The Development of Tourism Atlas to Support Tourism Sector in Indonesia

Setiyani[1], S. Eka Wati, Turmudi, F. Mustofa,

National Coordinating Agency for Surveys and Mapping (Bakosurtanal)
Jl. Jakarta Bogor KM 46 Cibinong INDONESIA
Paper Number: 6
Email: *tian2308@yahoo.co.id*

Tourism sector is one of important sectors which support the national income in Indonesia. In 2007, tourism sectors gave contribution 4.29% to National Gross Domestic Product (PDB). Regarding to this condition, tourism sector has to be regularly developed to improve the PDB. To promote tourism sector in Indonesia, some strategies must be conducted. The strategies are related to promotion, dissemination, and socialization of tourism objects through electronic media, book, leaflet, etc. As an example, tourism information can be presented on an atlas which compiles tourism information (object scenery, accessibility, and supporting facilities) in a certain area.

The atlas is created by using primary data collected through field survey and secondary data achieved from related institutions. The data consists of photo, object description, map, and other additional information. The data are then processed by means of particular software and consider cartographical concept. The atlas is subsequently published and disseminate into many regions in Indonesia, especially national and local tourism board.

Tourism atlas becomes one of essential tools to support promotion activities. It helps domestic and international tourists to understand the intended tourism object and to better arrange holiday's plan. Moreover, the atlas provides spatial information which can be utilized for further purpose.

Keywords: *Tourism, Atlas, Indonesia, Cartography*

I.   INTRODUCTION

Indonesia, an archipelagic country which consists of thousand islands, is located in a very strategic location. It extends between Hindia Ocean and Pacific Ocean and passed by equatorial line. Besides, Indonesia is situated in tropical zone with two seasons, dry and rainy season. Due to these conditions, Indonesia becomes a part of sea trading track, particularly in South East Asia Region and world globally. Indonesia also offers convenient weather supporting the growth of natural biodiversity and the uniqueness of landscape phenomena.

---

[1] Corresponding author, email: tian2308@yahoo.co.id

The existing landscape and biodiversity has been managed as point of interest in terms of tourism destination. There are a lot of natural objects that have already developed as famous tourism spots, for example Anyer Beach in Banten, Ranau Lake in South Sumatra, Mount Bromo in East Java, Bunaken in North Sulawesi, etc. Those interesting locations have been supported by many facilities, such as hotel/cottage, restaurant/food stall, transportation modes, and professional guide. Besides, those locations also grow up as a center for business and leisure which

In spite of natural objects, there are also many cultural and historical objects which can be found in Indonesia. Those objects consist of museum, monument, fort, cultural attraction, etc. Some of the objects were built over a century ago related to colonial era of Portuguese and the Netherlands in Indonesia. Historical memories in such buildings remain a long story which attracts many visitors to learn and to explore Indonesia from the past era up to present. Most of visitors are students and foreign people.

With many tourism objects and interesting places spread out from Sabang to Merauke, Indonesia becomes one of world tourism destinations. A strong effort is needed to disseminate and to promote tourism objects in order to globally socialize the tourism paradise in Indonesia. One of the promotion ways has been done by creating some tourism atlases which cover several provinces in Indonesia. Tourism atlases reveal as an effective way to publish many interesting tourism objects and to give a guidance to visit such places. Through these atlases, visitors, both domestic and international, can arrange their holiday and prepare it well. Moreover, their visits can also improve local and national income which will be used to support the development of tourism sector and the other sector in Indonesia.

II.   DEVELOPMENT OF TOURISM ATLAS
Tourism atlas is a collection of maps and narrative that presents information tourism object, i.e. object's scenery, facilities, distance from the nearest or well known city, and infrastructure. The atlas is developed through several phases, such as preparation, field survey and data collection, data processing, compilation, quality control, and printing.

2.1. Preparation
The preparation involves some activities, i.e. preparing the material, making technical specification, making of atlas dummy, and creating editorial team. The editorial team comes from related organizations such as Ministry of Tourism and Creative Economy of Republic of Indonesia, University of Indonesia, and Professional Graphical Designer.

