

The Second UN-GGIM-AP Plenary Meeting



The Role Of Ina-SDI For Disaster Management

Indonesia

Tehran - Iran
28 October 2013

Dodi Sukmayadi

Geospatial Information Authority of Indonesia (BIG)



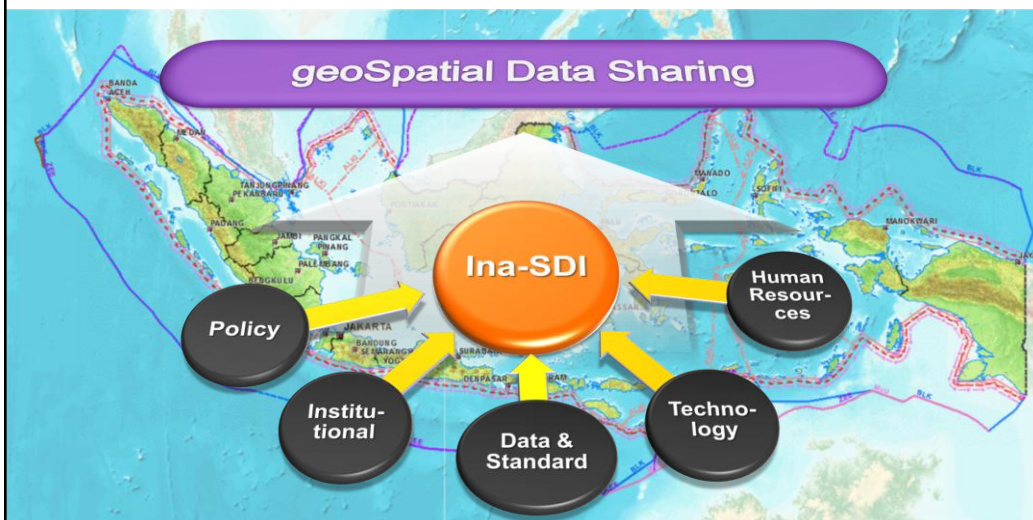
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COMPONENT FOR GEOSPATIAL DATA SHARING



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WG2: Initial Research on Existing National and International Geoportals for the Sharing of Data and Information Related to Disaster Management

Five Basic Components of NSDI have been applied and implemented by the National Geospatial Authority of Indonesia (**BIG - Badan Informasi Geospasial**):

1. POLICY →

- a. State Law No. 4 / 2011: Geospatial Information;
- b. Presidential Regulation No. 94 / 2011: National Geospatial Information Authority (BIG);
- c. Presidential Regulation No. 6 / 2012: Ortho-Rectified Hi-Res Satellite Imageries;
- d. Presidential Regulation No. 85 /2007 and No. Xx / 2013: National Geospatial Information Network and Sharing;
- e. Mutual Regulation (being implemented) between Ministry of Interior, Ministry of Communication and Information, and BIG.



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ACT NO. 4 YEAR 2011 POLICY AND IMPLEMENTATION



1. TO ENDORSE SINGLE REFERENCE FOR **INTEGRITY OF GEOSPATIAL INFORMATION** IN INDONESIA;
2. TO ENSURE **THE AVAILABILITY AND ACCESS OF GEOSPATIAL INFORMATION** WITH ACCOUNTABILITY;
3. TO ACHIEVE **USEFULNESS OF GEOSPATIAL INFORMATION** THROUGH COOPERATION , COORDINATION, INTEGRATION AND SYNCHRONIZATION; AND
4. TO ENCOURAGE **THE USE OF GEOSPATIAL INFORMATION** IN GOVERNMENT ACTIVITY AND PEOPLE'S DAILY LIFE

LAW 4/2011, ARTICLE 22



**GEOSPATIAL INFORMATION
AUTHORITY**



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ACT NO. 4 YEAR 2011 TRANSFORMATION IN PARADIGM AND INSTITUTION

BAKOSURTANAL

- INSTITUTIONS OF NATIONAL ADVISER IN DEVELOPMENT OF SURVEY, MAPPING, AND SPATIAL DATA INFRASTRUCTURE



BADAN INFORMASI GEOSPASIAL

GEOSPATIAL INFORMATION AGENCY

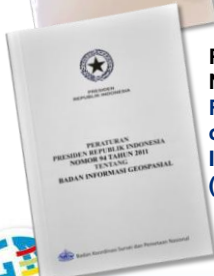
- THE NATIONAL ORGANIZER IN THE FIELD OF THE TOPOGRAPHIC SURVEY AND BASE MAPPING
- INSTITUTIONS OF NATIONAL ADVISER IN DEVELOPMENT OF THEMATIC MAPS
- THE NATIONAL ORGANIZER FOR SPATIAL DATA INFRASTRUCTURE



