



climate
everyone's
business

Kota Punya Cerita: Pengalaman Kota Bogor & Balikpapan

Tantangan dan Capaian Program Urban LEDS
2013 – 2016

I.C.L.E.I
Local
Governments
for Sustainability



URBAN LEDS

URBAN LOW EMISSION DEVELOPMENT STRATEGIES

Delivering low-emission development in 8 model cities in 4 emerging economies



Urban Low Emission Development Strategy:

A **pathway** towards a low-emission, green and inclusive urban economy through **integration** into city development plans and processes Using **sustainable energy** (energy savings, energy efficiency, renewable energy) and exploring energy storage are core elements in this transition strategy and process.

**Growth and
Developed since 533
years ago**



800.000 COMMUTERS

- Weekdays -

200.000

TOURISTS

- Weekend -





800
MOTORCYCLES

NEW
VEHICLES
EVERY
WEEK



200
CARS

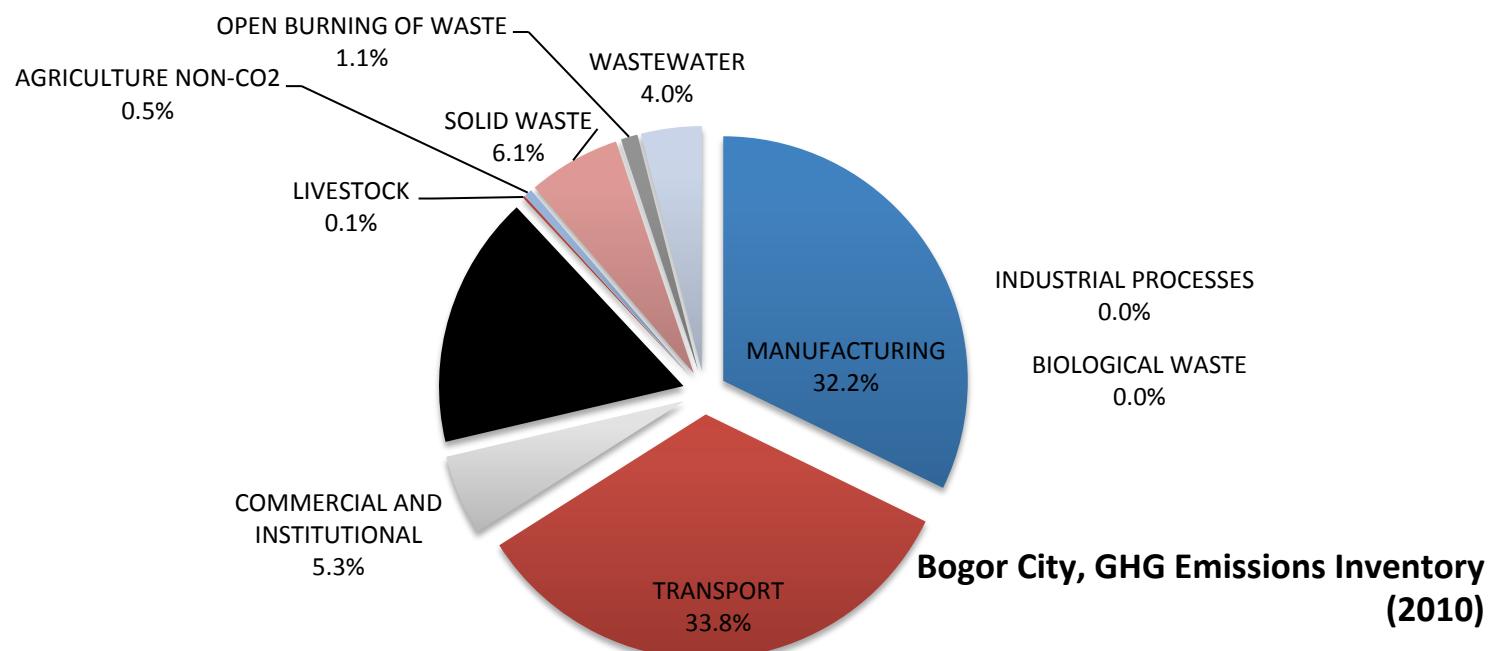
TRANSPORTATION'S PROBLEMS

IN BOGOR CITY



Bogor City GHG Inventory

- Developed with IPCC 2006 Tier 1, Combine with ICLEI HEAT+
- Base line 2010





"To shift Bogor City towards a low carbon development trajectory, the city will reduce GHG emissions by developing a set of environmental and low emission city regulations and policies. The city priorities are: to improve the quality of spatial planning and implementation; promote mass transportation, pedestrians and cyclists; and encourage urban development responsiveness to disaster risk and climate change impacts."

Bima Arya Sugiarto Mayor of Bogor

www.kotabogor.go.id

Model City Bogor

Indonesia



Vision

Realize a **clean** and **environmentally sound** city based on developing a **green economy** with an emphasis on services that optimize the use of existing **natural resources**.

Commitments

Bogor is committed to the following emission reduction target:

- 29% GHG emission reduction by 2020 (baseline year 2010) (community target)

Milestones

09/2013: Bogor participates in HEAT+ training for GHG inventory development
01/2014: Bogor participates in GPC training
11/2014: The City enacts the 5-Year Development Plan
09/2014: Bogor Participates in the 2014-2015 Earth Hour City Challenge
09/2014: Bogor releases its GHG inventory
2014: The City Strategic Environmental Assessment Document is finalized
12/2015: Bogor announces its emissions reduction commitment of 29% by 2020 at the COP21 in Paris (baseline year 2010)