2.2. Field Survey and Data Collection
The atlas is created by using primary data and secondary data. Primary data are collected by field survey, for example: taking photographs, recording coordinates and interviewing the local people/authority/visitors. On the other hand, secondary data are

collected from related institutions, internet and library. The data consist of photo, object description, map, and other additional information.

The data are collected regarding to some criteria such as location, accessibility, history, special characteristic, and tourism object status. Based on those criteria, tourism object can be divided into natural object (beach, marine parks, waterfall, reservoir, garden, natural scenery, cave, etc), cultural object (temple, palace, and pilgrim), man-made object (museum, monument, zoo, botanical garden, agro tourism, water parks), cultural performances (traditional art, bull racing, craft), special interest object (golf, rock climbing, rafting, etc).

2.3. Data Processing

Data processing includes map generation, photo editing, and narrative compilation. The maps are developed by considering cartographical aspects. The aspects involve symbol classification, legend, map scale, coordinate, names for places, and map index. Map processing itself is done by utilizing special software, i.e. Macromedia Freehand.

Symbol is used to replace or represent tourism objects on the map (see in Figure 1). In cartographical context, symbols are arranged in the proper location. Symbols are drawn with easily recognizable shape. According to their shape, the tourism map symbols can be categorized into pictorial symbol, geometric symbol, text symbol or numeric symbol, and combination symbol.

The symbols are gathered and presented on the map legend. On the map legend page, tourism symbols are displayed together with the other symbols used on the map. Legend is an important key to read and to understand the map because it contains of all information that explains the used symbols.
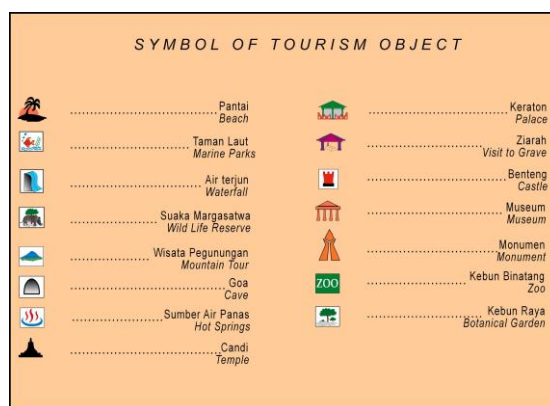

Figure1. Example of tourism object symbols

In developing tourism maps, it is important to consider the scale of base map. The scale selection can be determined according to the size and density of information in a certain region. For example: urban areas use the scale of 1:5.000 - 1:25.000. A relatively

narrow area with moderate-dense tourism information uses scale of 1:150.000 or larger (see Figure 2) whereas a large area with moderate-dense tourism information uses scale of 1:250.000 or larger. Moreover, scale of 1:500.000 or larger is applied for a large area with rare-moderate tourism information.
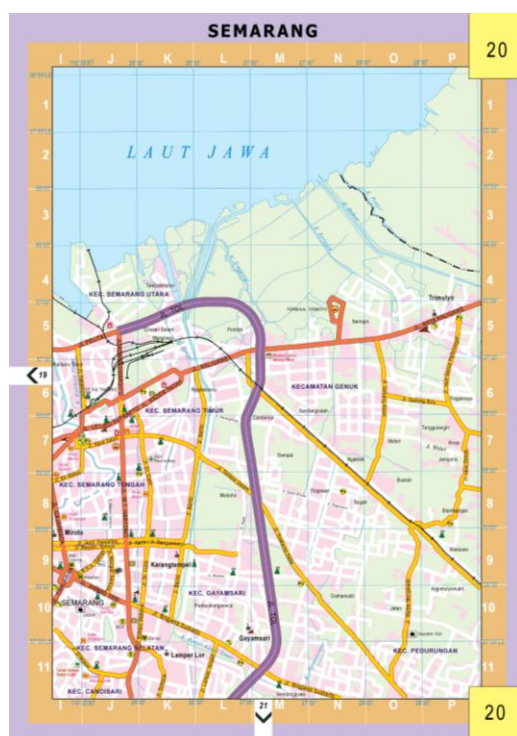

Figure2. Sample of relatively narrow area with moderate-dense tourism information

Information about names for place and natural object must be displayed on the map. The names in relation to location consist of names of villages, districts, provinces, streets, rivers, mountain, etc. The names help visitors to easily identify the location of tourism object. Location and accessibility is one of significant factors which influence cost and budget that has to be prepared by tourists. The object which is located in a quite far location and unsupported with adequate transportation is the main reason for the overwhelming cost.