LAWS AND REGULATION CONCERNING GEOSPATIAL INFORMATION



**UU No. 4 / 2011 :
Geospatial Information**



**Presidential Decree
No. 94 / 2011 :
Roles and Functions
of Geospatial
Information Authority
(BIG)**



**Presidential Decree
No. 85 / 2007 :
National Geospatial Data
Network (JDSN) →**

expanded to be

**PerPres No. ... / 2013
National Geospatial
Information Network
(JIGN)**



**Presidential Instruction
No. 6 / 2012 :
Provision, Use, Quality
Control, Processing, and
Distribution of Ortho-
Rectified Hi-Res Satellite
Imageries**



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WG2: Initial Research on Existing National and International Geoportals for the Sharing of Data and Information Related to Disaster Management

Five Basic Components of NSDI have been applied and implemented by the National Geospatial Authority of Indonesia (**BIG - Badan Informasi Geospasial**):

2. INSTITUTIONAL →

- a. BIG was established in 2012;
- b. Memorandum of Understanding (MoU) on Geospatial Information Sharing and Network Node with many Ministries and Provincial/Regency-Municipal Governments;
- c. Center for Assessment and Development of SDI with 8 (eight) Universities;
- d. Community-based Participatory Mapping.



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Five Basic Components of NSDI have been applied and implemented by the National Geospatial Authority of Indonesia (**BIG - Badan Informasi Geospasial**):

3. DATA and STANDARD →

- a. Seamless Basic Geospatial Data (2,500k / 250k / 50k / 25k) of BIG and many Thematic Geospatial Data from Ministries were improved (one map policy) & published on Indonesia Geospatial Portal (Ina-GeoPortal);
- b. National Standard of Geospatial Features and Catalog, and adoption of ISO Metadata as the National Standard.



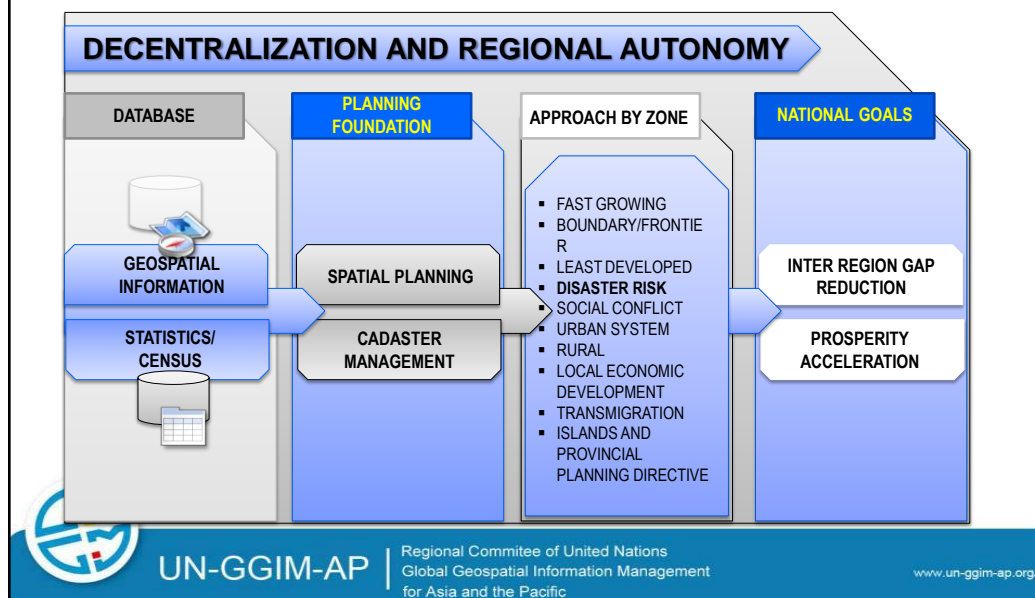
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GEOSPATIAL INFORMATION ROLE IN INDONESIAN SUSTAINABLE DEVELOPMENT



NEW INDONESIAN GEOSPATIAL REFERENCE SYSTEM (Ina-GRS2013)

Indonesia has launched a new Indonesian Geospatial Reference System on Oct 17th, 2013 which is called **Ina-GRS2013**.

Ina-GRS2013 replaced the former Indonesian National Geodetic Datum (DGN95) by [considering tectonic plate movement and crustal deformation into its reference system](#). It will be used as a single geospatial reference system throughout the country.