02/2016: Urban-LEDS expert begins to advise Bogor on Bus Rapid Transit roadmap
2016: LED Action Plan has been finalized and will be approved by the City Council in the course of 2016.

Strategy

Bogor's **5-Year Development Plan (RPJMD)** adopted in November 2014 recognizes climate change mitigation, adaptation and disaster risk reduction as strategic priorities for the period 2014-2019.

The RPJMD maps emission reduction efforts in the following priority sectors:

- Spatial planning
- Air pollution control
- Public transportation
- Pedestrianization
- Green building standardization
- Integrated waste management
- Energy efficient streetlights retrofits

Actions enabled in Bogor by the Urban-LEDS project

Methane capture from communal sanitation plant

- The communal sanitation plant of Bogor's residential area was equipped with a bio-digester to capture emissions of methane from domestic wastewater and converted it into a source of renewable energy for domestic use in cooking.
- In 2014, the system served 47 locations.

Bogor's Walkability Campaign

- Bogor has committed to building 22.5 kilometers of pedestrian and cycle paths by 2020.
- The first phase of the project has been concluded.
- The newly built paths are equipped with tag tiles, bicycle lanes, green areas and are completely integrated with public transport stations and public places of interest.
- A park-and-ride system is also planned.

Green Building Concept

- Bogor has enacted a Green Building Regulation and Coding.
- Funds are allocated in the annual budget to build the new energy-efficient House of Representative Building.
- Several more heritage buildings have been identified for retrofitting in the next 5 years.

Smart street-lighting

- In November 2014, Mayor Bima inaugurated a program of streetlight conversion to light-emitting diode (LED) lamps by installing the first lamp himself.



Mayor Bima installs the first light-emitting diode lamp in Bogor

Sustainable transport budget

- The city council decision of November 2014 allocated about 12 million USD to improve sustainable low emission transport in the city, including the revitalization of the Bus Rapid Transit (BRT) system and switching part of the city's microbuses to cleaner fuels.

Bus Rapid Transit (BRT) System

- In 2016 one new corridor will be added to the City's BRT system, "The Trans Pakuan", which currently stretches over 3 corridors and 14km.