In spite of mentioned information, the atlas is also equipped by map index (see Figure 3). The index assists user find the map regarding to map sheet numbering system. The

index allows user to read and track the information on the whole map even it is developed into several pages.

Tourism atlas is supported with photos as well. The photos should have good enough quality, so they can describe the real condition of tourism object. Sometimes, the photos have different qualities influenced by weather, biological environment, used camera, and the user. To improve the picture quality, the photos must be edited. The editing process comprises contrast sharpening, color-balanced arrangement, cutting and increasing the resolution. This activity is conducted by using Adobe Photoshop software.

The other important element in the atlas is narrative. The narrative describes the characteristics of the tourism objects, geographical location, physical situation of the area, accessibility, distance, travel time, and cost from the nearest city to the object. Besides, the narrative also explains the appeal of attractions and supporting facilities, such as description of beautiful natural scenery, uniqueness of culture, accommodation and the other facilities exist nearby the tourist attractions.
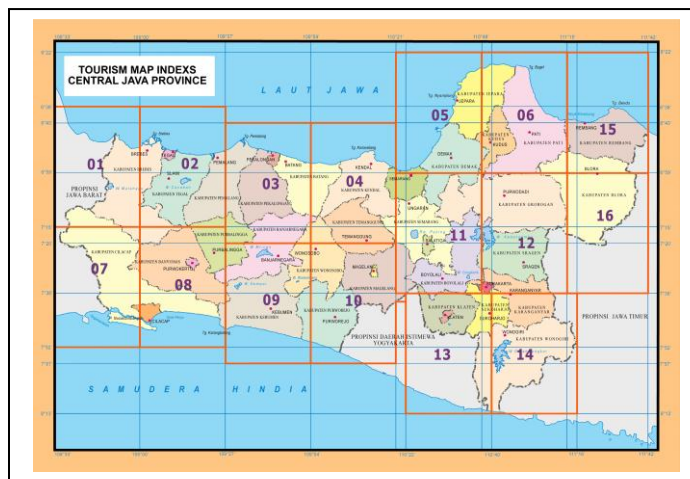

Figure3. Sample of map index

2.4. Data Compilation
All data that have been processed are then compiled into an atlas. The data are put in the book pages arranged systematically. The book generally consists of three main sections. Those are description of tourism object (narrative and photos); list of facilities (hotels, restaurants, shopping centers, money changer, banks, travel bureau, etc); and maps.

In order to develop more interesting atlas in terms of informative and attractive appearance, it is needed to consider and to involve graphical design aspect. Such

aspect uses the design principle of main visual communication. The principles themselves consist of white space, clarity, simplicity, and emphasis. White space is intended to arrange the position of the object in order to avoid crowded appearance. Clarity considers point of view of the readers so they can easily understand the contents without ambiguous thinking. Then, Simplicity means to make harmonious layout. Therefore, the readers is not saturated and perplexed due to unnecessary items. Emphasis can be defined as the center of attention or to emphasize one element at the center of attention to achieve artistic value.

Figure 4. Sample of atlas page layout

2.5. Quality Control

Quality of tourism atlas is depending on the intensity of quality control process. This required step should be done to eliminate some errors in the atlas and to revise them. Some elements that have to be controlled are maps, narration, composition and layout, and process of printing.

- Quality control of the maps considers map accuracy, informative, and efficiency related to the amount of space on each layout. Accuracy comprises object placement, road/street, and appropriate position for object's name. Informative aspect is related to uncomplicated and readable element placement on maps. Map efficiency can be shown through placement with proper size and considers space allocation.
- Quality control on narration is an activity to check the narration in terms of contents, grammar, and spelling. Narrative explains the feature of tourism object which cannot be revealed on pictures and photos.
- Composition and layout in the atlas should be balanced. The composition takes into account color balance, contrast, and sharpness.