Details:

1. GRS Name : **Indonesian Geospatial Reference System (Ina-GRS2013)**
2. Reference frame : **National Geodetic Control Network tied to ITRF 2008**
3. Reference epoch for Ina-GRS 2013 : **2012.0 (1 January 2012)**
4. Vertical Datum: **Geoid**
5. Include a Deformation Model / Velocity model



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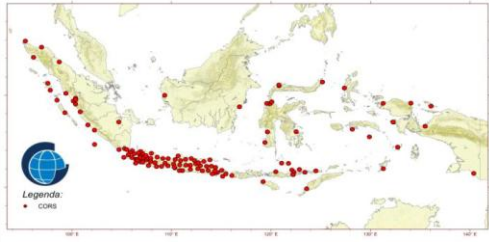
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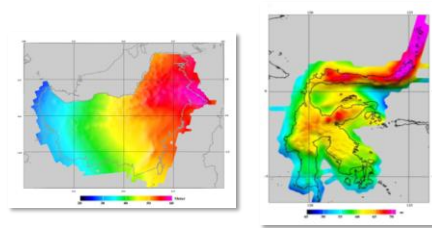


Ina-GRS 2013 REALIZATION

CORS GNSS Distribution 2013



Indonesian Geoid for Kalimantan & Sulawesi



Horizontal Control Network Distribution



Vertical Control Network Distribution



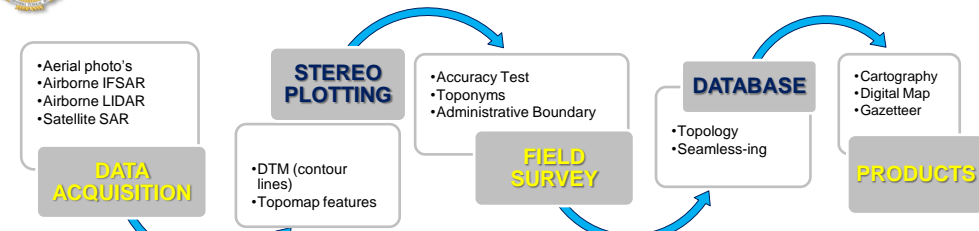
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STATUS 2013: BASE MAPPING



	SCALE	TOTAL	AVAILABLE	TO DO
SMALL	1:1,000,000	37	37 (100%)	0
	1:500,000	103	103 (100%)	0
	1:250,000	309	309 (100%)	0
MEDIUM	1:100,000	1,245	0	1,245
	1:50,000	3,899	2,417 (62%)	1,471
	1:25,000	13,020	1,774 (14%)	11,246
LARGE	1:10,000	91,547	658 (0.7%)	90,889
	1:5,000	379,014	128 (0.003%)	378,458
	1:2,500	880,206	0	880,206
	1:1,000	2,729,319	0	2,729,319



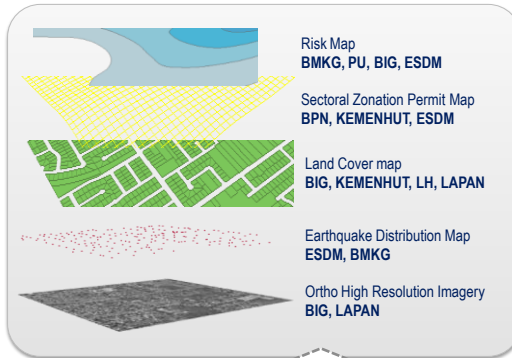
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STATUS 2013: THEMATIC MAPPING



11 NATIONAL WORKING GROUP FOR THEMATIC MAPPING

NATURAL RESOURCE AND WATERSHED

FARMING AND PEATLAND

RESOURCE DYNAMIC

CLIMATE CHANGE

ECOREGION

TRANSPORTATION

DISASTER STUDY

SPATIAL PLANNING

MARINE RESOURCES, COASTAL, AND
SMALL ISLANDS

SOCIAL, ECONOMY, CULTURE AND ATLAS

SECTORAL ZONATION, LAND COVER, AND
LAND STATUS

SECTORAL
COORDINATION AND SINERGY
FOR
'ONE MAP POLICY'



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WG2: Initial Research on Existing National and International Geoportals for the Sharing of Data and Information Related to Disaster Management

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4. TECHNOLOGY →

- Indonesia Geospatial Portal (Ina-GeoPortal) was launched in 2012;
- National Geospatial Data Center (Tier 3), Disaster Recovery Center, Geospatial Cloud & High Performance Computing Services;
- National Standard on Geospatial Reference System, Continuous Orientation Reference System (CORS) Services;
- National Internet eXchange (NIX) for Geospatial Information Communication Infrastructure.



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5. HUMAN RESOURCES →

- Professional Certification based on National Occupational Competency Standards, Licensing for Geospatial Information Services Industry;
- Capacity Building: NSDI Training Center, Promotion & Socialization.



