

Crowdsourced Toponym Handling in the Indonesian Legal and Regulatory Framework

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ABSTRACT

Toponyms are part of the fundamental spatial information provided by Badan Informasi Geospasial (BIG) and are mandated by Indonesian Law No. 4 Year 2011 on geospatial information. New issues like conflicting rules emerged after the Indonesian National Names Authority was terminated and its tasks moved to BIG. Indonesian toponyms experts and BIG also noticed the significant role of the citizen as a toponymist for the collection of multi-source gazetteers and other datasets related to crowdsourced geographic information. In this paper, we outline the process and accomplishment of workshops and meetings that facilitated drafting legal procedures with several stakeholders on toponyms in Indonesia.

1. Introduction

The UN Geographical Name Experts Group has been promoting the preservation of geographical places names (toponyms) since 1959, and has been encouraging every country to collect and maintain geographical place names (United Nations 2006; Zaccheddu 2017). UNGEGN provides each country with a background to develop their regulation, by developing a legal framework for collection and maintenance of toponyms. Furthermore, it is the responsibility of a national names authority (NNA) or group of toponym experts to share their knowledge and existing toponymic guidelines with the interested stakeholders.

In Indonesia, because of its large geographical extent over many islands and the variety of languages, regulation on toponym information handling is urgently required. In addition, organizational issues and limited human resources also have to be addressed. BIG has examined multiple gazetteer sources and volunteered geographic information (VGI) for verification and integration with the national toponymic files and gazetteer. However, the preparation of a legal framework as a structure for the operations still requires concrete intervention to allow citizen involvement. Citizens in general engage mostly passively in the current toponymic practice. We employed focus group discussions (FGDs) and technical workshops on citizen-science approaches. FGDs among multiple stakeholders at national level and a technical workshop conducted at the local level have initiated a recommendation for citizen participation in more active ways.

Evaluation of crowdsourced geographic information (CGI) for government gazetteers was explored and submitted at the 10th United Nations Conference on the Standardization of Geographical Names (UNCSGN) in New York, 2012. The findings are that crowdsourcing can help government agencies to receive more information, and crowdsourcing gives insights not available to conventional data collection. Its further points state that crowdsourcing for emergencies and ongoing data collection activities are different (Kostanski 2012). These insights have led and stimulated this research to help citizens participate and to create a legal framework for CGI support on toponyms.

We refer to toponymic crowdsourced geographic information (Toponymic CGI) as "toponyms harvested from multiple data collections," through the integration of multiple data sources, crowdsourcing, and participatory mapping.

2. Toponymic CGI on drafting of toponyms regulation in Indonesia

The current Indonesian hierarchy of legal norms is regulated in Law No. 12 of 2011 on the Formation of Laws and Regulations (Republik Indonesia 2011). The most fundamental legal norm is the 1945 Constitution of the Republic of Indonesia, followed by (in order of decreasing importance) the Decree of the People's Representative Assembly, generic laws, an interim laws, Government Regulations, Presidential Decrees, Regional Regulations at the province level, and finally Regional Regulations at the city/district level. Previously, the Indonesian NNA had been created by a Presidential Decree (Republik Indonesia 2006). Due to redundant roles and overlaps with the geospatial information Act No 4 Year 2011, the Indonesian NNA was terminated. The same geospatial information Act No 4 also established that toponyms are part of basic geospatial information, and on the basis of an assessment of the simplification of non- structural organizations in Indonesia, the Indonesian NNA's function was given to BIG which is accountable for geospatial information. Three major issues arose from these adjustments: confusion among stakeholders due to the duality of toponymic organizations and procedures (rules derived from previous regulations vs. rules developed under new regulation), legal uncertainty, and lack of effectiveness in implementing toponyms handling in the current situations.

Generally, the proposal of a new government regulation on toponyms may consist of the chapters below. It can still be adjusted, as the Ministerial Representative is still discussing this draft.