Microbus fuel switch

- 1000 microbuses will run on liquified natural gas and 50 microbuses will run on electricity by 2019
- To implement this, the city will provide converter kits or devices.
- In 2016: 200 buses have already been retrofit to liquified natural gas.
- Benefits of this action include the reduction of emissions from transport and the improvement of air quality.

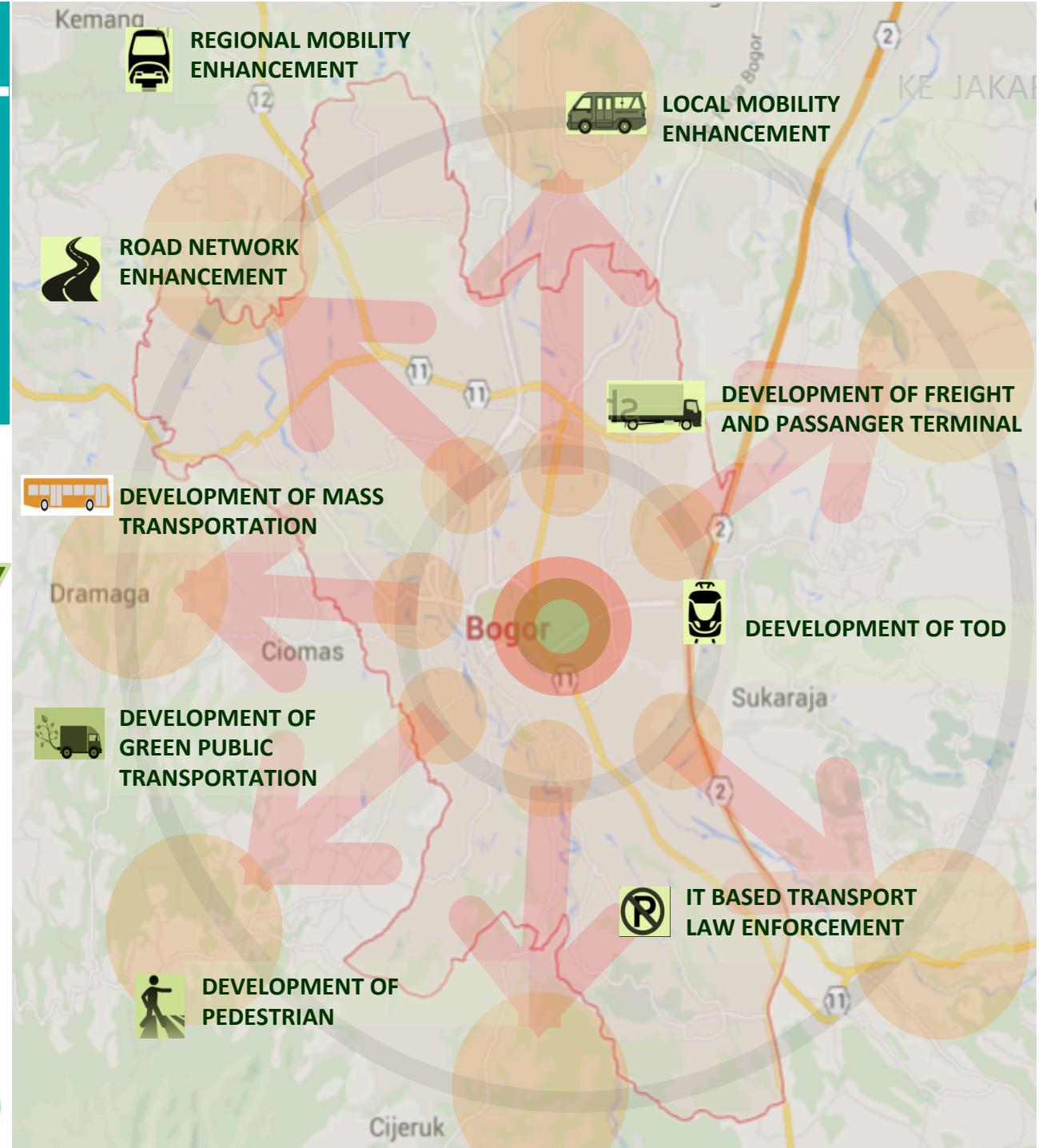
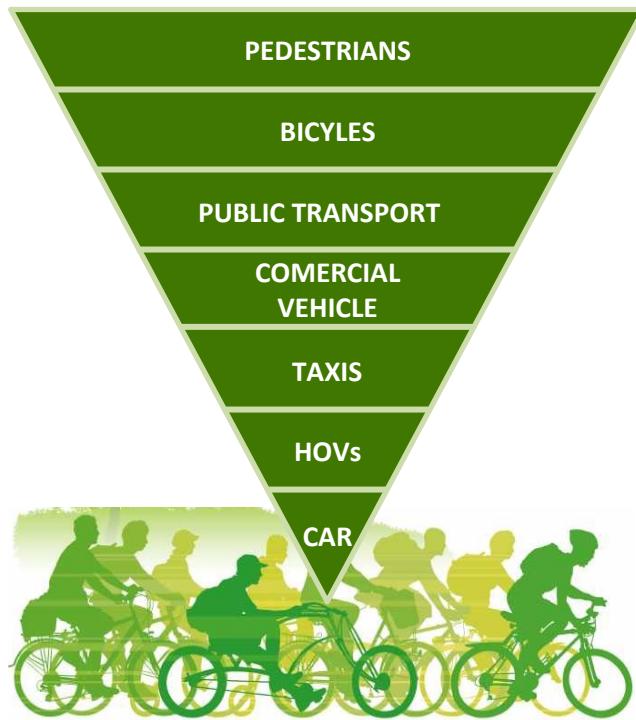
Used-cooking oil program