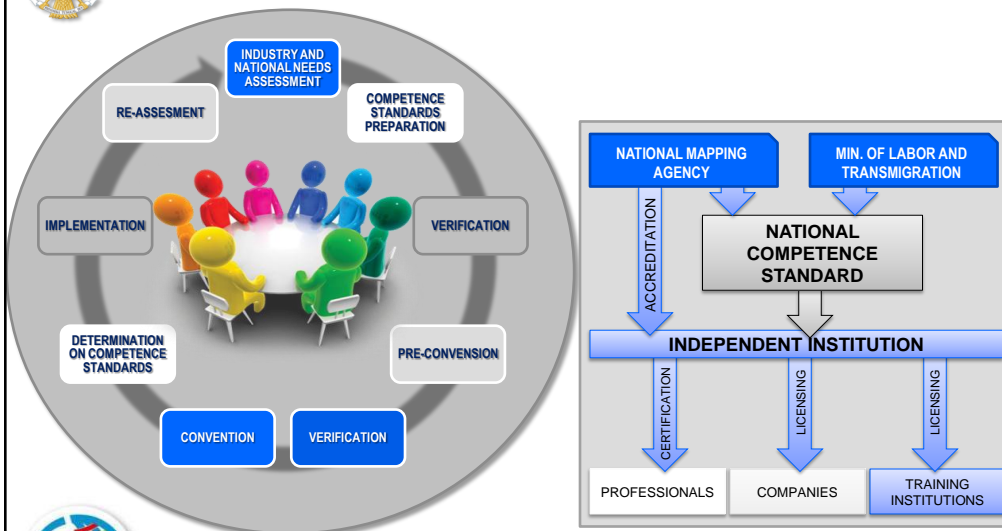
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LEVERAGING GEOSPATIAL INDUSTRY



Min. of Labor Decree No. 8/2012



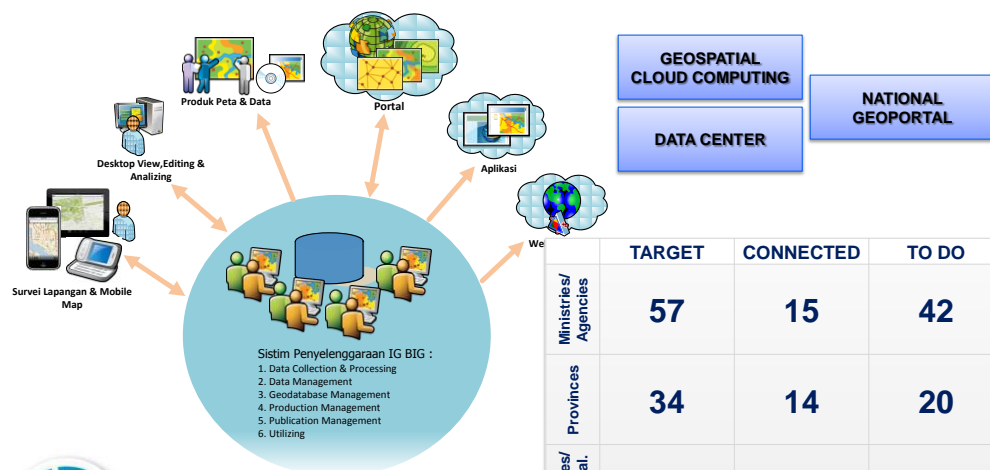
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STATUS 2013: Ina-SDI DEVELOPMENT



	TARGET	CONNECTED	TO DO
Ministries/ Agencies	57	15	42
Provinces	34	14	20
Regencies/ Municipal.	500	2	498



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INDONESIA: FACING MOST KIND OF HAZARDS



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INDONESIA: FACING MOST KIND OF HAZARDS

- Asia-Pacific Disaster Report 2010 stated that **people in the Asia Pacific is 4 times more susceptible than in Africa and 25 times more vulnerable than in North America and Europe.** [1]
- United Nations International Strategy for Disaster Reduction (UNISDR) rank Indonesia first in the two natural disasters (**tsunami and landslide**), ranking third in the **earthquake**, and ranked sixth in the **flood**.
- 4408 natural disasters occurred over the past 5 years (2004-2009) in Indonesia: **71 earthquakes; 2 Tsunami; 24 Volcanic eruption; 469 landslide events; 1916 floods; 158 Flooding with landslides; 1083 Drought; 580 Hurricanes; and 105 Tides.**
- The UN report estimates that more than **18 million peoples affected by natural disasters in Indonesia** from 1980 to 2009.