- Chapter 1. General Requirements consist of articles with terms definitions used in this regulation. For example, definitions of toponyms, man-made and natural features, toponyms handling, gazetteer, and stakeholders involved in toponym handling.
- Chapter 2. The Regulatory Scope consists of articles which introduce principles of geographical naming in Indonesia, and explain the process of toponym collection until publication in the form of a national gazetteer. The principles of geographical naming in Indonesia (Lauder 2015) consist of:
 - Principle 1 Use the Roman script
 - Principle 2 Use one name per geographic feature
 - Principle 3 Preserve local language names
 - Principle 4 Comply with government legislation
 - Principle 5 Respect the existence of ethnicity, religion, race, and class
 - Principle 6 Do not use proper personal names of people who are still alive
 - Principle 7 Use Indonesian rather than foreign languages
 - Principle 8 Limit names to a maximum of three words
- Chapter 3. Toponym Collection explains more details on the procedure of collecting toponyms which introduce two types of participatory toponym handling in the workflow: participatory mapping and crowdsourcing. This chapter also states the toponym information that should be collected by data collector. It may consist of the name of features, coordinates (geographic location), the meaning of the name, any other name (alias name), origin of language, the history behind the naming, spelling, and pronunciation. Authority and control of toponyms handling are also governed in this chapter. For instance, if there is a conflict between two districts over the naming and ownership of islands, then the province should try to assist solve these issues. If problems have occurred between provinces, then NNA should be of assistance in dealing with them.
- Chapter 4. Geographical Naming and Renaming describes the basic principles and procedures for giving and changing names.

- Chapter 5. Toponyms Review and Verification describes multiple stages of a review and verification process (bottom-up approach).
- Chapter 6. Public Consultation (announcement to the public recommends unprecedented transparency. If there is an objection from the public, the toponyms will be re-evaluated before they are designated as official toponyms.
- Chapter 7. Determination of Official Toponyms describes the authorization of toponyms as part of the national gazetteer.
- Chapter 8. National Gazetteer describes the role of BIG as Indonesian NNA to publish the gazetteer.
- Chapter 9. Toponyms Handling explains the roles of stakeholders involved in handling toponyms. For example, NNA, local committees, and members of the public have tasks and responsibilities to participate in preserving toponyms.
- Chapter 10. The Role of Indonesian NNA in International Organization and Meetings covers the tasks of BIG to represent the Government of Indonesia in UNGEGN meetings.
- Chapter 11. Capacity Building and Monitoring Evaluation explains the development of human resources through education and training on toponyms, including how to monitor and evaluate toponym data handling projects.
- Chapter 12. Transitional Provisions describes transitional process from previous regulations.

A proposal of citizen involvement on toponyms handling was introduced among toponymic stakeholders in Indonesia and has triggered BIG to develop more concrete policies, procedures, and guidelines on toponyms. Then intensive FGDs on drafting legal procedures followed, led by BIG, and supported by the Law Faculty of Gadjah Mada University in Indonesia. In high-level discussions, the legal preparation process was set up. The process and milestones achieved recently in developing the new regulation are shown in Figure 1.

Problems were identified and an agenda set through literature review, best practices or lessons learnt from other countries, existing toponymic practices in Indonesia, and targeted or proposed agenda (such as citizen involvement and collaborative approach in multiple sector or level). Two milestones (draft of a government regulation and formation of inter-ministerial committee) were achieved through several workshops and discussions. An inter-ministerial committee was recently established to continue working on policy making processes (consultation, discussion, and coordination).

There are four recognized methods to collect toponyms in the draft proposal for a new legislation on toponyms (see Figure 2). First, the field survey approach is a traditional way of collecting toponyms, which has already been carried out by national authorities and the local toponyms committee. The second method conducted for supporting the field survey activity is the secondary data collection, with further information and linked data to toponyms.

