NSDI AS PLATFORM FOR MULTI-SECTOR APPROACH FOR NATIONAL DEVELOPMENT

CASE STUDY: INDONESIA 2014

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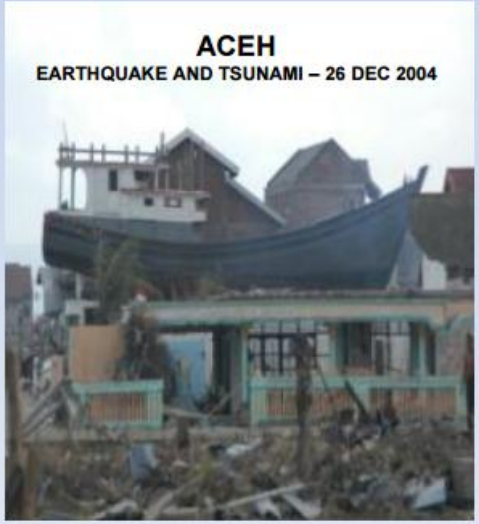
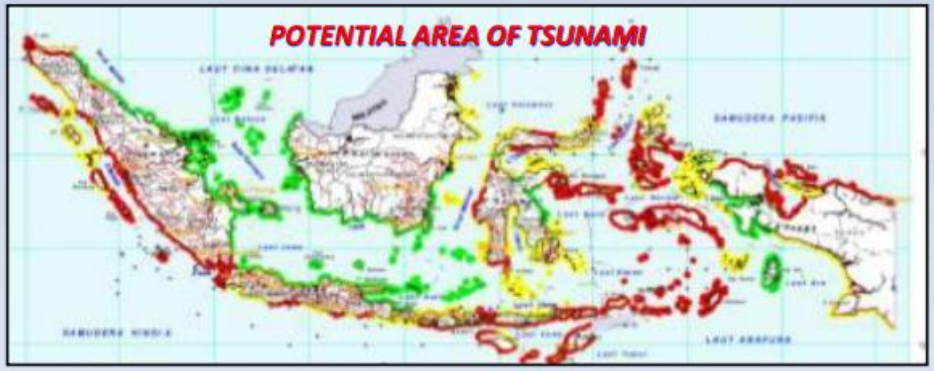
Side Event on The Role of Geospatial Information in Measuring and Monitoring the Sustainable Development Goals: Disaster Risk Reduction, Sustainable Development, and Global Urbanization
Session of the Open Working Group on Sustainable Development Goals
New York April 2015

INDONESIAN COUNTRY

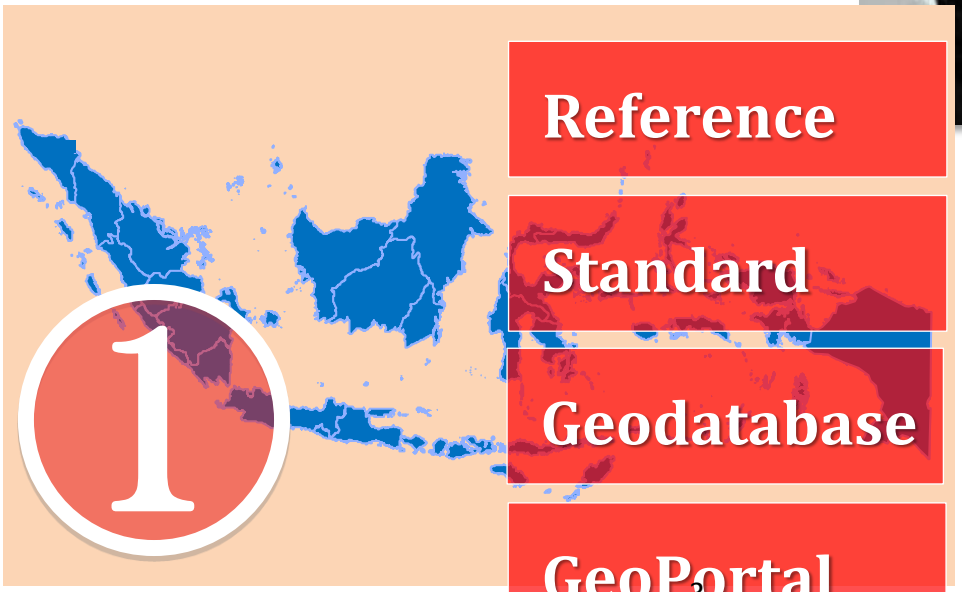
- COVERED BY RAIN FOREST
- LOCATED AT THREE CONTINENTAL *PLATE EURASIA, PASIFIC* AND *INDO-AUSTRALIA*
- PROMT TO ANY KIND DESASTER :
  - HIDRO-CLIMATE DISASTER
    - FLOODS
    - DROUGHTS
    - BUSH FIRE
  - EARTHQUAKES
    - TECTONIC
    - VOLCANIC
    - LAND SLIDES
    - TSUNAMI