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KEY INSTITUTIONS IN DISASTER MANAGEMENT

- **BNPB** is the **Indonesian National Board for Disaster Management** (Indonesian: *Badan Nasional Penanggulangan Bencana*), has the task to assist the President of the Republic of Indonesia: **planning and coordinating the implementation of disaster management and emergency response activities in an integrated manner**; and implement disaster management and emergency response from before, during, and after including disaster prevention, preparedness, emergency response, and recovery.
- **BIG** is the **Geospatial Information Agency** (Indonesian: *Badan Informasi Geospasial*), has the task to assist the President of the Republic of Indonesia: **planning, organizing and coordinating the development of geospatial information for disaster management activities.**

[1] <http://www.eastasiaforum.org>, 2010)



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Ina-SDI ROLE IN DISASTER MANAGEMENT



- **EXTRA-TERRESTRIAL:**
 - ASTEROID IMPACT
- **INTERNAL GEO-DYNAMIC PROCESSES:**
 - EARTHQUAKE, TSUNAMI, VOLCANIC ERUPTION
- **EXTERNAL GEO-DYNAMIC PROCESSES:**
 - LANDSLIDE, SOIL EROSION, LAND DEGRADATION
- **HYDRO-METEOROLOGICAL:**
 - FLOODS, TROPICAL STORMS, DROUGHT
- **ECOLOGICAL / ENVIRONMENTAL:**
 - POLLUTION, CROP DISEASE,
- **EPIDEMICS:**
 - SARS, HIV / AIDS, AVIAN FLU
- **TECHNOLOGICAL:**
 - INDUSTRIAL ACCIDENTS
- **CONFLICTS:**
 - PUBLIC DISORDERS, POLITICAL , TERRORISM



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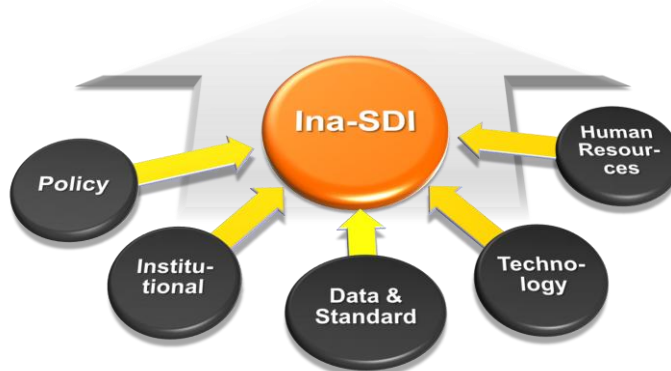
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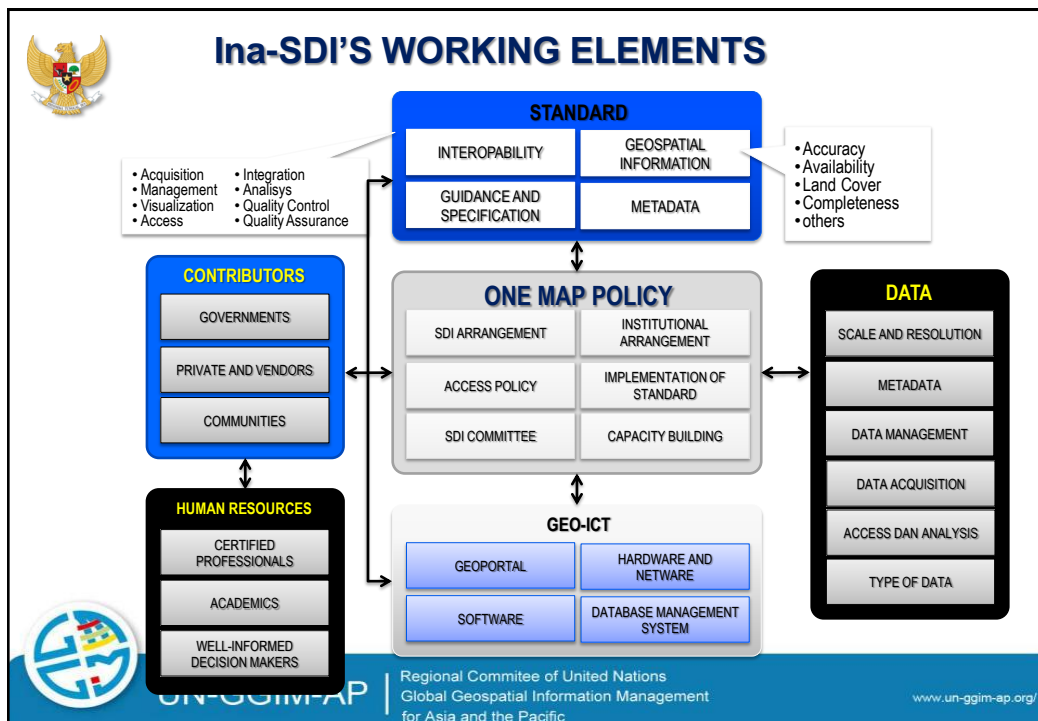
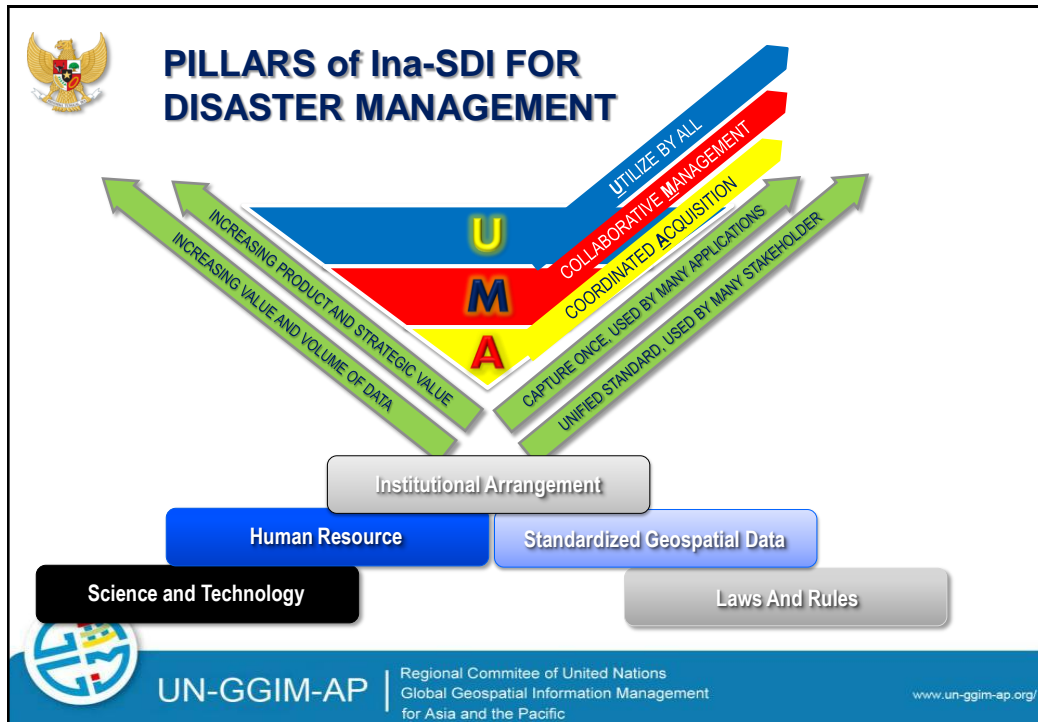
geoSpatial Data Sharing