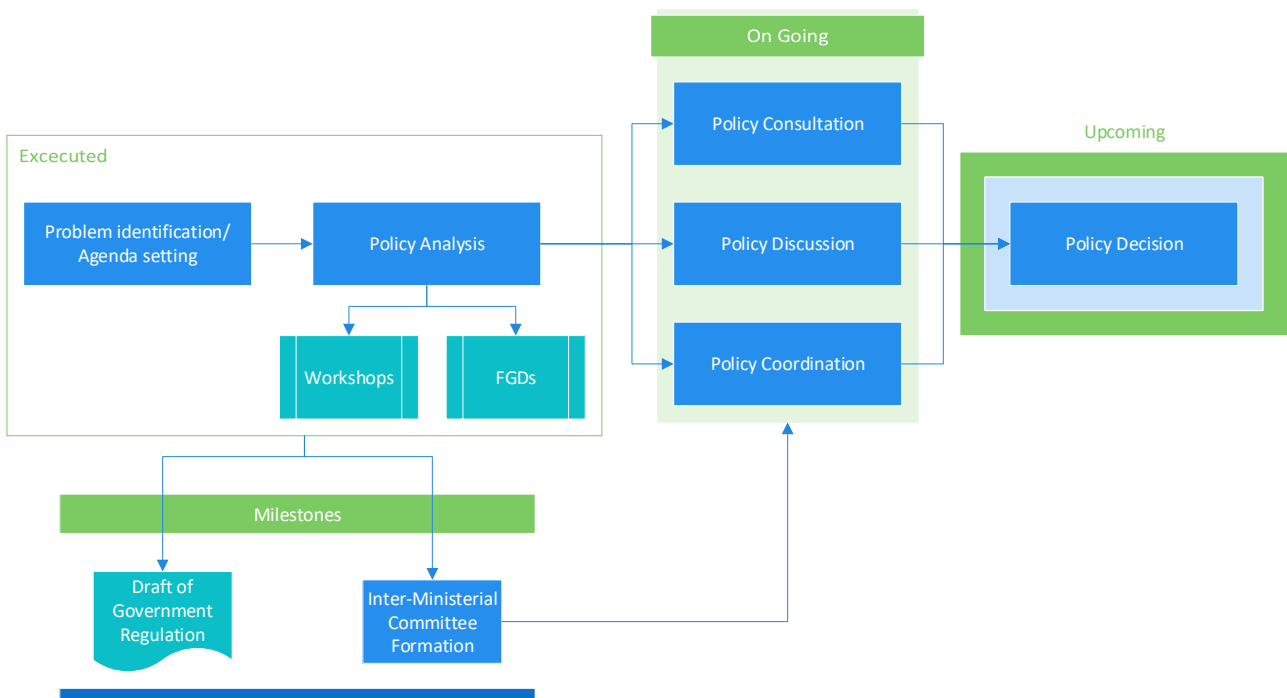


Figure 1. The process of developing new policy on toponyms in Indonesia

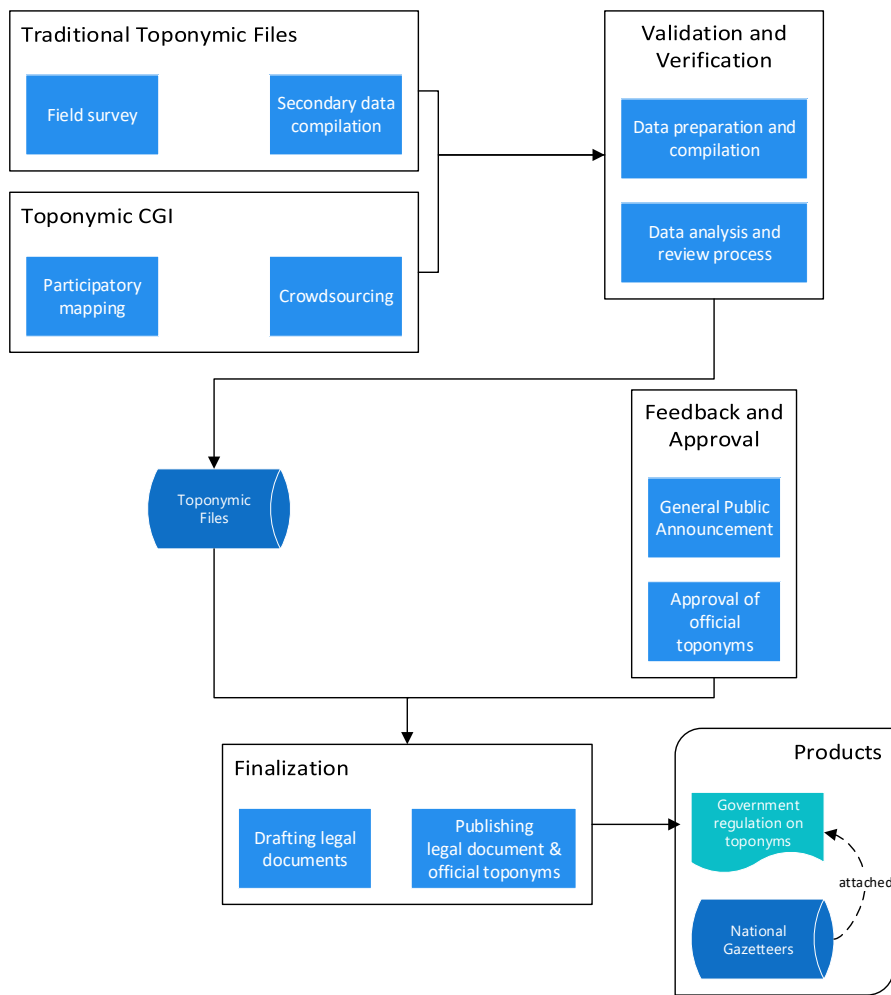


Figure 2. Proposal of toponym handling in new regulation on toponyms in Indonesia

