WRI INDONESIA

Jakarta, October 9th 2015

ANDHYTA F. UTAMI
Research Analyst

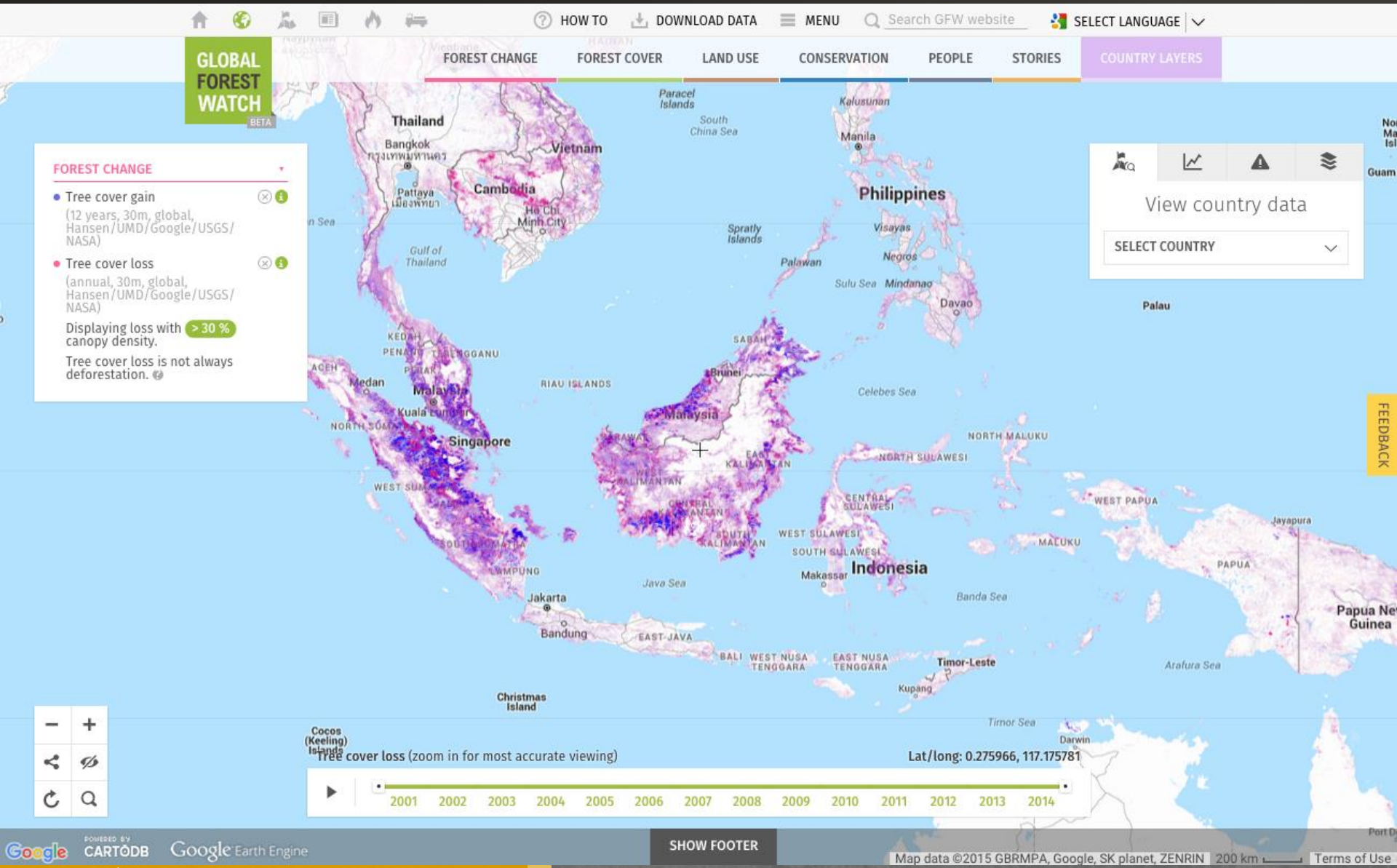
RENEWABLE ENERGY ACCESS MARKET MAP

Leveraging Geospatial Analysis in the Renewable Energy Data and Information Infrastructure Development

WORLD RESOURCES INSTITUTE

TRANSFORMING DATA AND INFORMATION INTO ACTION

GLOBAL FOREST WATCH



CAIT CLIMATE DATA EXPLORER

CAIT Climate Data Explorer

▸ Paris Contributions Map

OPEN CLIMATE NETWORK · WORLD RESOURCES INSTITUTE · Menu

Dashboard | Map | Detailed View | View Pre-2020 Map

Search for a country...

