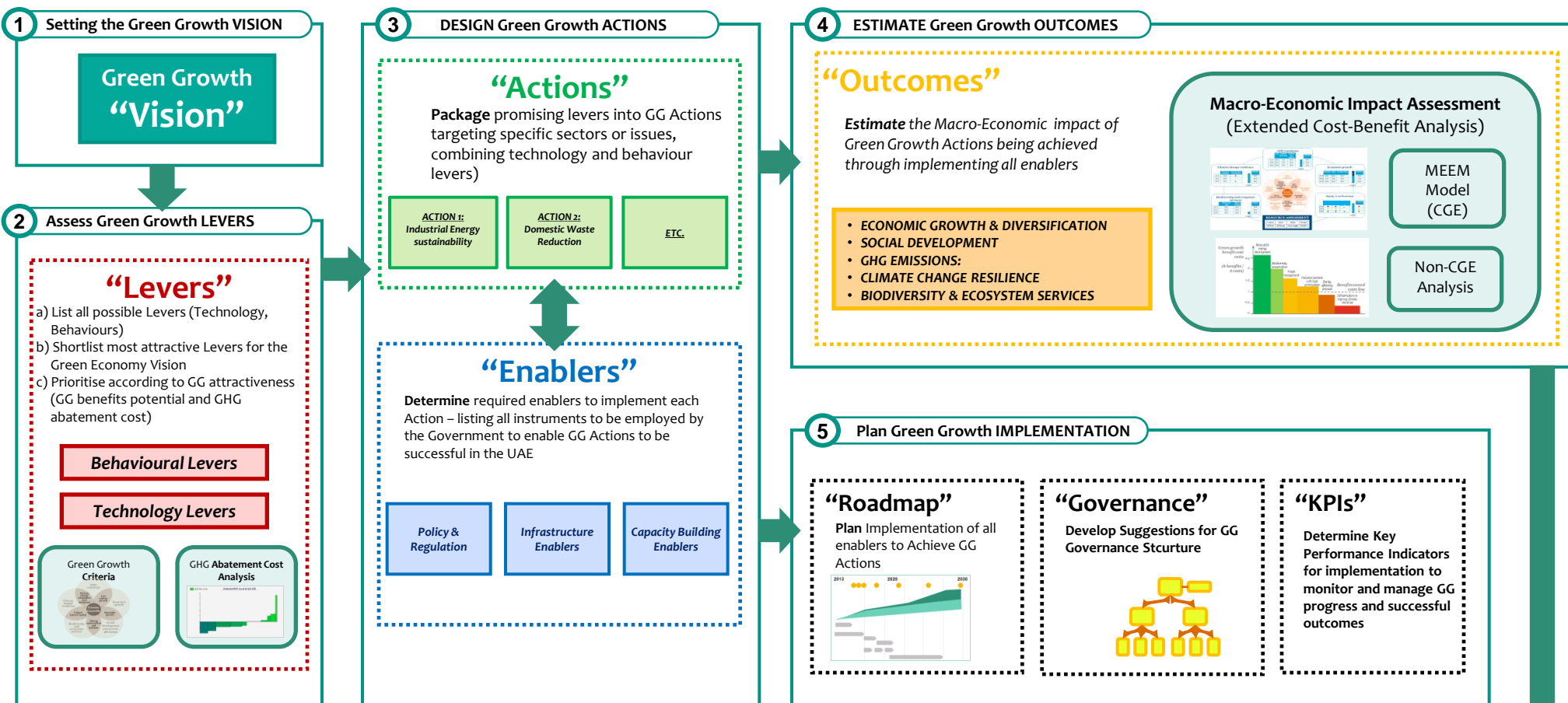
Lars Løkke Rasmussen, said: "The political determination and leadership by the United Arab Emirates government, which it has shown today to undertake a fundamental transformation of its economy through development of a national strategy for green growth is tremendously admirable."