NATIONAL PRIORITIES AGENDA

ONE MAP POLICY IN 2015-2019



Reference

Standard

Geodatabase

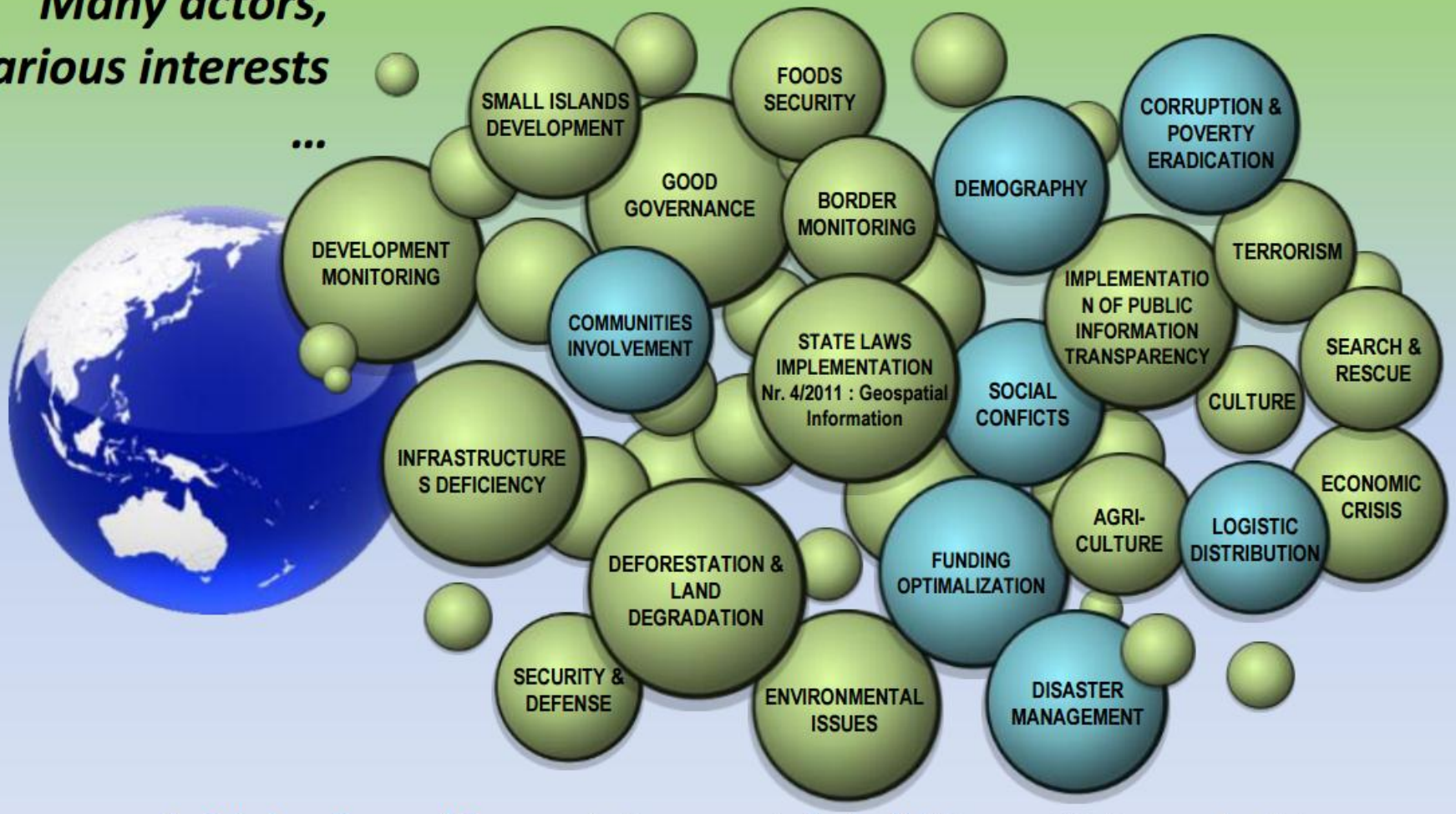
GeoPortal

"Geospatial Information are needed by all government institutions, local governments and communities to improve quality of decision making in all aspects of national development."

- **Source: Presidential Decree No. 2/2014**

VARIOUS PROBLEMS RELATED TO GEOSPATIAL DATA

Multi-layers,
Many actors,
Various interests
...

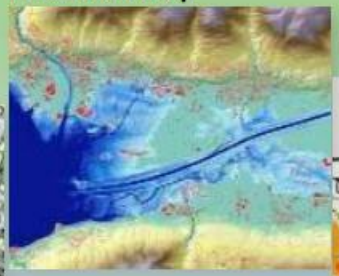


- *Colaboration and Synergy between each Stake Holder constitutes an absolute prerequisite;*
- *Opportunity for the Government, Private, Academic, and Public Sectors activities to perform the constellation of Partnership.*