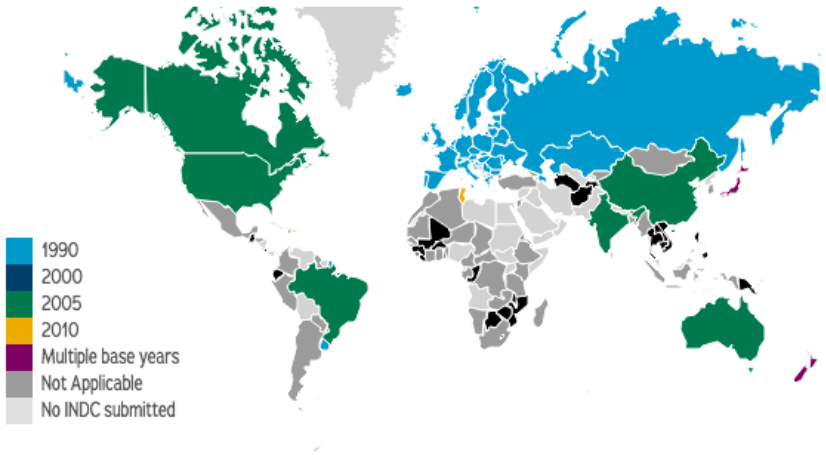
INDCs Submitted: **120**

Global emissions covered by countries that submitted an INDC

85.4%

Base year(s)/period

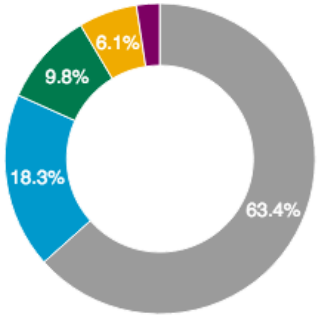
Expand Map



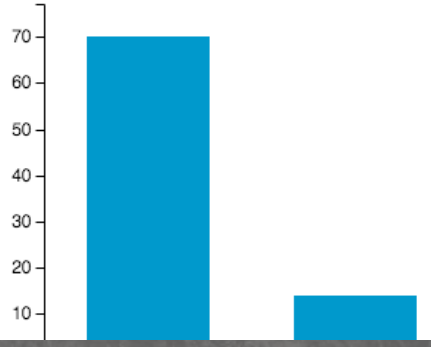
Latest Submissions:

120. Afghanistan	October 06, 2015	Analysis in progress	
119. Argentina	October 01, 2015		
118. Mozambique	October 01, 2015	Analysis in progress	
117. Ecuador	October 01, 2015	Analysis in progress	
116. India	October 01, 2015	Read WRI Blog	
115. Belize	October 01, 2015	Analysis in progress	
114. Paraguay	October 01, 2015		
113. Botswana	October 01, 2015	Analysis in progress	
112. Sierra Leone	October 01, 2015	Analysis in progress	
111. Honduras	October 01, 2015		

