

## SPATIAL DISTRIBUTION OF TOPONYMY IN KARST AREAS GIRITONTRO

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### ABSTRACT

Every object in the form of an earth element or man-made feature has a name with various origins. The origins of place names can be categorized based on geography, history, folklore/culture and language so that their spatial distribution can be known. This research explores the spatial distribution of the origins of naming earth elements and man-made features in the Giritontro District. The study begins by identifying the aspects of the earth's appearance and man-made features and then finding the meaning of naming each identified element. Data collection was carried out using in-depth interviews. Determining the sources used the snowball sampling method. The results of the research show that the toponymically identified objects are dominated by man-made features with a spatial distribution of 92% in Giritontro Village, 72% in Pucanganom Village, 52% in Tlogosari Village and 78% in Jatirejo Village. The remainder is dominated by the earth's elements of the Karst Area, such as caves, hills, and springs, with a spatial distribution of Bayemharjo Village at 63%, Ngargogarjo at 53% and Tlogoharjo Village at 66%. Meanwhile, the spatial distribution of toponymy in Giritontro District, whose origin is dominated by language, is known to be spread across Giritontro District with a percentage of 60%. Apart from that, the toponymy found was predominantly geographically dispersed across Pucanganom Village with a portion of 40%, Tlogosari Village at 60%, Jatirejo Village at 61%, Bayemharjo Village at 61%, Ngargoharjo Village at 57% and Tlogoharjo Village 46%. The geographical conditions referred to are those attached to the object or the object's proximity to geographical things (associations) which are dominant in the Karst Area.

**Keywords:** *Karst Areas, Man Made Features, Spatial Distribution, Toponymy, Earth Elements*

### INTRODUCTION

Geographic names play an irreplaceable role in landscape identification, navigation, and all other activities that occur in space (Azaryahu, 2011; Jordan, 2012; Rose-Redwood et al., 2017; Rose-Redwood & Alderman, 2011). In



addition to their primary function as spatial identification, geographical names often carry a certain symbolism through which the various causes of the person naming them are expressed subtly or overtly to give a certain impression. Geographic names are messengers about who the objects they refer to belong to or who they should belong to, which can influence the way they are perceived. Geographic names shape social space by labelling places and associated ideas and images (Azaryahu, 2011; Cooper, 1993; Rais et al., n.d.; Rose-Redwood et al., 2017; Vuolteenaho et al., 2009). Many places are identified by several geographic names and a phenomenon known as toponymy.

Toponymy comes from the Greek *tópos* which means "place", and *ónoma* which means "name", is a branch of onomastics which studies place names (toponyms), their origins, meanings, uses and typology (Kadmon, 2000; Monmonier, 2006; Reinoso & Tort, 2015; Ruspandi, 2016). An ethnobiological approach can help better understand the relationship between names of objects and places with geographical conditions (Siderius & de Bakker, 2003). Toponymy is an excellent topic that combines local/rural and expert/scientific knowledge, which

contains many elements gathered from physical, social and cultural dimensions (Cooper, 1993; Donald, 1987; Kadmon, 2000). Toponymy is also an important signal of the distinctive identity of a place or object, the establishment and communication of which are the fundamental goals of place branding activities (Kavaratzis & Ashworth, 2008). So that people who hear the name of a place or object will immediately imagine its location and shape.

Nowadays, thanks to the availability of historical cadastral maps in many countries (Femenia-Ribera et al., 2022; Post & Alderman, 2014; Radding & Western, 2010; Tichelaar, 2002) the study of toponymy goes beyond the classical approach to "historical, etymological, philological, and semantics" (Ardanuy & Sporleder, 2017; Capra et al., 2015a; Conedera et al., 2007, 2009; Kavaratzis & Ashworth, 2008), by including the relationship between place names and cultural and traditional landscapes (Corona et al., 2018; Fagúndez & Izco, 2016; Payne, 2001; Penko Seidl, 2008). Considering toponymy as a language of landscape (Atik et al., 2022) makes an important contribution to ethnoecological studies (Capra et al., 2015b; Siderius & de



Bakker, 2003), as it recreates images that reflect situations that, sometimes, date back centuries. Centuries or thousands of years ago (Maxia, 2020).

In the discipline of Geography, geographical names or toponyms are one of the requirements for making a map; if these names are not included, it is called a blind map. However, many scientists in the field of geography do not yet know the meaning behind toponyms (Ayu Segara, 2017; Budi Haryono et al., 2021; Luo et al., 2017), and are often less interested in toponymy theory because they only need to know with what name each object to be mapped must be known and recorded (Kavaratzis & Ashworth, 2008; Perdana & Ostermann, 2018; Tichelaar, 2002). In fact, if studied more deeply, toponymy contains much geographical information that can be used as a basis for studying geosphere phenomena in a place because even though toponymy often has deep meanings involving complex semantics related to language and history (Ardanuy & Sporleder, 2017; Capra et al., 2015b; Luo et al., 2017; Radding & Western, 2010) (Capra et al., 2015; Ardanuy & Sporleder, 2017), but many toponyms also describe the features they name (Conedera et al., 2007; Perdana &

Ostermann, 2018; Reinoso & Tort, 2015).