THE ROLE OF GEOSPATIAL INFORMATION FOR SUPPORTING DISSATER AND EVACUATION MANAGEMENT

Simulation for Flood Disaster Management

Flood Risk Map



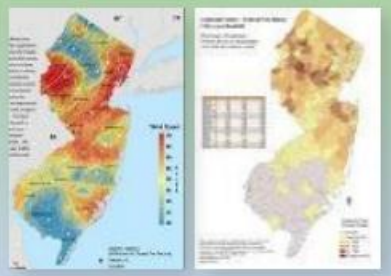
Effects of Flooding

Distribution of Officers in the area of disaster

El Nino and La Nina

Floods

Drought



Plantations on Forest Fire Mapping

Earthquake Risk

Police Facilities Distribution on Earthquake Prone Regions

Rob Disaster Study on unemployment

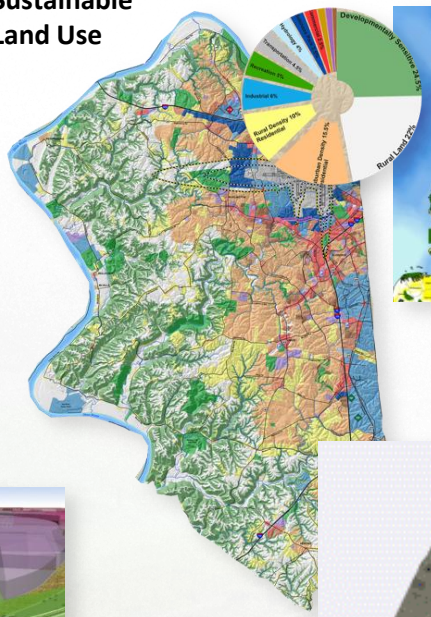
DEVELOPMENT PLANNING IN THE FUTURE

Green Belt

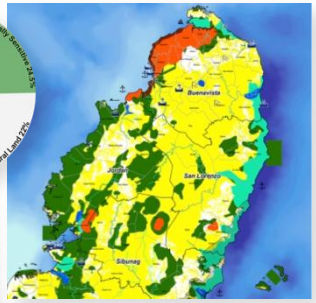
Planning Open Spaces

Building New Cities

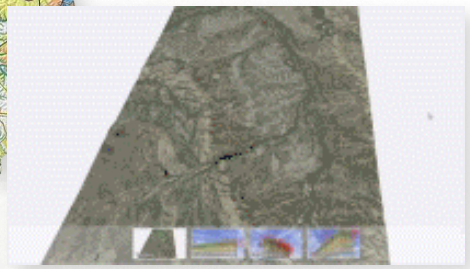
Sustainable Land Use



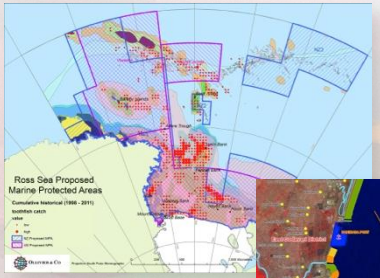
Land Use Concept



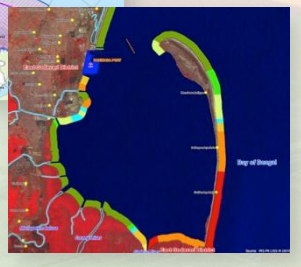
3D City Model



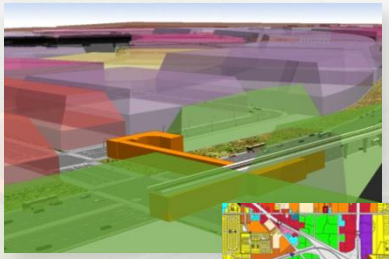
Coastal Zone Planning



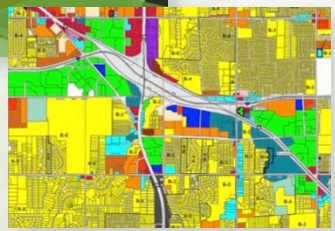
Off shore Infrastructure Planning



Building Zones 3D

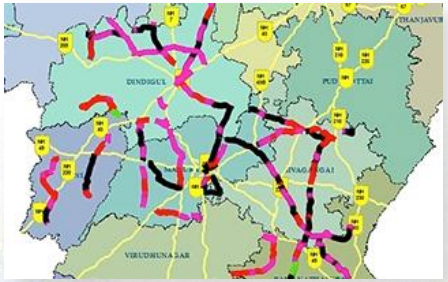


Zoning



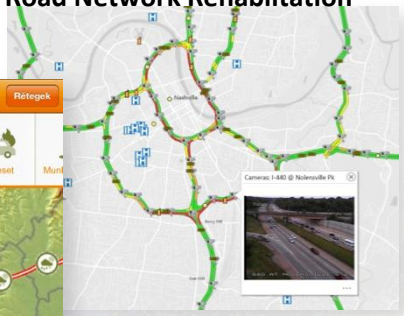
INFRASTRUCTURE MANAGEMENT AND PLANNING

Road Network Maintenace

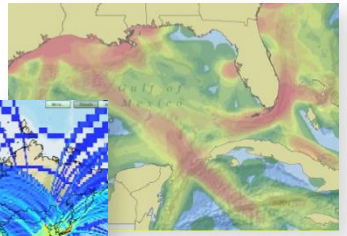


Bridge Monitoring

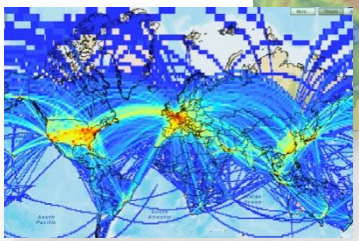
Road Network Rehabiltation



Infrastructure Port Planning



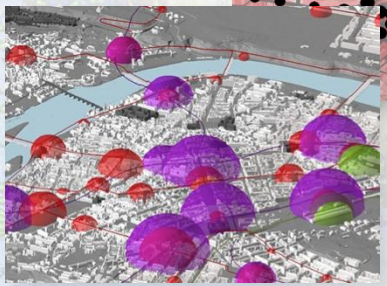
Air Trafic



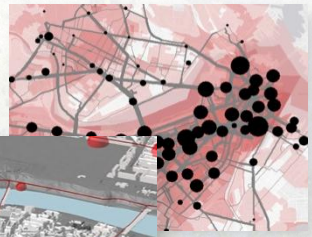
Road Planning

City Visualisation

Infastructure Transportation Utilisation



Pedestrian

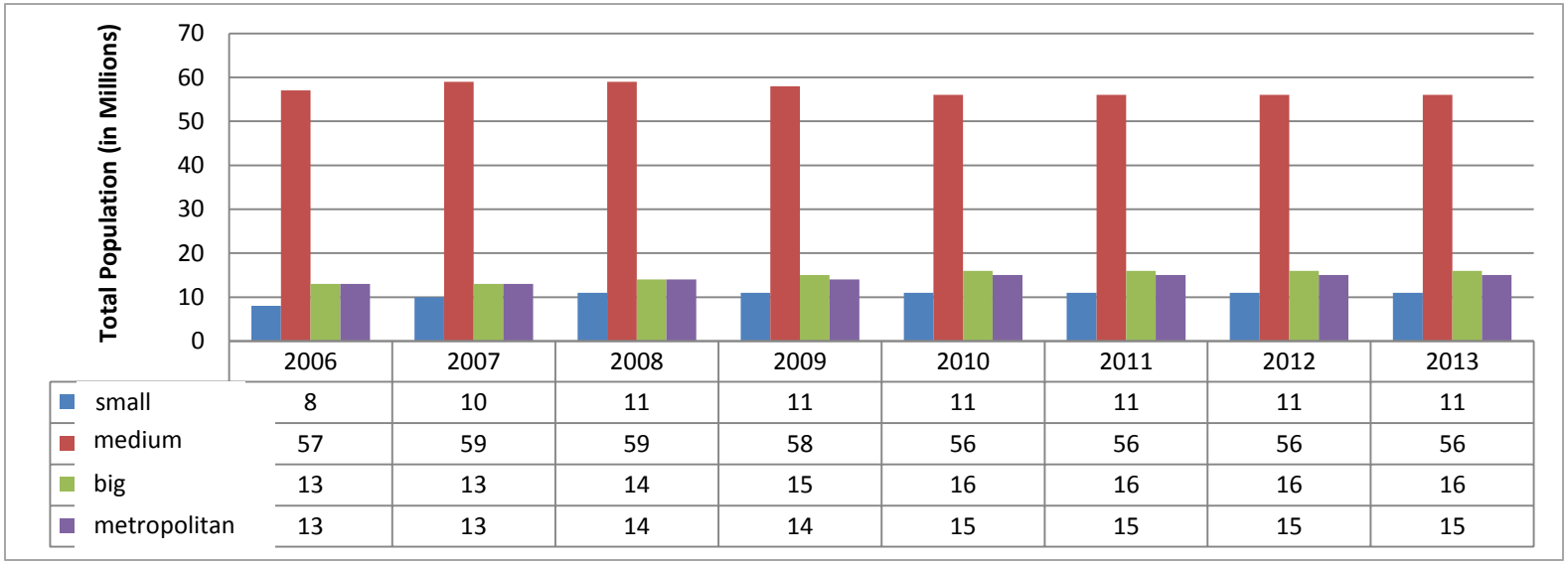


Trafic jam Simulationn

INDONESIAN SUSTAINABLE DEVELOPMENT

GROWTH OF CITIES IN INDONESIA

Typology of *Autonomous Cities* in Indonesia
Year 2006-2013



	2006	2007	2008	2009	2010	2011	2012	2013
small	8	10	11	11	11	11	11	11
medium	57	59	59	58	56	56	56	56
big	13	13	14	15	16	16	16	16
metropolitan	13	13	14	14	15	15	15	15

Until **2012**, city growth rate is **19%** per year; Medium cities with total population of **100.000-500.000 is the largest proportion among all** (Bappenas, 2012).