He added: "I believe the UAE National Strategy for Green Growth has strong potential to demonstrate a compelling case for action from other hydrocarbon-based economies in the Middle

# High-Level project plan to develop UAE NSGG



# Approach to Developing NSGG for the UAE



## Green Growth Strategy

- Green Growth “Actions” with required “Enablers” (Policy & Regulation/Infrastructure/Capacity)
- Green Growth “Outcomes” listing benefits to the UAE Economy (Economic/Environmental/Social)
- GG “Roadmap” suggesting implementation Timeframe
- GG “KPIs” highlighted for monitoring successful implementation
- GG “Governance” Recommendations outlining Governance Structure, Roles and Responsibilities for Implementation

 = Models used

# MENA Capacity Building

## Promoting Green Growth in MENA region

Green Growth momentum will be strengthened across the MENA region by engaging/empowering regional stakeholders with Green Growth knowledge, technologies and best practices tailored for the regional challenges. GGGI Abu Dhabi Office is to become the Hub of green growth capacity building program.

### Project Objectives

- Deliver necessary background knowledge of Green Growth for MENA stakeholders to build relevant decision making processes at the international, regional, sub-regional, national and local levels;
- Enable stakeholders in MENA region to initiate, design, and implement green growth strategy, monitor & evaluate outcomes, and feed the experience back into further relevant policy making;
- Strengthen the stakeholder community network as a whole and those engaged in national Green Growth Plan by increasing professionalism and effectiveness;
- Enable 'trained' stakeholders to carry out similar capacity building programs among MENA's constituencies.



## Capacity Building Program Structure

- **Introduction to Green Growth**
- **Development of Green Growth Strategies & Framework**
- **Specialized Sector Programs**



# UAE Green Growth Capacity Building Program

Successful organization of its first version on 5 November

As part of the UAE Green Growth Project, the UAE Ministry of Foreign Affairs and GGGI successfully co-organized **the first version of the UAE Green Growth Capacity Building Program-‘Green Growth Knowledge Sharing Workshop’** on 5 November,

- **More than 80 high level stakeholders** from Prime Minister’s Office, Ministry of Environment & Water, Ministry of Economic Development, Department of Transportation, Road and Transportation Authority, Environmental Agency in Abu Dhabi, Urban Planning Council, ADWEA, FEWA, and DEWA, Masdar Institute, Department of Municipal Affairs from different emirates, state owned companies such as Masdar, ADNOC, and Beeah.
- The overall **feedback assessment** from participants turned out to be quite positive **scoring 3.9 out of 5.0 on average**
- The participating ministries relayed feedback as **“Those who attended the workshop agree that it was worth every minute of their time.”** The Workshop was believe to be as providing a critical momentum for the stakeholders to be on the same page in terms of awareness of Green Growth and GGGI activities.



**Green Growth Knowledge Sharing Workshop  
(Abu Dhabi, Nov. 2012)**

# UAE Green Growth Capacity Building Program

## Specialized seven sector programs to be planned in March 2013

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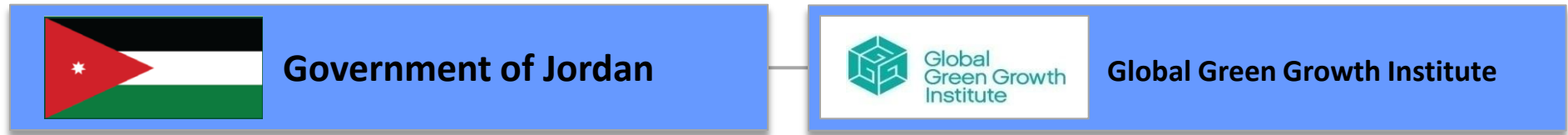
- **Seven parallel capacity building sessions** covering oil & gas, water & electricity, transport, building, landuse and agriculture, industry and waste in the UAE. A program for the 2 days of training will be developed including plenary sessions crosscutting the seven specific capacity development sector programs.
- The course is taught by sector **experts from GGGI and its expert network, UNEP Risø Center, Petrad, UNEP-SBCI, and invited guest speakers from international organisations** working with low carbon development and green growth initiatives.
- Participants will have **interactive sessions with problem solving exercises and case studies for innovative solutions for greening sectors.**