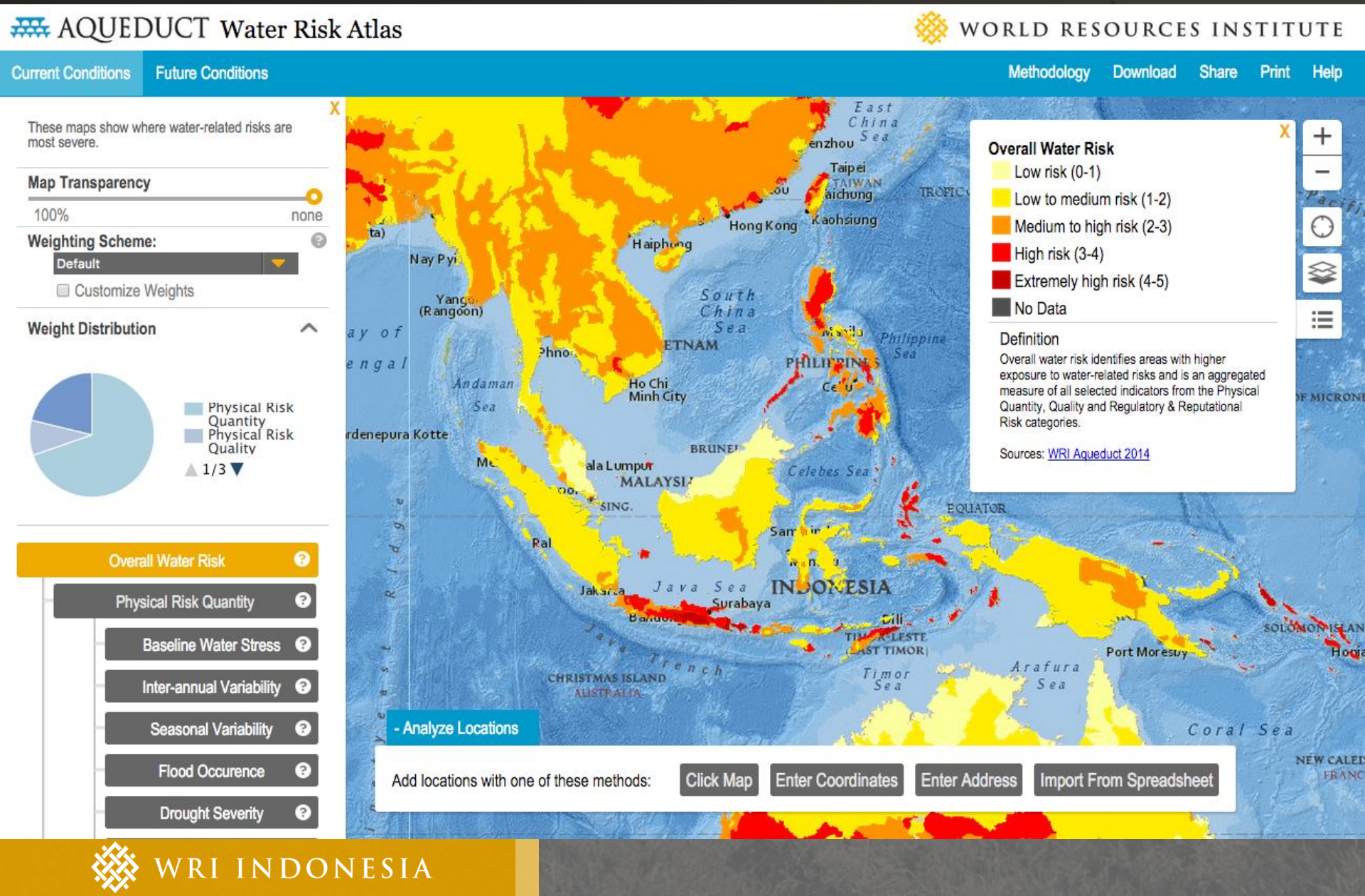
Base Year(s)/Period



Coverage of Mitigation and Adaptation



AQUDEUCT



WRI INDONESIA

WHY MAPS FOR RENEWABLE ENERGY?

LOCATION, LOCATION, LOCATION

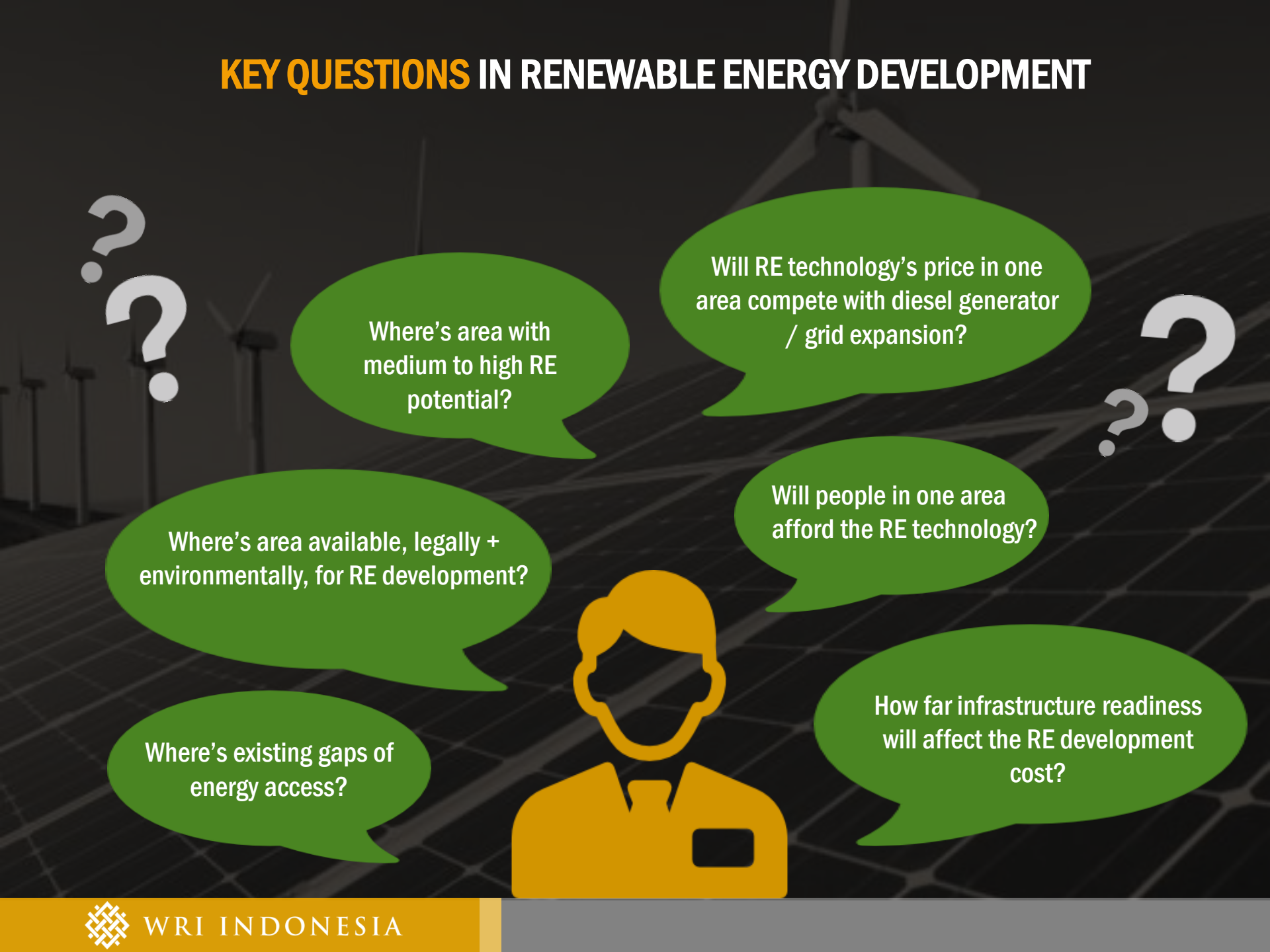
Different from traditional energy resources that could be transported, renewable energy technologies should be deployed where the demands are.