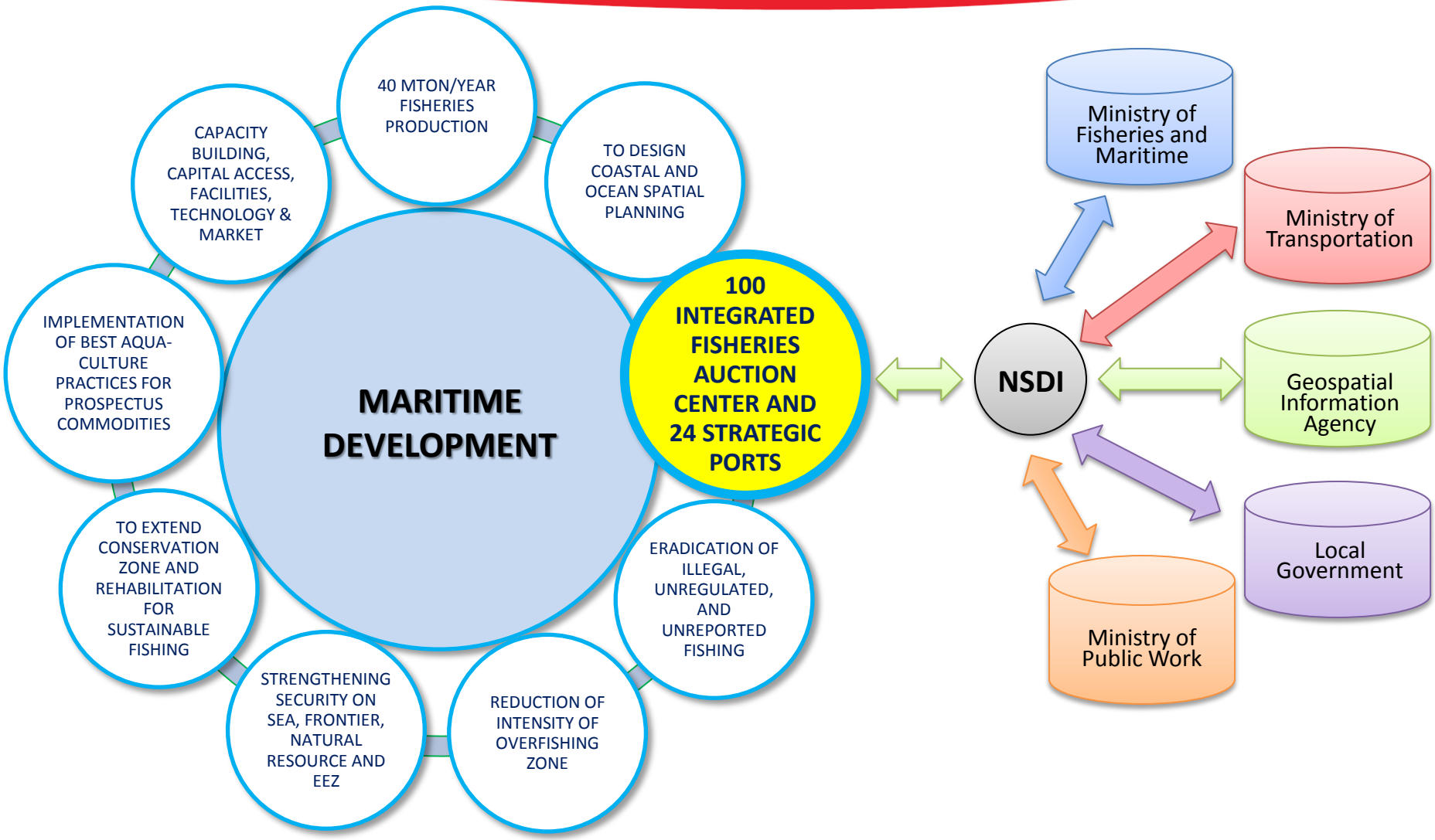
The autonomous district and city in Indonesia until 2013 are 539, including the 93 cities (Bappenas, 2012).

Autonomous City	Population
Small Cities	< 100.000
Medium Cities	100.000 – 500.000
Large Cities	500.000 – 1.000.000
Metropolitan Areas	> 1.000.000

NATIONAL PRIORITY AGENDA

NATIONAL MARITIME DEVELOPMENT 2015-2019

BADAN INFORMASI GEOSPASIAL



NATIONAL PRIORITY AGENDA

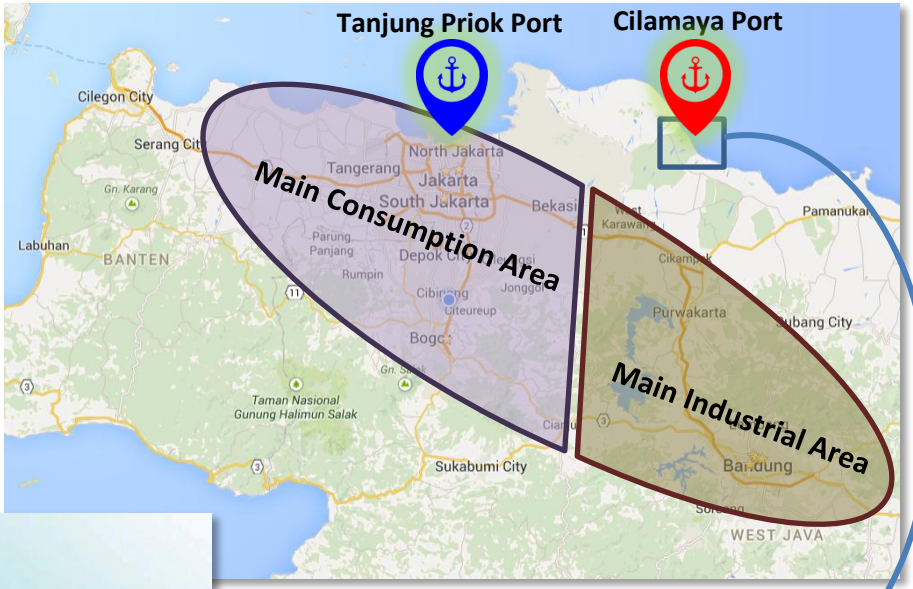
NATIONAL MARITIME DEVELOPMENT 2015-2019

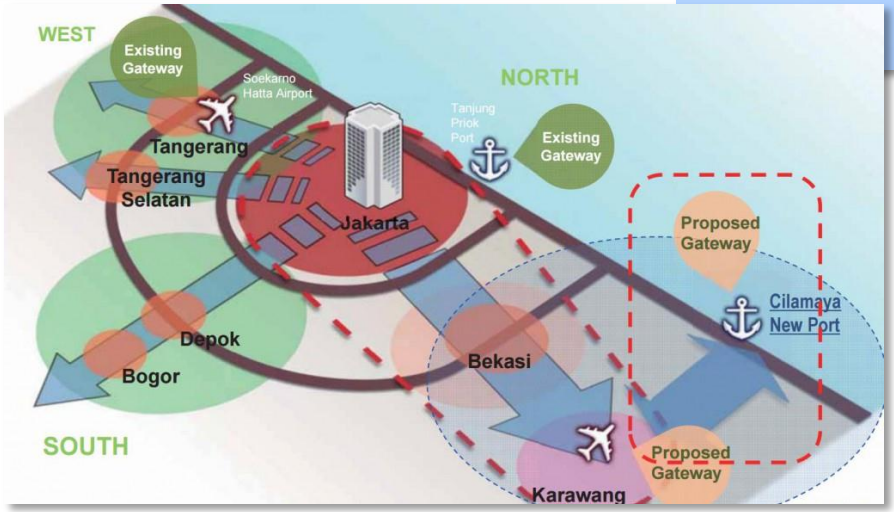
BADAN INFORMASI GEOSPASIAL

Geospatial Technique to support Cilamaya Port Development

Ports are essential for economic growth, Cilamaya Port Development has been proposed to anticipate:

1. Projected 19.5M TEUS of goods in 2030.
2. Rapid growth in Bekasi-Karawang Industries Corridors.
3. Heavy Traffic of Passanger and Cargo on Karawang-Tanjung Priok Highway and Toll Roads