- Used cooking oil from the food industry is converted to biodiesel and used by the City to operate its Bus Rapid Transit, the Trans Pakuan.
- With the support of Urban-LEDS Bogor has been exploring converting used cooking oil as heating fuel in commercial buildings. The mitigation potential of this action is 278 tCO₂/year or cumulatively 1,529 tCO₂ in five years. The project will start in the course of April 2016.

URBAN DEVELOPMENT AND MOBILITY ENHANCEMENT STRATEGY:

- Reducing traffic load in city center
- Developing public transportation

POLICY OF CITY'S MOBILITY DEVELOPMENT



Walk-able City





LOW EMISSION ENERGY: ENERGY ALTERNATIVE

CNG ANGKOT

Installation of CNG Converter Kit to existing *angkot* & development the gas station



Current Status : 50 angkot

Target up to 1000 *angkot* in 2020.

Gas Station available at PGN Office Bogor, will then be built at the North & South Bogor Area.

Electric ANGKOT

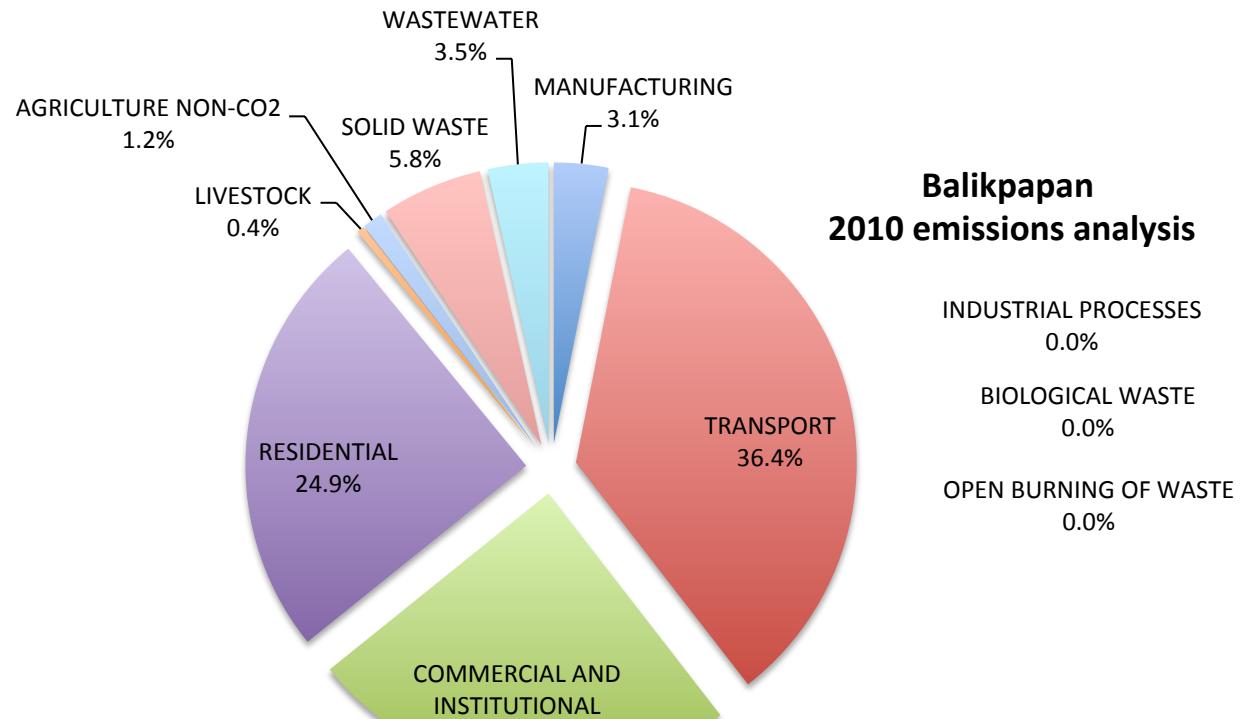
Developing grid as the base for future public transport. Prototype Is developed in cooperation with LIPI (Indonesian Institues of Sciences)



Current Status	: 1 prototype (FS)
Target	: Feasibility Study

Balikpapan City GHG Inventory

- Developed with IPCC 2006 Tier 1, Combine with ICLEI HEAT+
- Base line 2010





"Balikpapan City is very optimistic regarding the achievement of its emission reduction target by 2020 as a contribution to the national emission reduction target to reduce emissions by 25.82%. We must and will make it. The ICLEI GreenClimateCities program will help us to get there."

Rizal Effendi
Mayor of Balikpapan

www.balikpapan.go.id