SPATIAL INFO FOR LONG TERM VIABILITY

Need for weather, social, as well as landscape monitoring to ensure long term viability of deployment for renewable energy technologies.

"Geographic mapping facilities are important to support initial feasibility studies and for long-term monitoring and evaluation."

KEY QUESTIONS IN RENEWABLE ENERGY DEVELOPMENT



IDENTIFIED CHALLENGES

Policy

- Complicated exploration permits
- Land tenure issue
- Limited share on foreign investment availability

Technology

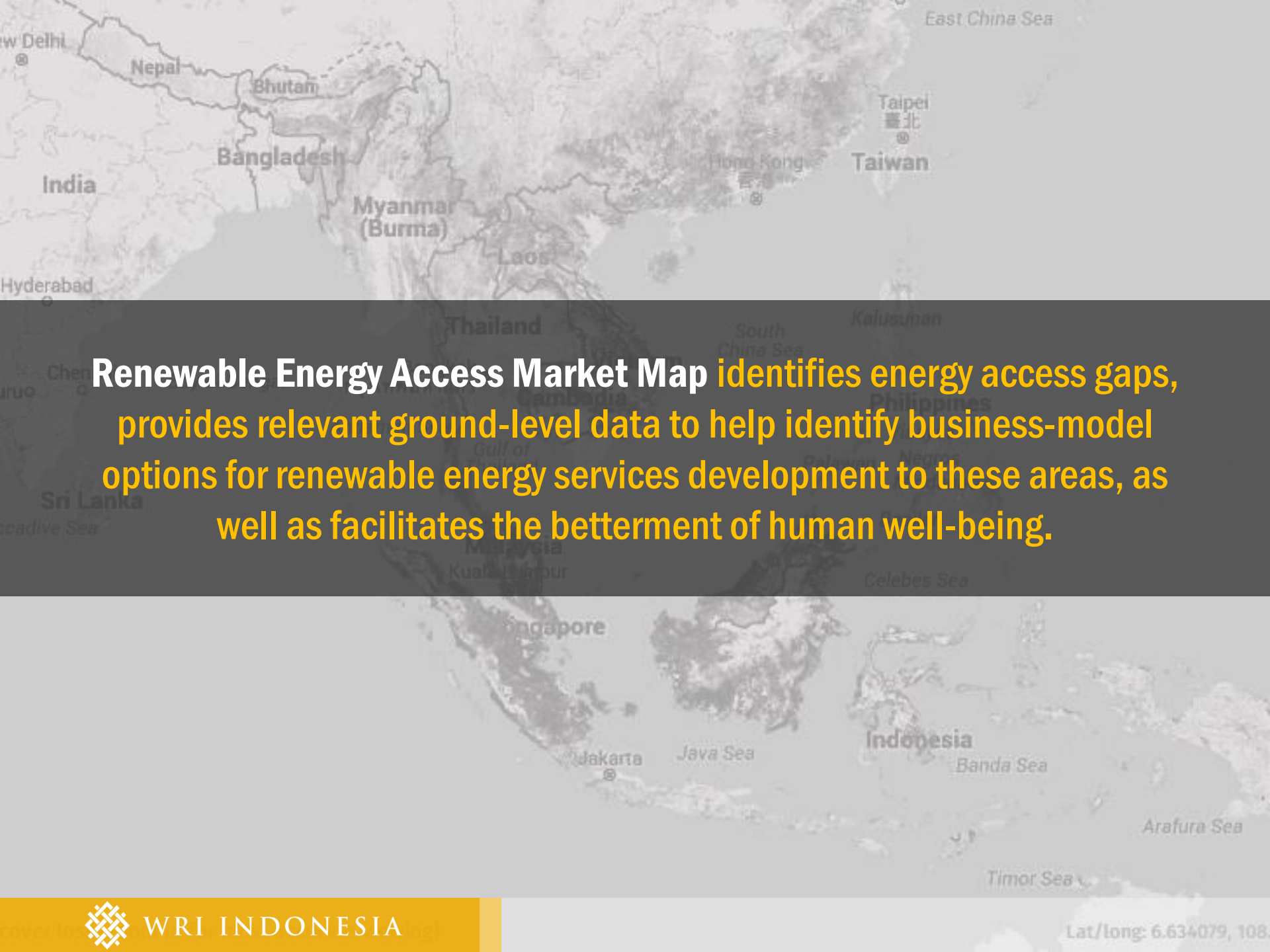
- Limited technology advancement
- Limited number of networks off-grid
- Poor management on RE data