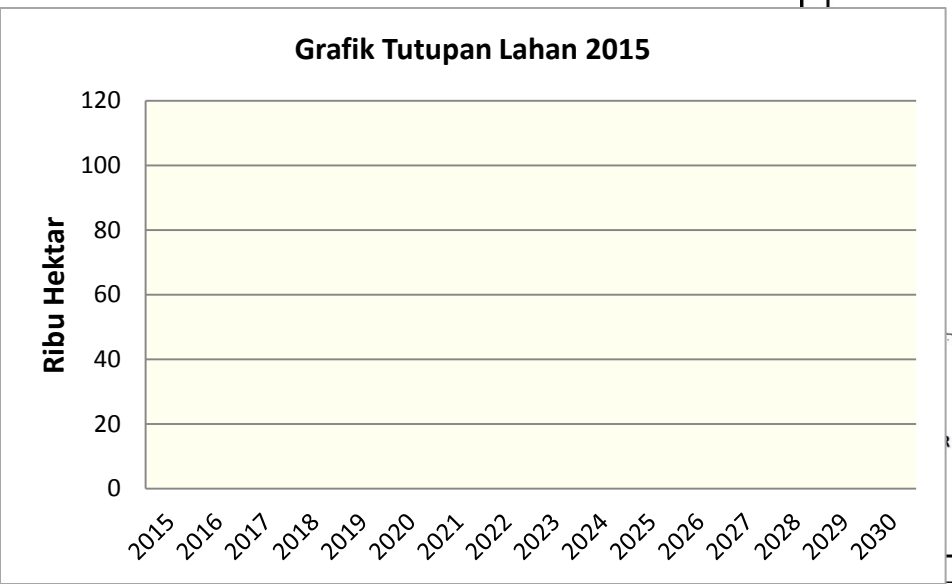


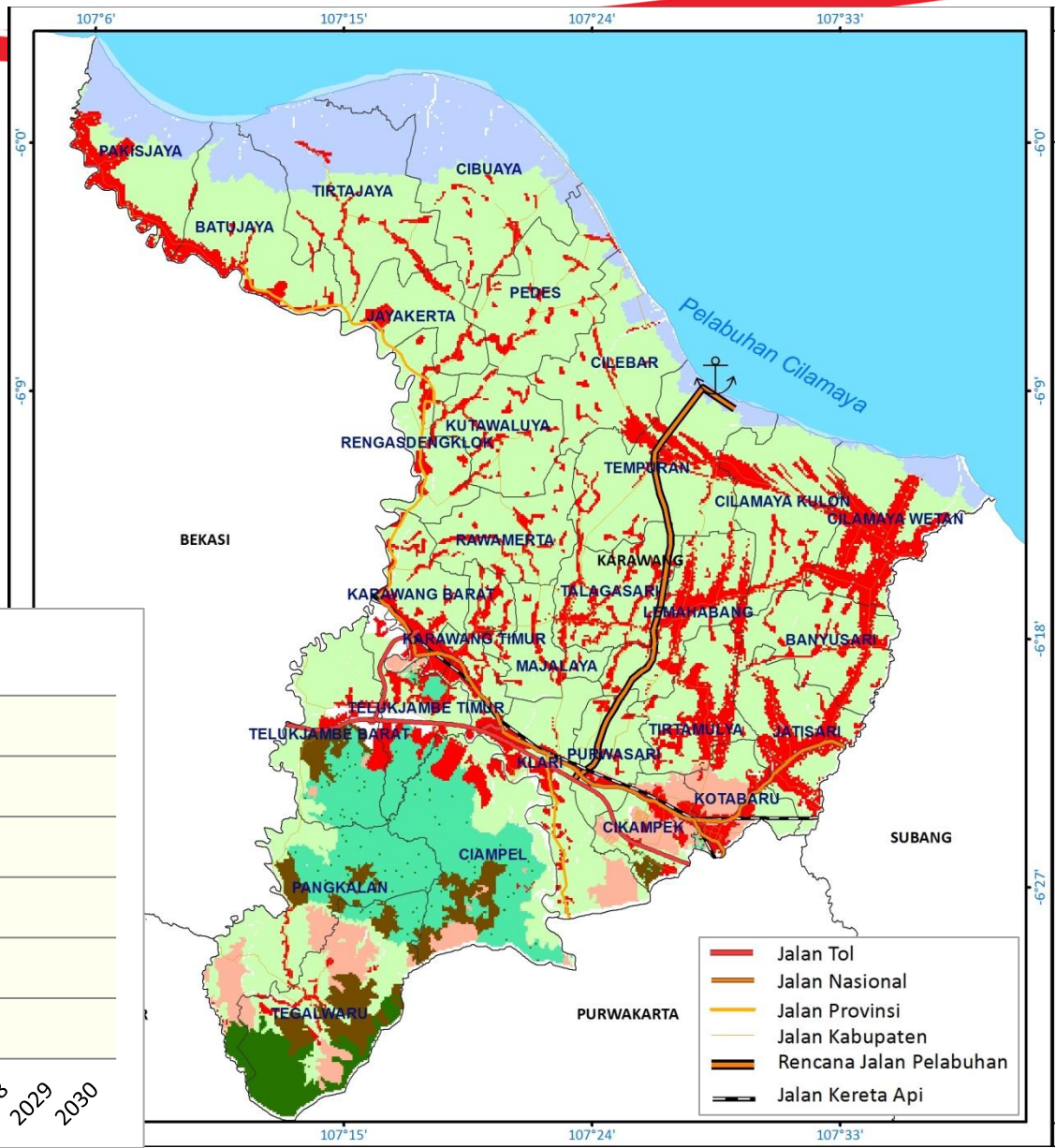
IMPACT ON PADDY FIELD AND ENVIRONMENT (SPATIALLY) IN KARAWANG IN 2015

ASUMPTION: STRICT LAW ENFORCEMENT ON FORESTRY

BADAN INFORMASI GEOSPASIAL

Legenda	Land Cover	Area (Hectare)
	Underbrush	13.559
	Forest	3.263
	Plantation	5.258
	Land Use	28.231
	Agriculture	6.644
	Padi field	112.028
	Fishpond	18.436