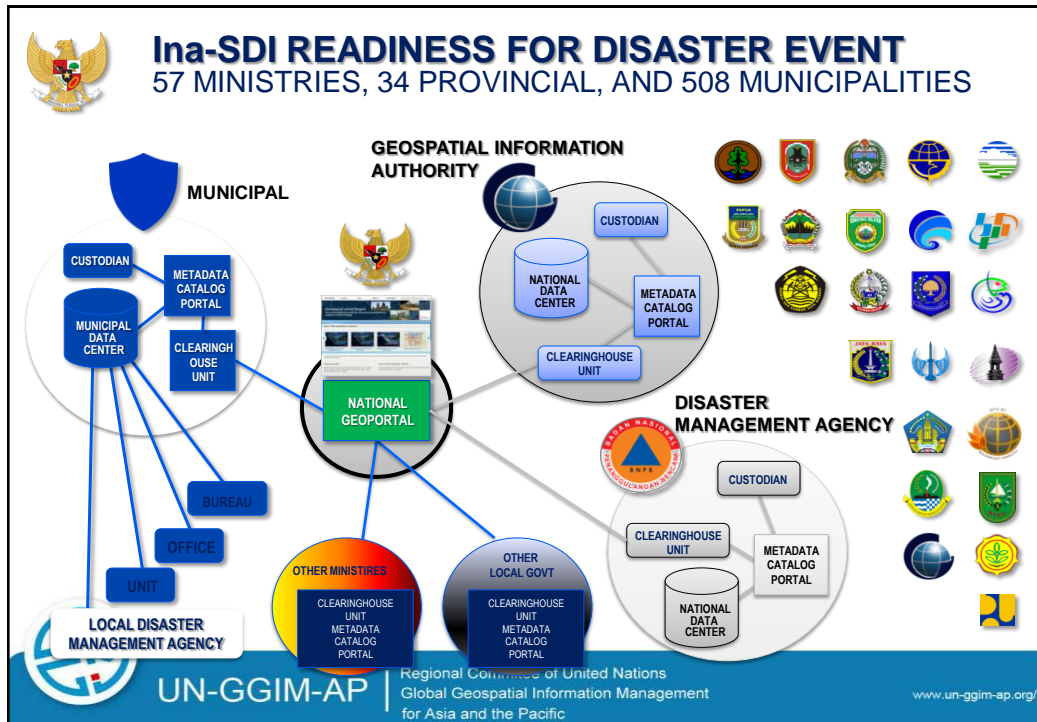


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Ina-GeoPortal :
<http://tanahair.indonesia.go.id> or <http://maps.ina-sdi.or.id>