Capacity Development

- Poor maintenance and management of RE technologies
- Lack of capacity in risk calculation associated with RE investments
- Lack of capacity in RE investments viability assessment

Funding

- High risks in RE investments
- Insufficient assessment on long-term RE technologies deployment viability



Renewable Energy Access Market Map identifies energy access gaps, provides relevant ground-level data to help identify business-model options for renewable energy services development to these areas, as well as facilitates the betterment of human well-being.

RENEWABLE ENERGY ACCESS MARKET MAP

DATA

National institutions

Regional institutions

Civil Societies

Public

Easy-to-understand data visualization

Interactive platform

Analysis capability for decision making

USERS

Governments

Business

Civil societies

Communities

transforming **information** into **transparent & informed decision**

3 CORE FUNCTIONALITIES

Of Renewable Energy Access Market Map

Identification of energy-access gap & socio-economic data

Identification of renewable energy hotspots

Identification of renewable energy's market competitiveness

IDENTIFICATION OF ENERGY-ACCESS GAP & SOCIO-ECONOMIC DATA

Questions Answered

Where's existing gap of energy access?

Will people in one area afford the RE technology?

Data Used

Current grid expansion

Electrification rate

Population

Economy growth

(To be identified as part of the project)

IDENTIFICATION OF RENEWABLE ENERGY HOTSPOTS

Questions Answered

Where's area with high RE potential?

Where's area available, legally + environmentally, for RE development?

Data Used

RE resources potentials

Legal protection

Forest extent

Natural disaster vulnerability

(To be identified as part of the project)

IDENTIFICATION OF RENEWABLE ENERGY'S MARKET COMPETITIVENESS

Questions Answered

Will RE technology's price in one area compete with diesel generator / grid expansion?

How far infrastructure readiness will affect the RE development cost?

Data Used

RE technologies development cost

Grid expansion / diesel generator cost

Raw material price

Infrastructure readiness

(To be identified as part of the project)

RENEWABLE ENERGY ACCESS MARKET MAP

WIREFRAMES

WRI INDONESIA

New Tab

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RENEWABLE ENERGY ACCESS MARKET MAP

HOME ABOUT CONTACTS

DEMANDS AFFORDABILITY POTENTIALS LEGAL & ENVIRONMENTAL MARKET COMPETITIVENESS

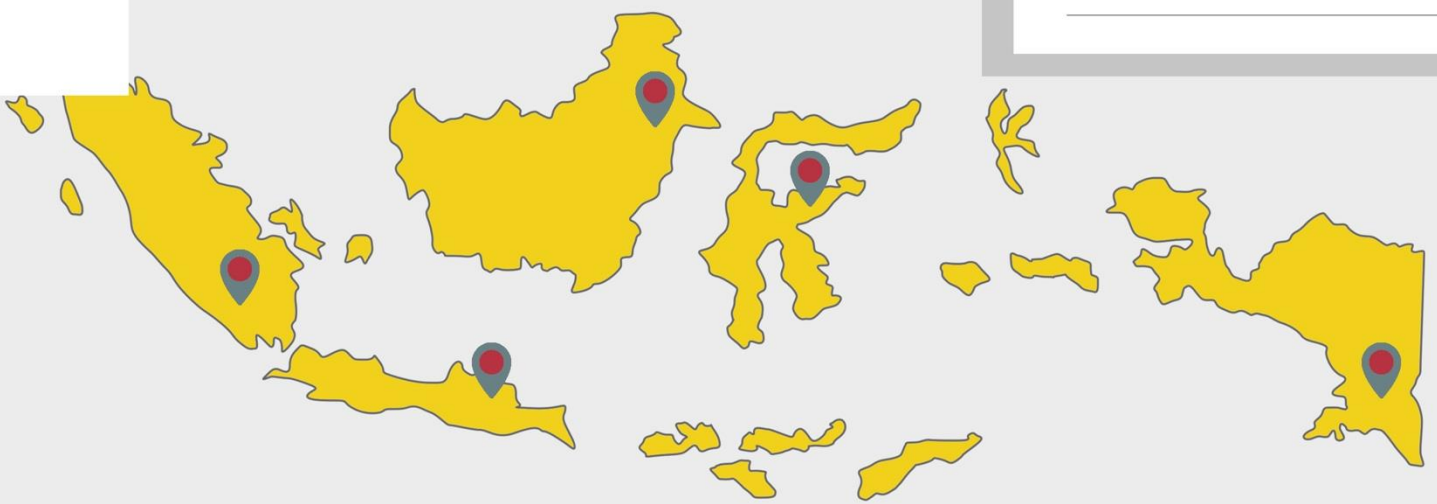
Electrification rate
Grid Distribution
Population
Economy growth