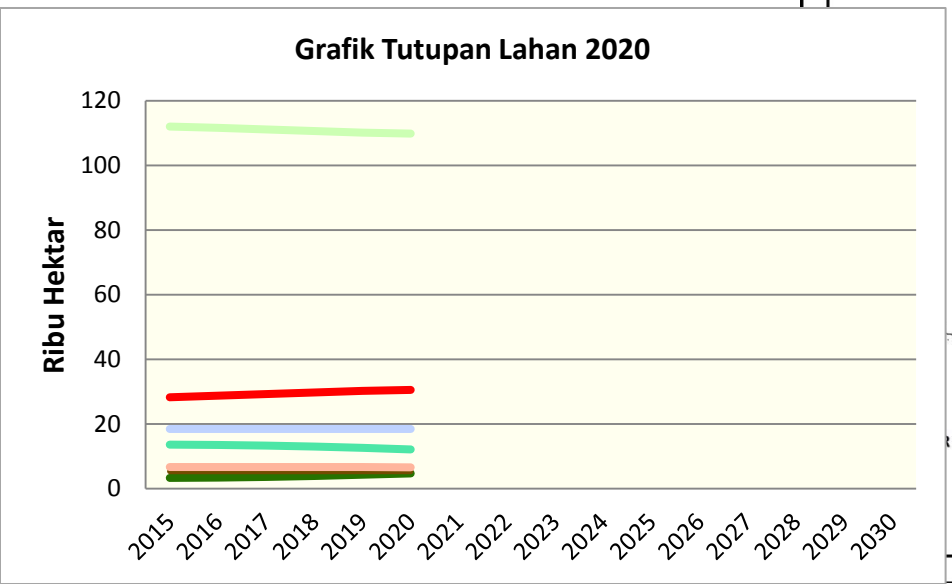


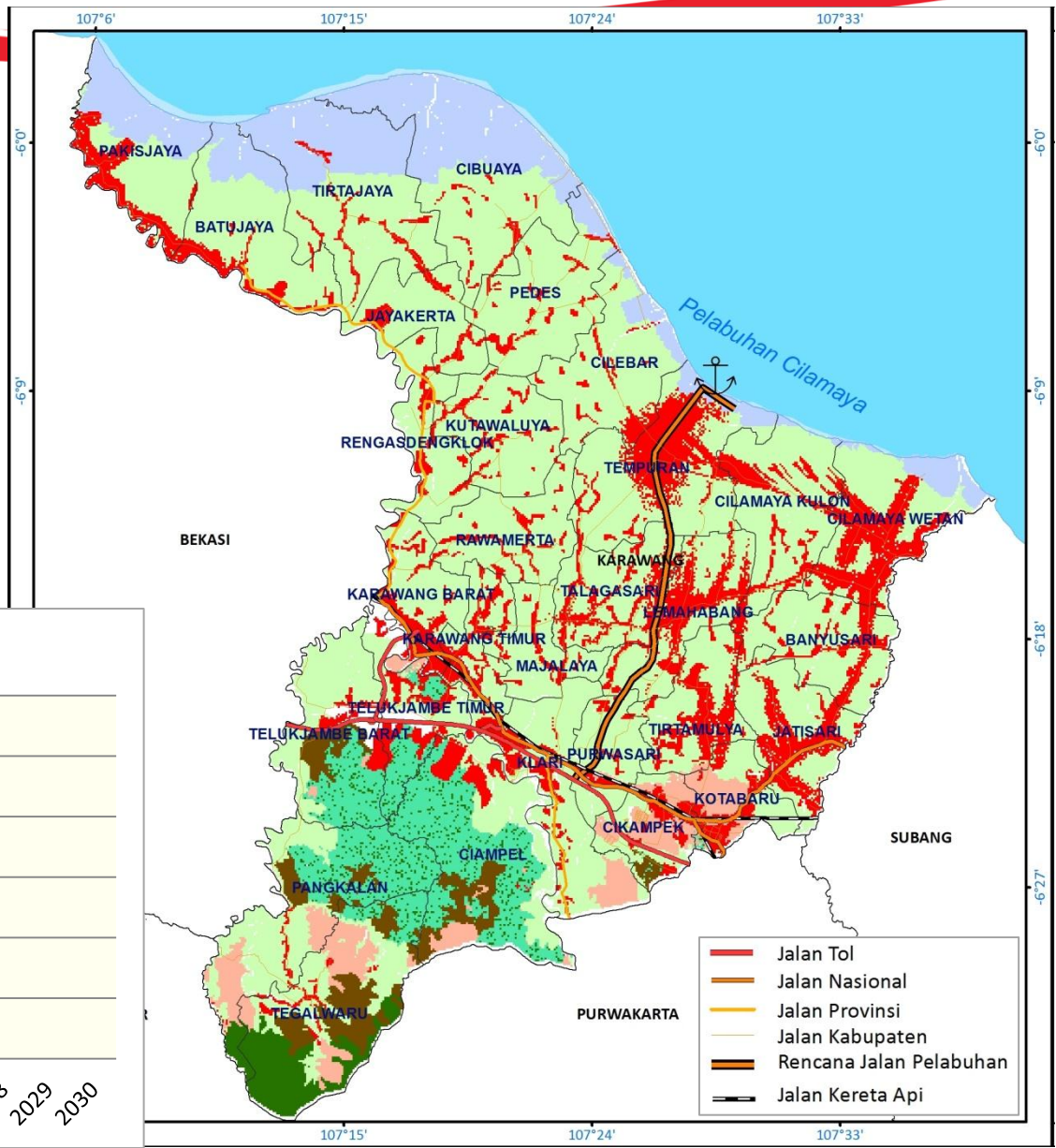
IMPACT ON PADDY FIELD AND ENVIRONMENT (SPATIALLY) IN KARAWANG IN 2020

ASUMPTION: STRICT LAW ENFORCEMENT ON FORESTRY

BADAN INFORMASI GEOSPASIAL

Legend	Land Cover	Area (Hectare)
	Underbrush	12.109
	Forest	4.667
	Plantation	5.252
	Land Use	30.548
	Agriculture	6.584
	Padi field	109.822
	Fishpond	18.436