Ina-GeoPortal GALERI PETA GROUP KONTEN

Geospasial untuk Negeri
Informasi geospasial menambah dan memperkuat pengetahuan kita mengatasi masalah keruangan

Geospasial untuk Negeri

Citra SPOT 6 LAPAN Citra SPOT 5 LAPAN Citra Modis LAPAN Citra Landsat 7,8 LAPAN

Geospasial untuk negeri adalah portal geospasial Indonesia dibangun dengan partisipasi berbagai kementerian dan lembaga serta pemerintah daerah di Indonesia.

Membuat Peta >
Membuat Peta yang menarik dapat dilihat pada browser, desktop atau perangkat mobile, dapat diunduh dalam blog, melalui email, atau diunduh dalam website.

Mulai ArcGIS Explorer Online >
Gunakan aplikasi ini untuk mentransformasi data anda kedalam bentuk peta dan presentasi yang bagus.

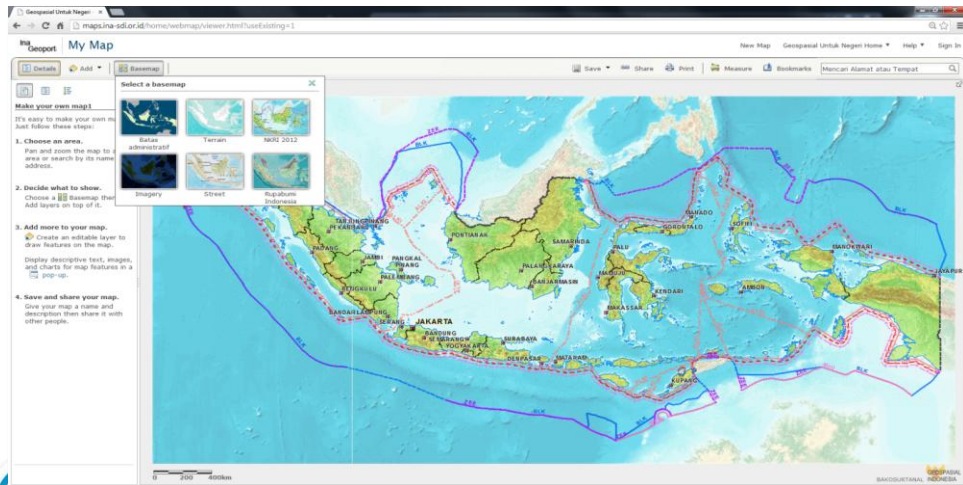
Pengunjung >
3.983 Visitors
17 Aug 2012 - 16 Sep 2012

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Ina-GEOPORTAL : SERVICING MEMBER OF INA-SDI AND PUBLIC WITH MULTI-SCALE BASEMAP