Model City **Balikpapan** Indonesia



Vision

Making Balikpapan a **livable** and **environmentally sound** city with a **green economy**.

Commitments

The Low Emission Development Action Plan includes the following GHG emissions reduction target:

- 25.82% reduction by 2020 (baseline year 2010) (community target)

Milestones

2013: HEAT+ training on GHG inventory development
09/2014: Earth Hour City Challenge Participant
09/2014: Balikpapan releases its GHG inventory and identifies the transport sector as the highest emitting sector as well as huge carbon sink potential from the city forest and open green spaces.
04/2016: Balikpapan's Low Emission Development Strategy, Action Plan and Target are embedded in the city's 5-Year Development Plan (RPJMD) which was finalized and sent to the City Council for approval in April 2016.
The RPJMD allocates 30,000 USD of the City Budget to the implementation of the LED Strategy

Strategy

The **City 5-Year Development Plan**, which includes a **Low Emission Development Strategy** has been finalized and submitted for a Council approval in April 2016.

The Action Plan includes actions with the total mitigation potential of 1'133'904 tCO₂e by 2020 (a reduction of 25.82%) in the following priority sectors:

- Energy (20%)
- Transport (10%)
- Waste (71%)

Actions enabled in Balikpapan by the Urban-LEDS project

First GHG inventory and identifying LEDS activities

- Balikpapan finalized its first community GHG emissions inventory with the support of Urban-LEDS and the guidance of an expert recruited through the Pool of Experts for direct technical assistance.