Workshop Programme Overview - Abu Dhabi, United Arab Emirates													
Time	DAY 1						Time	DAY 2					
	Oil and Gas	Water & El.	Transport	Buildings	Industry	Waste		Oil and Gas	Water & El.	Transport	Buildings	Industry	Waste
8.30-9.00	Registration and Coffee						8.30-9.00	Registration and Coffee					
9.00-9.15	Opening Ceremony						9.00-10.00	Plenary: energy efficiency and clean, renewable energy					
9.15-10.00	Plenary: Model for GG and LCD in UAE, new technologies and jobs						10.00-10.15	Coffee Break					
10.00-10.15	Coffee Break						10.15-12.00	Session 4	Session 4	Session 4	Session 4	Session 4	Session 4
10.15-12.00	Session 1	Session 1	Session 1	Session 1	Session 1	Session 1	12.00-13.00	Lunch Break					
12.00-13.00	Lunch Break						13.00-14.15	Session 5	Session 5	Session 5	Session 5	Session 5	Session 5
13.00-14.15	Session 2 Stakeholder presentations of GGINs	Session 2 Stakeholder presentations of GGINs	Session 2 Stakeholder presentations of GGINs	Session 2 Stakeholder presentations of GGINs	Session 2 Stakeholder presentations of GGINs	Session 2 Stakeholder presentations of GGINs	14.15-14.30	Coffee Break					
14.15-14.30	Coffee Break						14.30-16.00	Session 6	Session 6	Session 6	Session 6	Session 6	Session 6
14.30-16.00	Session 3	Session 3	Session 3	Session 3	Session 3	Session 3							

**Programs Sector Specialized Green Growth Knowledge Sharing Workshop**  
(Abu Dhabi, March. 2013)

# MENA Green Growth Planning

## National Green Growth Plan in Jordan (NGGP)



### Background

#### ➤ Starting situation:

- Unemployment rate more than 13% in 2012;
- Estimated 13.3% of Jordanians below UN poverty line in 2008;
- More than 95% of energy (13% of GDP) was imported in 2012;
- Green growth related efforts by Government of Jordan focus on individual sectors, lacking an overarching comprehensive policy framework and strategy.

➤ Funded by the German Federal Ministry for the Environment (BMU) through its International Climate Initiative, GGGI awaits final project approval from BMU for National Green Growth Plan project

➤ Jordanian lead ministry: Ministry for the Environment

➤ Sectors to be covered: Energy, Transport, Water, Waste, Agriculture & Tourism

➤ Project Budget: Euro 1.06m

➤ Project Duration: 20 months

## Project Objectives

### Project Objectives

#### Overriding project goal

A comprehensive set of green growth policies is in place and the capacity of Jordan's public sector institutions is increased to the extent that they are able to develop and implement a comprehensive set of green growth policies.

- A clear vision towards green growth in Jordan is in place, and a comprehensive, cross- sector policy framework to support implementation has been developed.
- Institutional and governance structures are in place within Government that provide strategic coordination and leadership on green growth, and provide long term continuity.
- Capability is enhanced in key Ministries around green growth and climate change mitigation.
- Policies are in place that aim to increase Private-Public Partnerships (PPPs) – Renewable energy and energy efficiency have the potential to become significant markets for products and services in the Jordanian economy.