LEGEND

SUB-NATIONAL LAYERS | ANALYZE | BASEMAP

SELECT PROVINCE/DISTRICT/VILLAGE

INFORMATION SUMMARY



2000 2001 2002 2003 2004 2005 2006 2007 2008 2009

New Tab

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RENEWABLE ENERGY ACCESS MARKET MAP

HOME ABOUT CONTACTS

DEMANDS AFFORDABILITY POTENTIALS LEGAL & ENVIRONMENTAL MARKET COMPETITIVENESS

Economy growth

Asset ownership

Layer 3

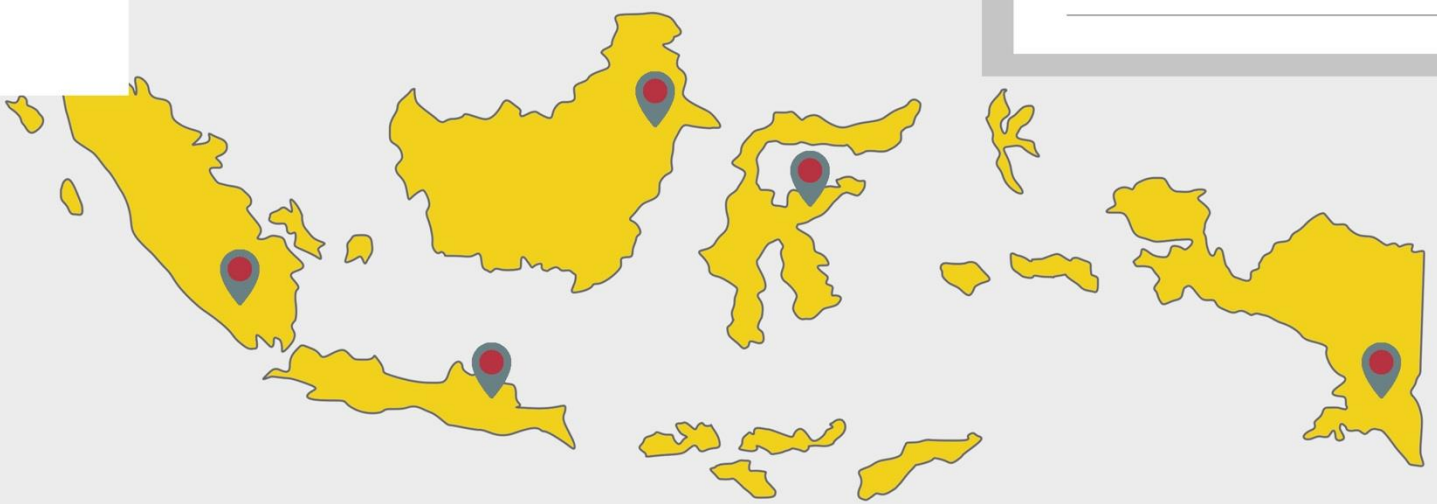
Layer 4

LEGEND

SUB-NATIONAL LAYERS | ANALYZE | BASEMAP

SELECT PROVINCE/DISTRICT/VILLAGE

INFORMATION SUMMARY



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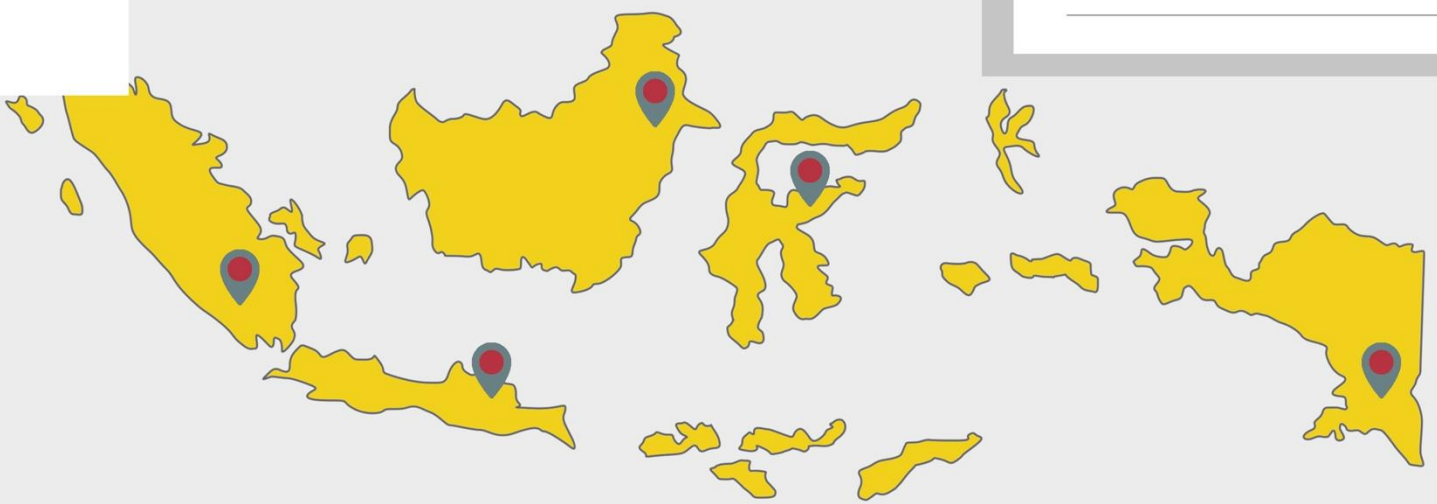
Solar energy
Wind energy
Geothermal energy
Ocean energy