The workflow introduces two new methods that produce toponymic CGI: participatory mapping and crowdsourcing. In this regulation, participatory mapping activities on toponyms are defined as toponymic data and information collection activities, involving community groups or organizations, and emphasizing community involvement in the mapping processes. Currently, participatory mapping in Indonesia is common to indigenous people and environmental issues, which are recognized as projects carried out by local and international NGOs. Crowdsourcing on toponyms is defined as the collecting of toponyms with citizens' active participation, particularly members of the public where data is stored in the organizer database. The Humanitarian OSM Team Indonesia stated that the OSM dataset was produced in Indonesia by crowdsourcing and supported humanitarian and disaster mapping.

In relation to two citizen approaches for collecting toponyms, workshops need to be developed and conducted. BIG considers using incentives to encourage public participation. It needs to be examined as well as the active engagement of the public (organizers, municipal, and BIG). The information collected or contributed by a citizen shall be kept as a citizen layer for verification and integration into the official toponym files and gazetteers.

During the drafting phase, BIG noticed that the protocols and current SOPs developed by BIG or other organizations need to be evaluated. The government is also aware of the leverage of the citizen's role, not just as a passive contributor, but also as a citizen toponymist. Within the framework of participatory toponyms, the government promoted participation of citizens in the legal drafting of a new regulation on toponyms. This allows local governments to involve individuals or NGOs in the handling of toponyms more actively. Nevertheless, the preservation of place names in their areas is an easy action for people to engage and work as toponymist. Once the regulation has been enacted, the government must establish and publish guidelines for citizens to take part in the handling of toponyms.

Ethical aspects on toponyms are being considered for discussion and put in the new protocols and SOPs of crowdsourced or participatory toponym handling. The traditional collection of toponyms used informed consent during interviews with local people and asked for approval to do so before recording the voice of place names pronunciation. Likewise, surveyors asked for their permission to collect private information, such as the name of the person and the address (marking their geographic coordinate location), to help monitor and ensure that the surveyor goes directly to the field. Personal data is well maintained and is only used for demographic analysis of toponymic survey projects. Recently, the utilization of the SAKTI mobile application for collecting toponyms in Indonesia (Geospatial Information Agency of Indonesia 2017) raises new issues on data quality, data sharing, and intellectual property. At present, BIG explains these ethical issues at the beginning of education and training on toponyms before the data collector starts using a mobile application. Since the SAKTI mobile application is still restricted to registered users as a representative of the local committee on toponyms, and not yet offered to citizens, some problems have not yet been realized in practice. All data will be maintained in BIG servers, and no personal data will be published. However, according to the geospatial information Act No 4 Year 2011, toponyms as part of basic information geospatial in Indonesia should be publicly available as toponymic open data. This obviously leads to many unsolved issues related to legal and ethical aspects of toponymic CGI.

3. Next steps: enactment and enforcement of government regulation

After the enactment of the Government Regulation on standardization of geographical names in Indonesia, the first step is for BIG to create the organizational structure that is mandated in the regulation, together with other ministries and agencies. Subsequently, BIG and the Ministry of the Interior work together to create budgeting guidelines for toponymic survey projects and provide supporting ministerial regulation on local government budgeting for toponyms handling.

From technical and educational aspects on toponyms, BIG starts with the improvement of existing mobile and web-based applications, a single database structure for multiple uses, toponymic harvesting methods, and large-data processing tools. On the other part, a group of toponyms experts and a technical team on toponyms are responsible for modifying or updating toponymic (technical) guidelines and procedures. All of these processes are still going on and parallel with the policy making process to produce the government regulation.

Enforcement of the regulation should start by building a stronger partnership with multiple stakeholders. At a higher level, it remains a challenging step to improve collaboration between several ministries and agencies. The Indonesian NNA led by BIG should continue to establish capacity building for local governments and other stakeholders. Another task in dealing with crowdsourced toponym handling is to activate collaboration work between a group of experts on geographical names, the research community, local government, and members of the public.

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