# What will the green growth project look like?

Main program activities	Objective
<b>Developing the National Green Growth Plan</b>  (1) Situation Analysis (2) Developing a Green Growth Vision (3) Baseline scenario and green growth policy options (4) Green growth programs – Prioritizing policy options (5) National Green Growth Plan with selected green growth programs and implementation roadmap	A comprehensive set of green growth policies is in place and the capacity of Jordan's public sector institutions is increased.
<b>Capacity Building</b>  (1) Capacity assessment (2) Capacity building program (3) Public awareness initiatives	Capacity of Jordan's public sector institutions is increased to the extent that they are able to develop and implement a comprehensive set of green growth policies.

## Next steps towards a Jordanian Green Growth Program

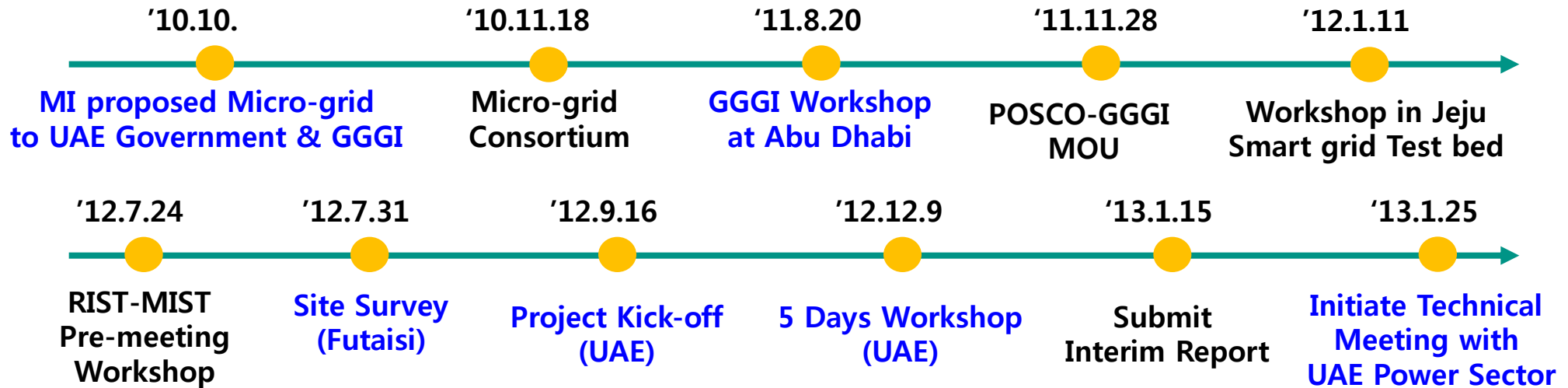
- Project approval by the German Ministry for Environment
- Written agreement between the governments of Jordan and Germany
- Setting up project steering committee

# Renewable Microgrids Project

# UAE Al Futaisi Island Micro Grid PPP Project

## Project history

- Masdar Institute of Science and Technology (MI) in the UAE proposed a renewable based micro grid idea for developing countries in MENA.
- The project based on the idea by MI has been supervised by Global Green Growth Institute (GGGI).
- MI and Research Institute of Industrial Science & Technology (RIST) affiliated with Korea's POSCO group members of GGGI's partnership network have become industrial partners.