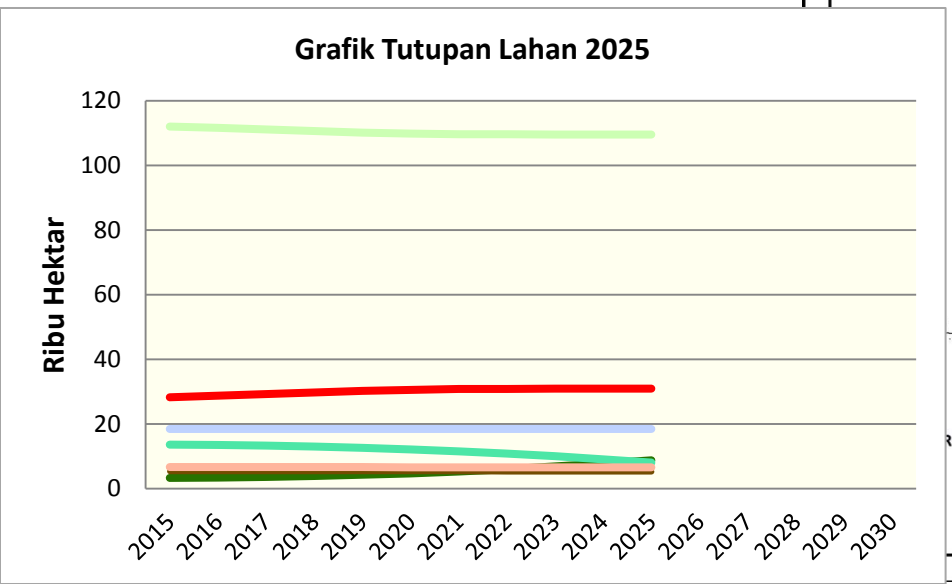


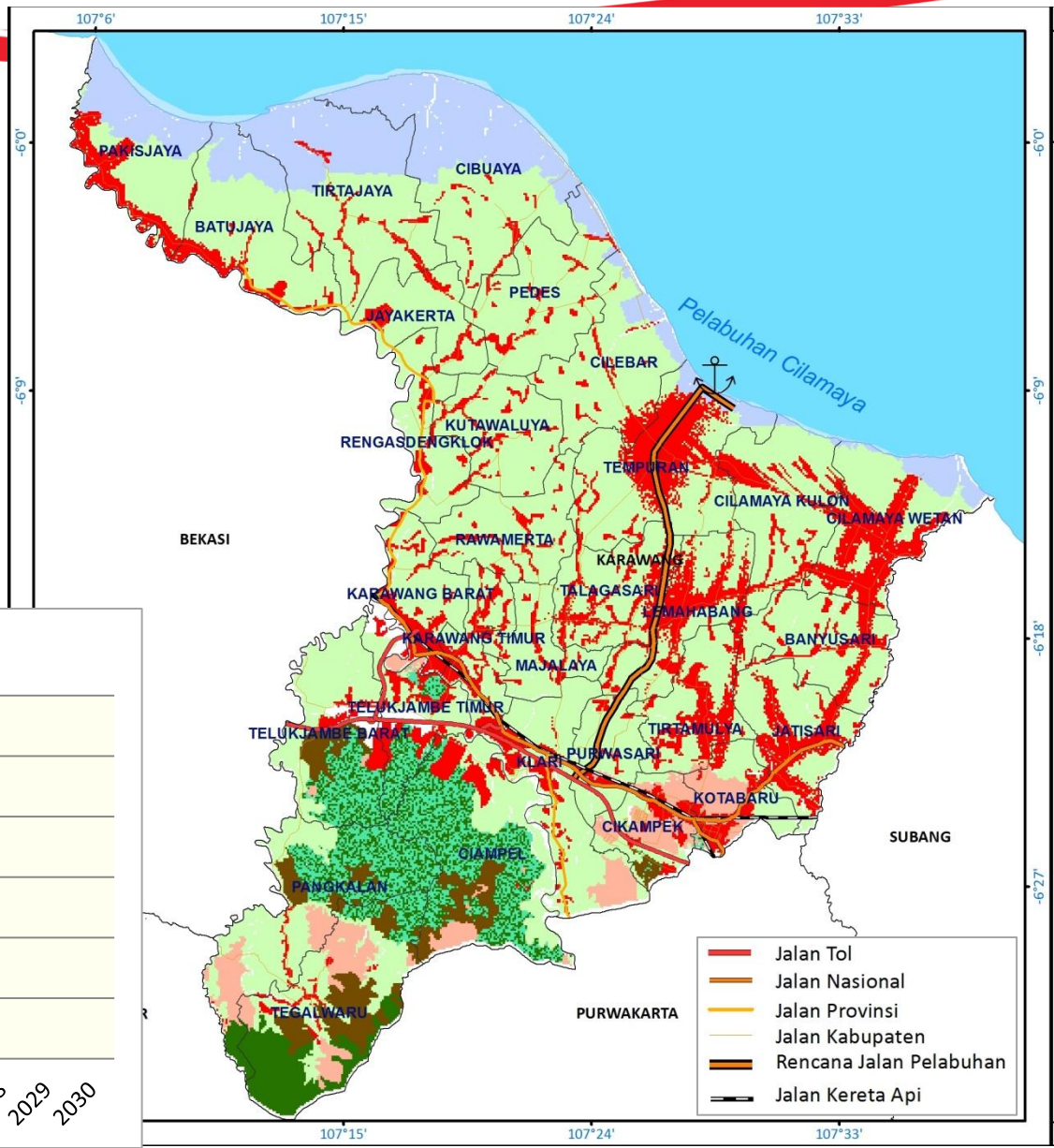
IMPACT ON PADDY FIELD AND ENVIRONMENT (SPATIALLY) IN KARAWANG IN 2015

ASUMPTION: STRICT LAW ENFORCEMENT ON FORESTRY

BADAN INFORMASI GEOSPASIAL

Legend	Land Cover	Area (Hectare)
	Underbrush	8.041
	Forest	8.686
	Plantation	5.250
	Land Use	30.878
	Agriculture	6.580
	Padi field	109.548
	Fishpond	18.436