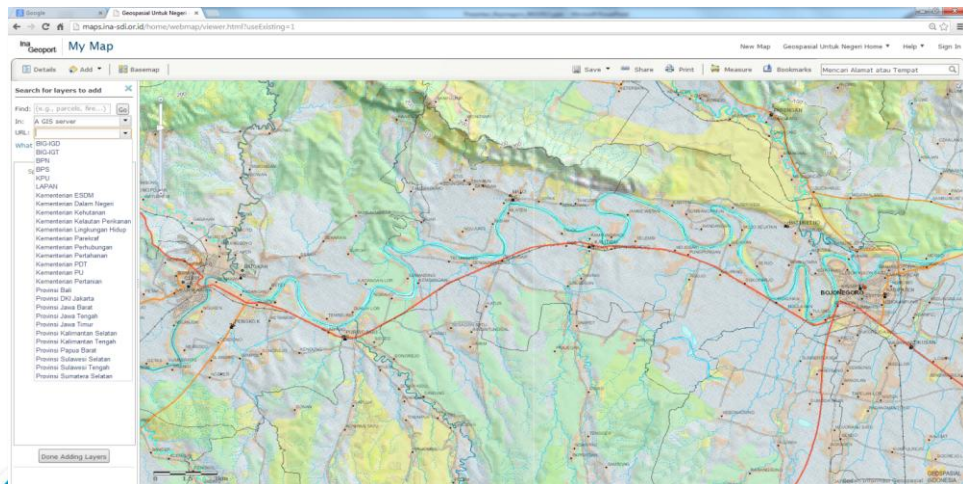
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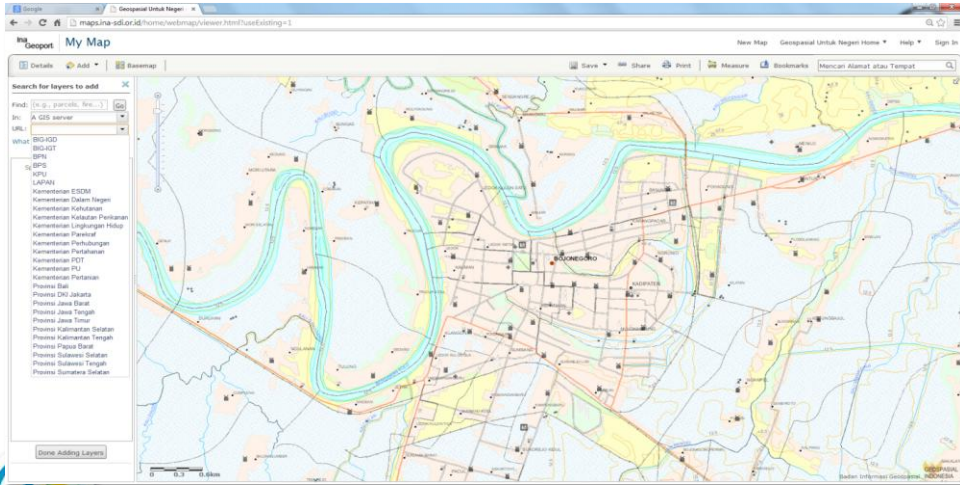
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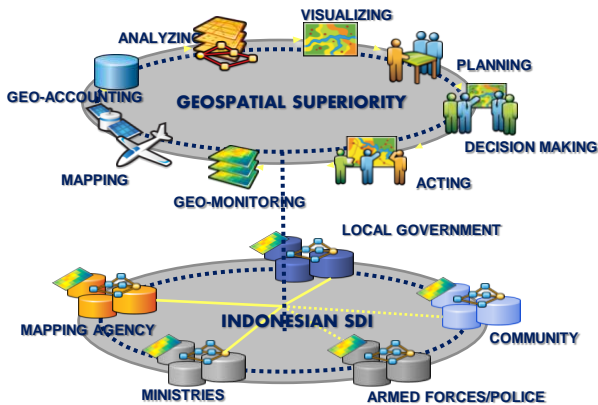
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GEOSPATIAL SUPPORT COMMAND CENTER BETTER DECISION MAKING WITH COMMON OPERATING MAPS



CAPABILITY

GOVERNANCE IN THE FIELD OF SURVEYING, MAPPING AND GEOSPATIAL
DATA INFRASTRUCTURE IN PROVIDING TIMELY, RELEVANT, AND ACCURATE
GEOSPATIAL INFORMATION TO SUPPORT OF DISASTER MANAGEMENT



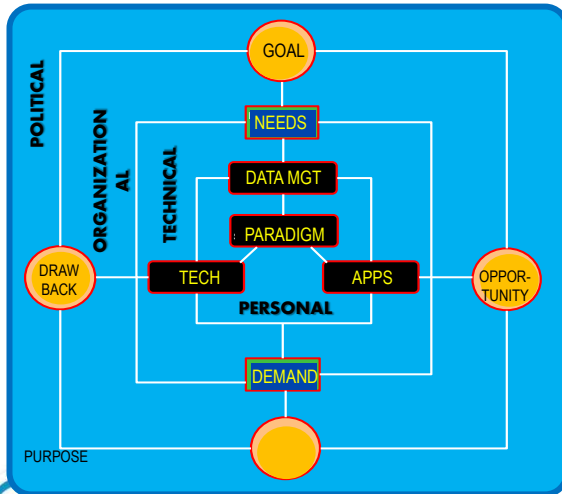
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RESUME : Ina-SDI FOR DISASTER MANAGEMENT → CHALLENGES AND OPPORTUNITY



- **Our strength** is strong political support, has stated strong organizations' vision and underlying measurable missions.
- **Our challenges** lies in in technical level and personal level, both in quantity and quality.
- **Our plan** to overcome these challenges is to empower academia through establishing SDI Centers in 8 top universities and Constructing new standard of competence and professionalism, both in government and the geospatial related industries.



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با تشکر از شما Thank You ... See You in Bali



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