RIST-MIST Pre-meeting Workshop

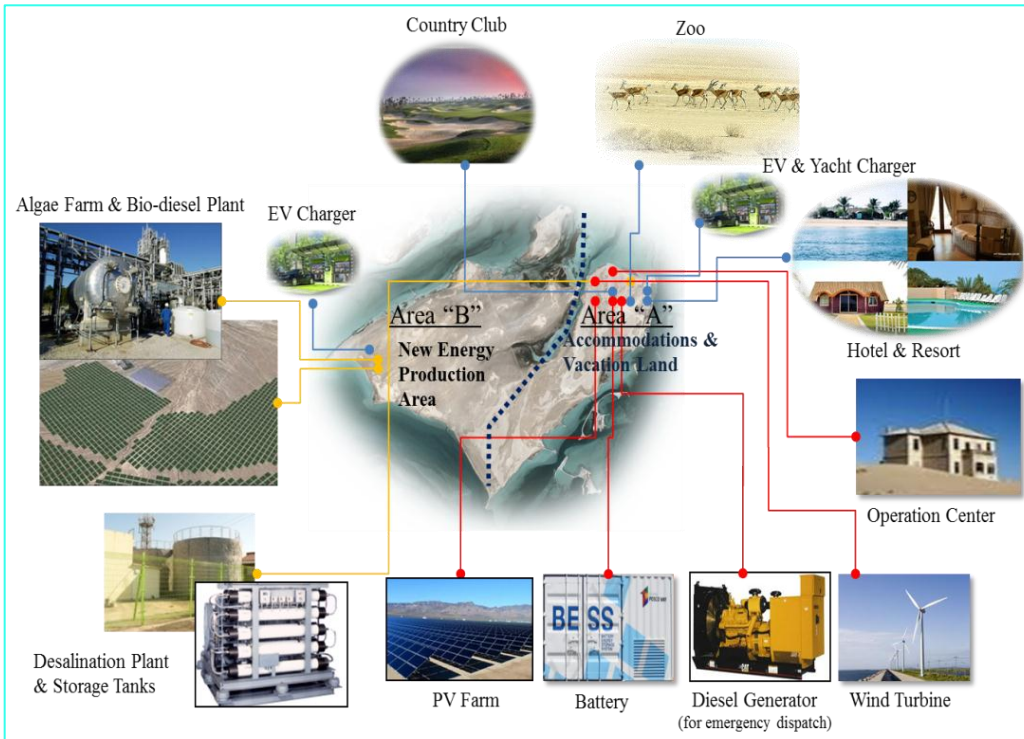


Project Kick-off (UAE)

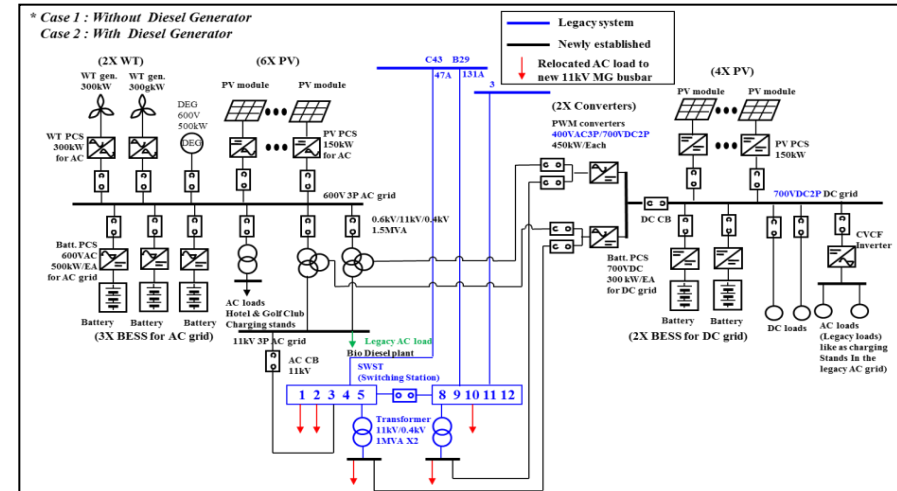


5 Days Workshop (UAE)

## Conceptual Design



## Grid System Configuration



## DER and Storage Coverage

Item	rating
Photovoltaic generator	1,750 [kW <sub>MAX</sub> ], 350[kW <sub>AVG</sub> ]
Wind turbine generator	600 [kW <sub>MAX</sub> ], 82[kW <sub>AVG</sub> ]
Diesel generator	500[kW <sub>MAX</sub> ], 0 [kWh/day]
BESS	8,000[kWh], 2,350[kW]
Desalination plant	64[ton/h] <sub>MAX</sub> , 320[kW] <sub>MAX</sub>
Water storage tank	2,000 [ton]