Carbon sinks

- The protection and expansion of protected forest area in Balikpapan city will tap into the significant potential of local carbon sequestration from the city's forest and open green spaces. In addition, the City supports the importance of agro-forestry, offering environmental and forestry education in two schools.

Energy efficient lighting

- Energy-efficient lighting is a primary LEDS focus in Balikpapan, including:
 - Scaling-up energy efficient street lighting to main and secondary roads
 - Retrofitting facilities, starting with the retrofit of government and public buildings.

Waste-to-energy: low carbon waste management

- Detailed engineering feasibility studies were developed to equip the Pandansari Market and Marga Sari waste treatment facilities with carbon capture and storage systems.
- Budget has been allocated for this action in the city budget for 2016. The regulations to implement this project will be enacted in June 2016.

Corporate Social Responsibility

- The Corporate Social Responsibility (CSR) Forum is a group of companies in Balikpapan City that have committed to dedicate part of their budget to support social and environmental issues in the city, coordinated directly by the Government of Balikpapan.
- Funds have already been allocated through the CSR Forum to the Manggar Waste Management Facility to develop a methane capture pipeline. The facility will electrify 40 households.

Barriers

- Lack of incentives
- Lack of integration
- Institutional weaknesses and differences
- Lack of capacity

Lack of financial incentives

Lack of political/
co-benefit incentives

Inadequate budget support

Poor access to finance (esp. international)

Potential loss of revenue

Misalignment with subnational planning priorities

Unclear co-benefits

Vested interests

Institutional bias

FORMULIR PENGAJUAN PINJAMAN

Kepada Yth,
Ketua Koperasi
Di tempat

Bantuan pengajuan pinjaman ini kami mengajukan kepada Koperasi Bank Sampah Malang (BSM) dengan keterangan sebagai berikut:

No Rekening : M-227 (IBU)
Nama Kelompok : "Sukses Berkarya"
Alamat Kelompok : Jalan. Arismunandar RW. 06
Telp : 082143537362

Dengan uang pinjaman Rp 1.000.000,- Cicilan yang dipotong langsung melalui rekening tabungan kelompok kami sebesar Rp 100.000,- tiap bulan selama 10x yang ditanggung renteng oleh pengurus dan anggota.

Kami sebagai pengurus dan anggota bertanggungjawab penuh terhadap pengajuan dan pembayaran cicilan yang dibayarkan ke Koperasi BSM dengan diketahui oleh RT dan RW setempat. Apabila diantara hari kelompok kami tidak bisa membayar angsuran karena rekening tidak cukup, maka BSM berhak meminta cicilan kepada pengurus sebagai wakil dari kelompok/unit BSM. Jika kami mengingkari untuk tidak membayar cicilan, kami tidak berkeberatan dituntut umum yang 5/25/16 dapan data pengurus dan anggota kelompok/Unit BSM yang bertempat terlampir dalam permohonan ini.

FORMULIR PENGAJUAN PINJAMAN

Kepada Yth,
Ketua Koperasi
Di tempat

Bantuan pengajuan pinjaman ini kami mengajukan kepada Koperasi Bank Sampah Malang (BSM) dengan keterangan sebagai berikut:

No Rekening : M-206 (IBU)
Nama Kelompok : BAS

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- Lack of effective coordination and regulatory mechanisms
- “Institutional congestion”

Institutional weaknesses



- Culture and perspectives
- Focus and priorities
- Political ideology
- “Superiority-inferiority complex”

Institutional differences





Lack of Capacity

- Skills
- Knowledge of feasibility
- Awareness raising need
- Technical training need
- Lack and availability of data

Breaking through to the other side

Engaging political leader,
second line and third line
decision making official

Harmonize policy and
action

Bottom up engagement
and synergy

Focus on either ongoing
or already planned
activities

Form alliances and
partnership

Effective, efficient and
equitable

Comprehensive and solid
planning

Powerful MRV system

Capacity Building