SUB-NATIONAL LAYERS | ANALYZE | BASEMAP

SELECT PROVINCE/DISTRICT/VILLAGE

INFORMATION SUMMARY

LEGEND



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LEGEND

Forest moratorium

Protected area

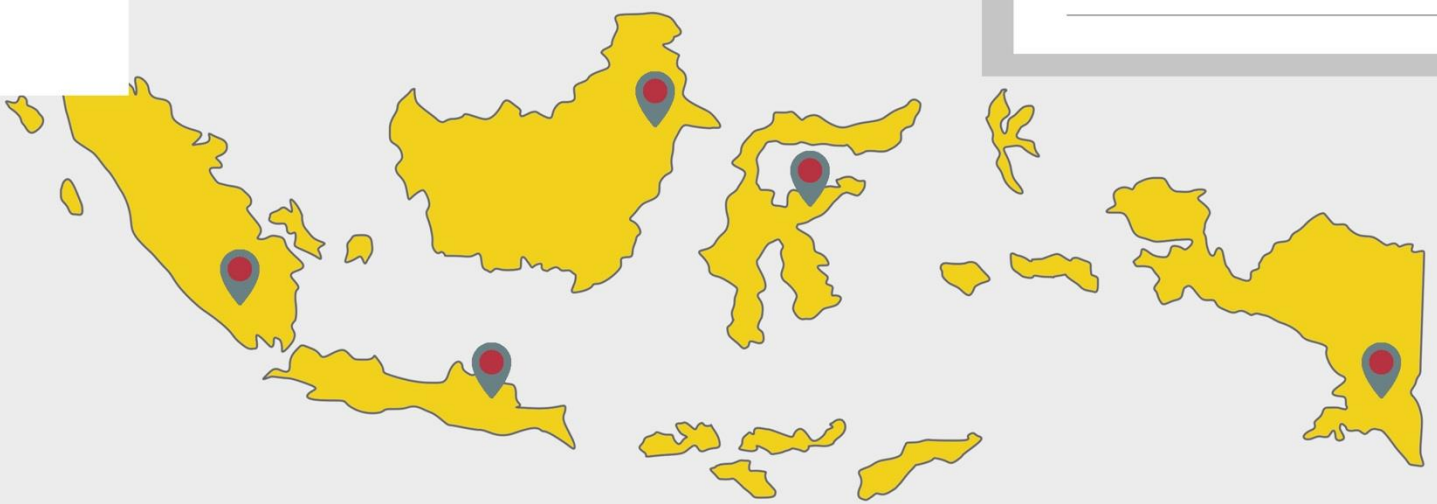
Hazards risk

Layer 4

SUB-NA... LA... ...ZE BASEMAP

S... ...CT/VILLAGE

...SUMMARY



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RE technology cost

Grid expansion cost

Diesel generator cost

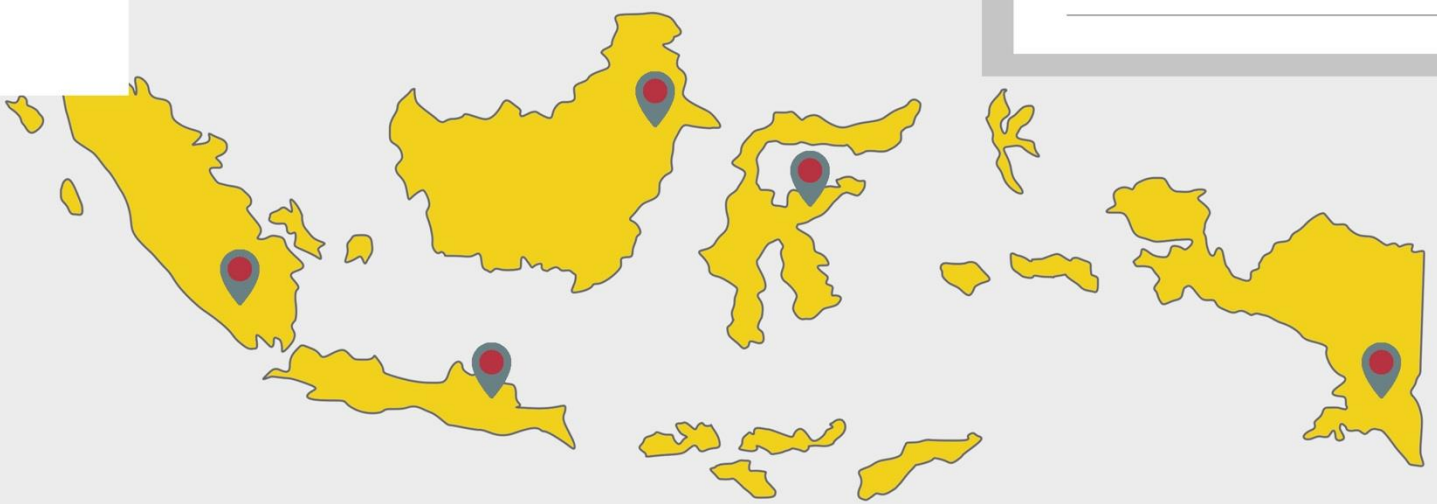
Infrastructure

LEGEND

SUB-NATIONAL LAYERS | ANALYZE

SELECT PROVINCE/DISTRICT/VILL

INFORMATION SUMM



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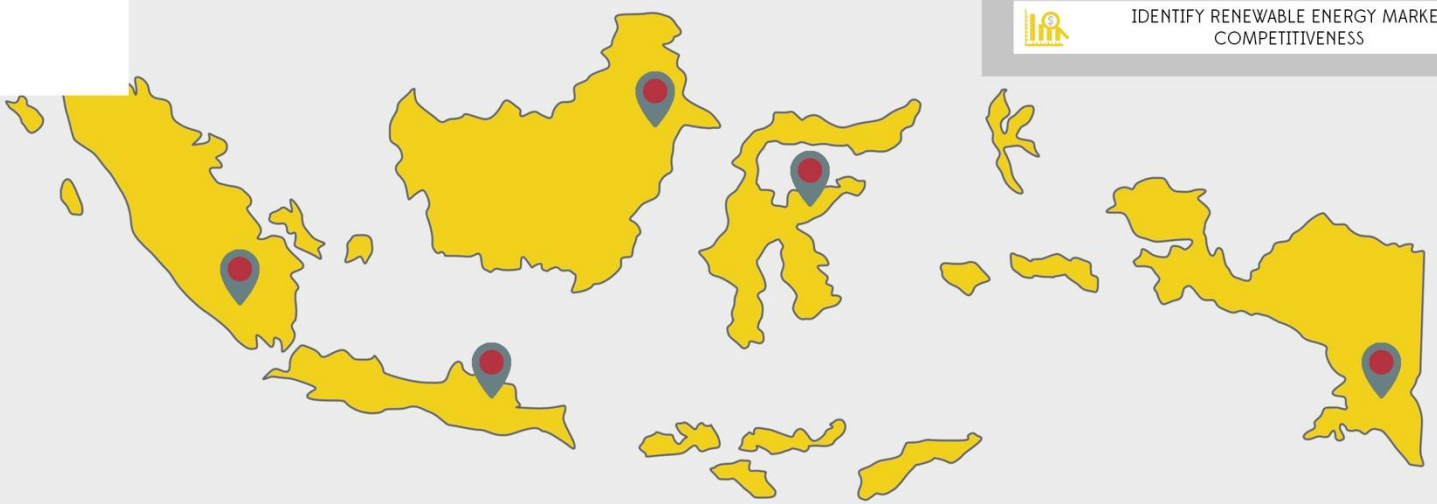
LEGEND

SUB-NATIONAL LAYERS | ANALYZE | BASEMAP

IDENTIFY ENERGY-ACCESS GAP & SOCIO-ECONOMIC DATA

IDENTIFY RENEWABLE ENERGY HOTSPOTS

IDENTIFY RENEWABLE ENERGY MARKET COMPETITIVENESS



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GLOBAL FOREST WATCH

PLATFORM DEMO

TIMELINE

Phase 1
(Oct 2015 – March 2016)

- Staging version of REAM Map Platform
- Provincial level database on 1 pilot province
- Policy recommendation

Phase 2
(April – September 2016)

- Beta version of the platform with online analysis tool
- Documentation of data analysis methodology
- Capacity building for stakeholders through FGDs

Phase 3
(Oct 2016 – February 2017)

- Identified strategies to scaling up
- Enhanced beta version of the platform based on inputs and new data