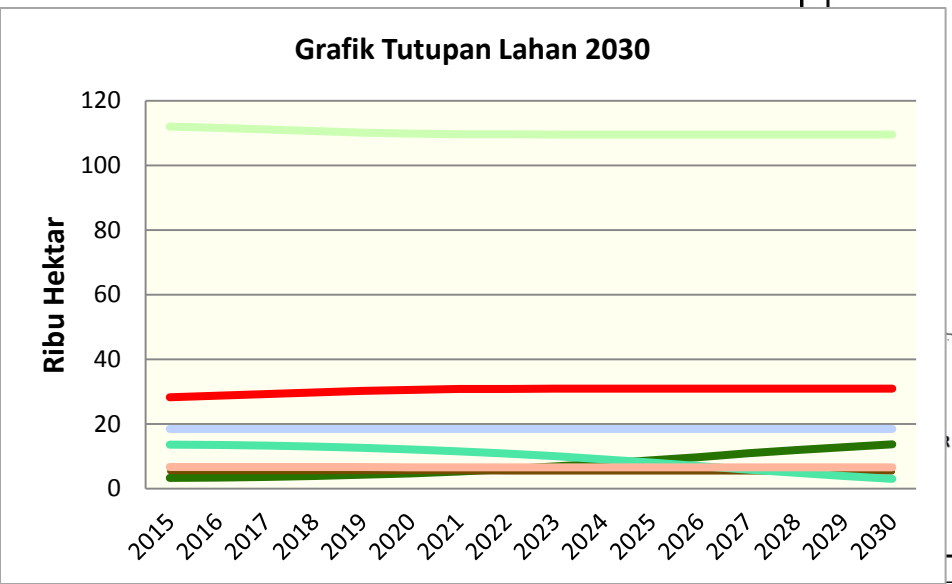


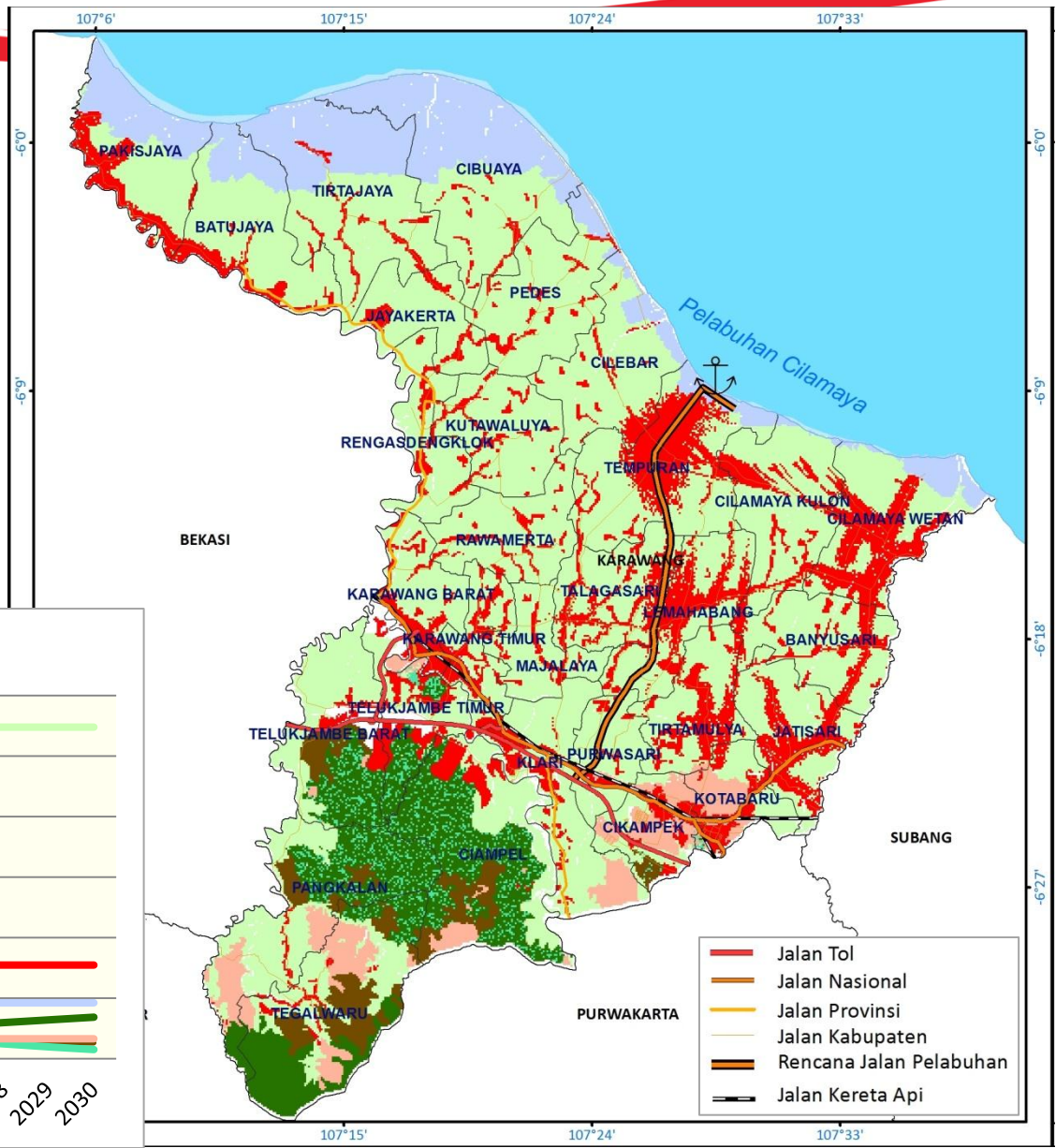
IMPACT ON PADDY FIELD AND ENVIRONMENT (SPATIALLY) IN KARAWANG IN 2030

ASUMPTION: STRICT LAW ENFORCEMENT ON FORESTRY

BADAN INFORMASI GEOSPASIAL

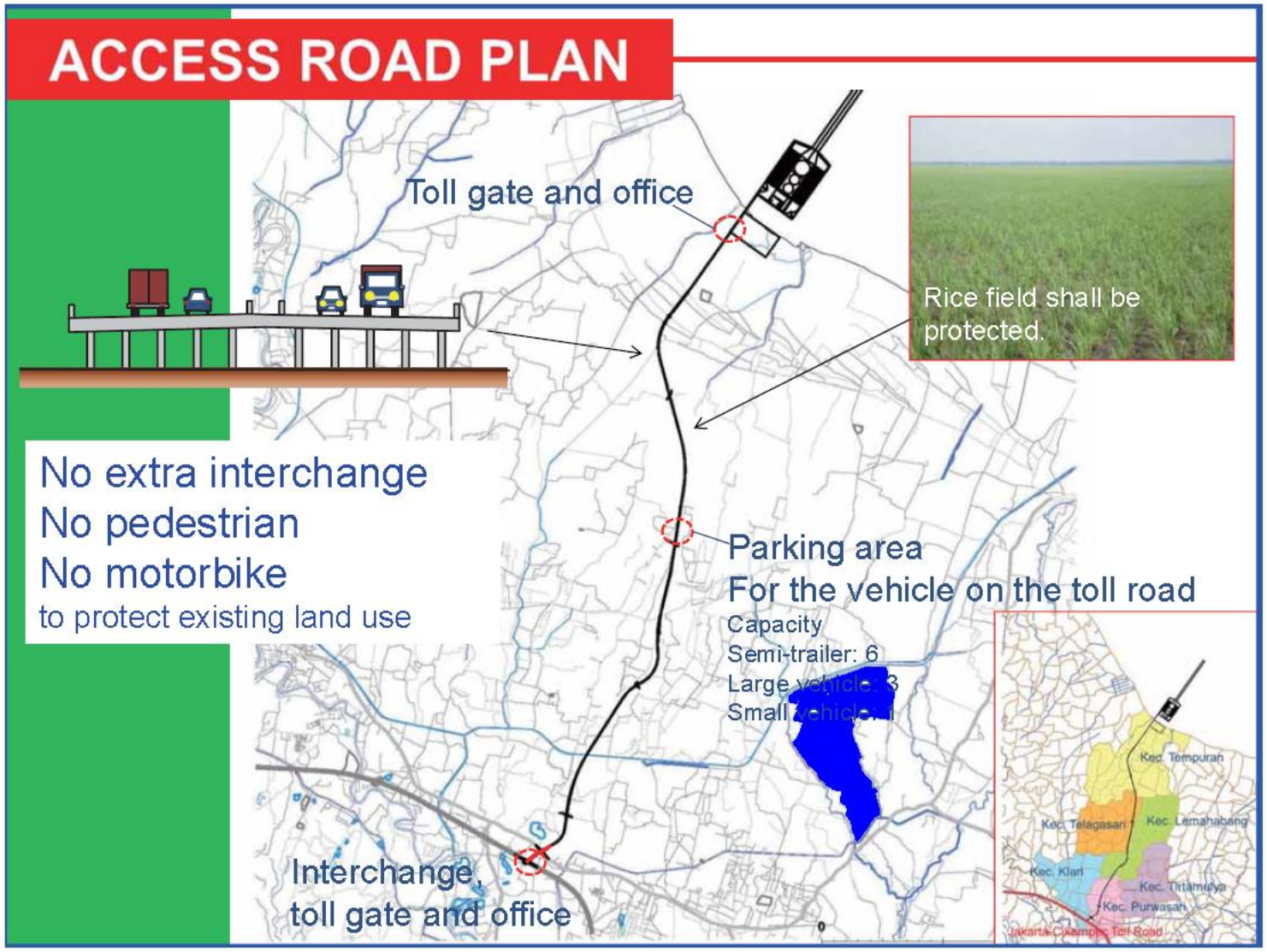
Legend	Land Cover	Area (Hectare)
	Underbrush	3.019
	Forest	13.644
	Plantation	5.250
	Land Use	30.942
	Agriculture	6.580
	Padi field	109.548
	Fishpond	18.436





ENGINEERING ADJUSTMENT TO PRESERVE PADDY FIELD

RECOMMENDATION FOR DECISION MAKING



Source: Ministry of Transportation

SUMMARY

1. Geospatial Information should be promoted as an integrator of information in all phases of national development cycle.
2. Indonesia's recent experiences in constructiong medium term (5 yearly) of national development, geospatial accounting in term of measurement, reporting and verification are potential tool for not only planning, but also in monitoring, controling and evaluation of national development.
3. Government of Indonesia will be focus on large scale surveys and mapping (scale 1;1000 and 1:5000) to support detailed spatial planning program, economic development and disaster management.
4. Multi-sectors approach uses various geospatial information from many source. Single Geodetic Reference System is "a must to be stated and implemented" by all map producers and users.
5. Multi-sectors approach or national development needs stable institutional arrangement, well-informed policy making, and skillful human resource. These elements of Spatial Data Infrastructure (SDI) can be achieved with good and consistent leadership on "one map policy".

BADAN INFORMASI
GEOSPASIAL

THANK YOU