- Quality control during process of printing is the last phase. Quality control in this phase includes color separation, file transferring to the film, making of printing plate, accuracy of placement the letter, color arrangement on process of printing, sorting of printing output, etc.

2.6. Process of Printing

Process of printing is the final process of the development of tourism atlas. Quality of appearance atlas determined on this phase.

3.   THE USE OF TOURISM ATLAS

Tourism atlas reveals as one of significant tools in tourism sector. It is used to help local government in promoting tourism objects for domestic tourist and overseas tourist. The atlas with its interesting appearance becomes a guidance to explore Indonesia. The contents of the atlas helps domestic and international tourists to understand the intended tourism object and to better arrange holiday's plan.

The atlas is also utilized to present and to provide information in relation to investment potency in the tourism industry in Indonesia. Indirectly, tourism atlas supports the improvement opportunity to increase National Gross Domestic Product (National GDP). Based on the data from Tourism and Cultural Agency (Depbudpar, 2008), tourism sector contributes 5%, 6.45%, 4.3%, and 4.28% to National GDP in 2004, 2005, 2006, and 2007 respectively (see Table 1).

Table1. Contribution of Tourism Sector to National Economy

Item	Year			
	2004	2005	2006	2007
National Gross Domestic Product (Trillion Idr)	2,273,14	2,784,90	3,339,50	3,957,40
Contribution from Tourism Sector (Trillion Idr)	113,78	146,8	143,62	169,67

Source: Nesparnas, Depbudpar, 2008

The atlas will develop to cover the whole area of Indonesia. It is intended to provide the most comprehensive tourism book which is needed both by government and public. Up to 2011, the ten tourisms atlases has been generated, for example tourism atlas of East Java Province, tourism atlas of Bangka Belitung Islands Province, tourism atlas of North Sulawesi Province, and tourism atlas of Gorontalo Province (see Figure 5).
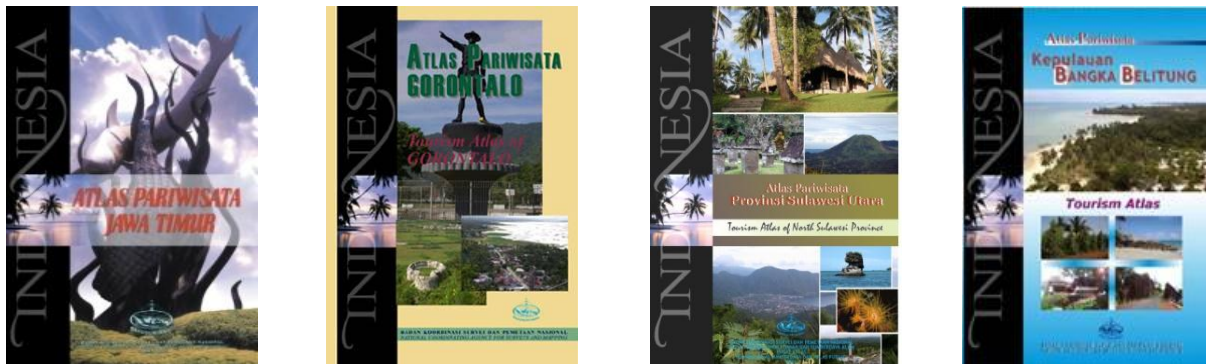
Figure 5. Several Tourism Atlas Which Have Been Developed

4. CONCLUSION

The development of tourism atlas is expected to help the tourism sector to improve services information on tourism objects and to give a positive impact on the tourism industries.

5. BIBLIOGRAPHY

BAKOSURTANAL. 2005. Atlas Pariwisata Jawa Tengah.

BAKOSURTANAL. 2005. Atlas Pariwisata Jawa Timur

BAKOSURTANAL. 2005. Norma Pedoman, Prosedur, Standar, dan Spesifikasi Atlas Pariwisata: Spesifkasi Atlas Pariwisata.

DEPBUDPAR. 2008. Contribution of Tourism Sector to National Economy.

Widjojo, S. 2010. The Use of Satellite Remote Sensing Imagery To Support Indonesian Tourism