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Toponymic data files and gazetteers:
Data maintenance

The progress work of toponymic geo-database for preparing National Gazetteer

Submitted by Indonesia**
Summary

Indonesian toponymic geo-database is facing a new paradigm with the born of Act Number 4 Year 2011 regarding Geospatial Information and the transformation of National Coordination Agency for Surveys and Mapping (BAKOSURTANAL) into Badan Informasi Geospasial (BIG). Toponymic geo-database conducted by BAKOSURTANAL in the last stage, where collected into region and developed as seamless toponymic geo-database in order to establishing National Gazetteer. In this paper describe the current status of toponymic geo-database.

Background

Indonesian toponymic geo-database is facing a new paradigm with the born of Act Number 4 Year 2011 regarding Geospatial Information and the transformation of National Coordination Agency for Surveys and Mapping (BAKOSURTANAL) into Badan Informasi Geospasial (BIG). In this Act Number 4 Year 2011 Article 12 letter d mentioned geographical names as part basic geospatial information and proceed with Article 15 which states that the name referred topographical collected using procedures for the collection of topographical names in accordance with the provisions of the legislation. This is in line with Presidential Regulation No. 112/2006 concerning the National Team for Standardization of Geographical Names in Indonesia and the Minister of Home Affairs Regulation No. 39/2008 on General Guidelines for Standardization of Topographic Names. Two aims of standardization of topographical names closely related with Act No.4/2011 are providing an accurate geospatial data and information on topographical names of the Unitary Republic of Indonesia and publishing national gazetteers to provide a common understanding on topographical names in Indonesia.

Providing data (status until 2011)

The availability of topographic map series of Indonesia at various scales such as 1:25,000-1:50,000 which compiled on seamless of toponymic geo-database (see Figure 1). But, topographic map series of Indonesia at scale 1:10,000 not yet compiled into seamless of toponymic database. Bopunjur area (Bogor, Puncak, and Cianjur), Mataram, and west coast of Sumatra Island already mapped in scale 1:10,000 (Figure 2). Those areas are already prepared in database, but not yet compiled into seamless of toponymic geo-database.

The Development on Stage of Work

Start in 2011, software used in processing geographical names obtained from topographic map: AutoCAD Map, ArcGIS and MS Access. Previously, automated data-processing systems using ArcInfo but now used two GIS software: AutoCAD Map (data preparation) and ArcGIS (building toponymic geo-database and geographical names seamless form). In the future work, this toponymic geo-database will be loaded into The Indonesian Geographic Names Service (IGNS).
Figure 1. Availability Index of Topographic Base Map Scale 1:50,000 and 1:25,000 until year 2011
(Source: Centre for Topographic Base Mapping-BAKOSURTANAL, 2012)

Figure 2. Availability Index of Topographic Base Map Scale 1:10,000 until year 2011
(Source: Centre for Topographic Base Mapping-BAKOSURTANAL, 2012)
The current status of toponymic geo-database

Toponymic geo-database conducted by BAKOSURTANAL in the last stage, where collected into region and developed as seamless toponymic geo-database in order to establishing National Gazetteer. The automated data-processing system of toponymic data has been presented in the Ninth United Nation Conference on the Standardization of Geographical Names (UNCSGN). In this paper describe the current status of toponymic geo-database. This geodatabase has been used on verification and validation the names of prefectures (administrative areas) in years 2009-2011. In 2012, toponymic geo-database prepared for verifying and validating the names of natural geographic feature in 8 (eight) Provinces in Indonesia.

Geographical names in toponymic geo-database obtained from topographic map series of Indonesia at various scales such as 1:25,000-1:50,000. The progress work of 2004-2011 on activities of building database of geographical names almost compiled all geographical names from the maps. In order to maintenance toponymic geo-database at the end of year always compiled into toponymic geo-database (Figure 3). In 2012, the activity of building database of geographical names conducted to complete Papua region. Those data stored into shapefile format and Ms. Access format (*.mdb), also on ORACLE centrally.

In the future work, toponymic geo-database will be processed into IGNS schema. The Indonesian Geographic Names Service is envisioned to be an authoritative source of geographic names in Indonesia. ESRI Global through ESRI Indonesia provides support for BAKOSURTANAL toward the development of an initial operating capability of IGNS. IGNS will be managed at BAKOSURTANAL as part of the Indonesian Spatial Data Infrastructure (Ina-SDI). ESRI Global proposes an initial schema for IGNS reference data as listed below.

- OBJECTID: <auto generated>
- NAMA_GEOGRAFIS: [NAMA_GEO2]
- JENIS: [NAMA_UNSUR]
- STATUS: “Telah diverifikasi”
- SUMBER: “BIG, Toponim 2012”
- LINTANG: [LINTANG]
- BUJUR: [BUJUR]
- KIRIBAWAH_X: [BUJUR] – 0.3
- KIRIBAWAH_Y: [LINTANG] – 0.3
- KANANATAS_X: [BUJUR] + 0.3
- KANANATAS_Y: [LINTANG] + 0.3
- PRIORITAS: 1
Figure 3. The status of Toponymic Geo-database until 2011

Figure 4. Index of Work on Building Toponymic Geo-database in year 2012
The result of toponymic geo-database, in printing needs to help user, this database prepared on its printing format in gazetteer for each scale. In this compiled database there are two map scale; 1:50,000 and 1:25,000 which can be seen in the map sheet number (on printing format).

![Image of Gazetteer of Badung Regency (Map Scale 1:25,000)](Figure 5. Gazetteer of Badung Regency (Map Scale 1:25,000))

![Image of Gazetteer of Majene Regency (Map Scale 1:50,000)](Figure 6. Gazetteer of Majene Regency (Map Scale 1:50,000))