Based on the geological map sheet of Surakarta-Giritontro, 98% of the area in the Giritontro District is in the Gunungsewu Karst Area. Karst areas can be characterized as landforms formed in solvent rocks such as carbonates (limestone, dolomite and marble), evaporite rocks (anhydrite, gypsum and halite), and some non-carbonates which to some extent can dissolve, such as quartzite and sandstone containing silica (Ford & Williams, 2007; Goldscheider et al., 2020; Jiang et al., 2014). These areas are regularly described by the presence of surface landforms, for example, dolines, poljies, and sinkholes. The subsurface elements incorporate underground conductors and cavities that may form caves, as well as extensive subsurface water frameworks (Fiorillo, 2009; Ford & Williams, 2007; Goldscheider et al., 2020; Kuzichkin et al., 2021; Parise et al., 2018; Stevanović, 2018; Wijayanti et al., 2022). The structure of the karst region has stunning surface and subsurface views due to its interaction with groundwater and surface water systems. Surface groundwater is often found in the form of springs, which supply clean water to communities (Ford



& Williams, 2007; Stevanović, 2019; Wijayanti, 2020; Wijayanti & Noviani, 2021; Zeng et al., 2015).

Giritontro District itself comes from the words "Giri", which means mountain, and "tontro", or "tan antoro", which means there is nothing in between. When combined, Giritontro means connected mountains. Geomorphologically, the Giritontro District area is dominated by the interconnected Gunungsewu Karst mountains. All the objects in the Giritontro District likely have interesting naming origins. This research aims to identify the appearance of objects and analyze the spatial distribution of toponyms in Giritontro District, Wonogiri Regency.

## **MATERIALS AND METHODS**

The research was conducted in Giritontro District, Wonogiri Regency, which is astronomically located at coordinates 80°1'50.6"-80°9'25.7" South Latitude and 110°51'19.7"- 110°56'15.9" East Longitude with an altitude of around 162-440 meters above sea level. Giritontro District consists of 2 sub-districts, namely Giritontro and Bayemharjo sub-districts and 5 villages, namely Pucanganom, Jatirejo, Tlogoharjo, Tlogosari and Ngargoharjo

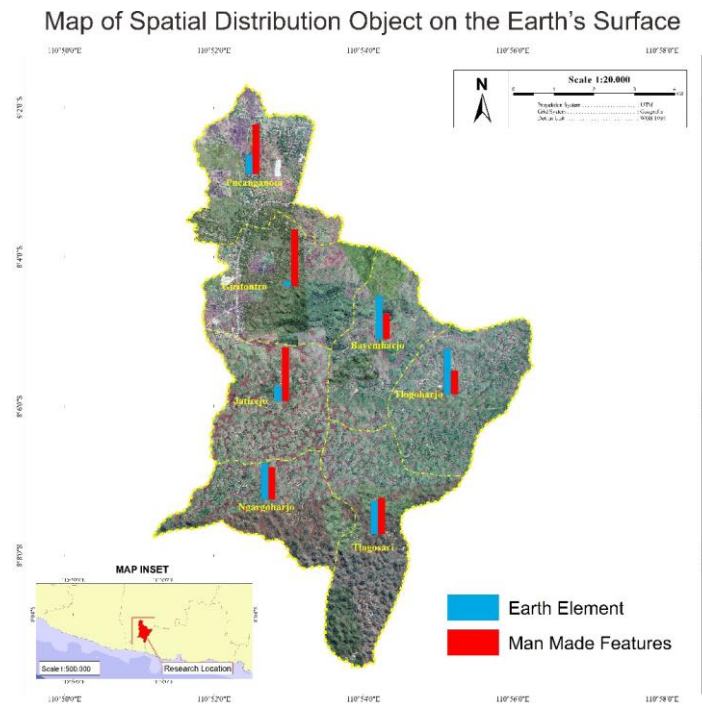
villages. The data needed in this research is the number of elements of the earth's appearance and man-made features as well as their toponymy. Special earthly elements that are unique to Karst areas such as hills, springs, sinkholes, dolines and caves. The number of landform elements and man-made features was obtained through the Indonesian Landform (RBI) map, Ikonos Imagery and interviews. Then, the toponymic data was obtained through field observations and in-depth interviews. Determining interview sources used the snowball sampling method. Toponymy searches include the name of the object, location, year of naming, linguistic meaning and meaning according to what the community believes. The data is presented in the form of diagrams and maps and then analyzed for their spatial distribution in a qualitative descriptive manner.

## **RESULTS AND DISCUSSION**

### **Identify objects in Giritontro District**

A number of locations or places that are named are classified into 2 types, namely earth features and man-made features (see **Figure 1**).





**Figure 1.** Map of Spatial Distribution Object on the Earth's Surface

### **Girintontro Village**

Man-made features dominate the appearance of objects in Girintontro Village with a percentage of 92.3%, while Earth Elements only account for 7.7%. This is because plains dominate the morphology, and geologically, there is a transition from the Wonosari Formation to the Baturetno Formation.

### **Bayemharjo Village**

63% of Earth Elements dominate the appearance of objects in Bayemharjo Village, while 37% are man-made features that have been named. The Earth Elements found are caves, hills and dolines. Meanwhile, few man-made

features have been identified due to the lack of named public buildings.

### **Pucanganom Village**

The appearance of objects in Pucanganom Village is dominated by Man Made Features, with a percentage of 72.1% and Earth Elements with a total of 27.9%. This is because plains dominate the morphology, and geologically, it is not included in the Karst Area of the Wonosari formation but is included in the Baturetno formation.

### **Tlogosari Village**

Man-made features dominate the appearance of objects in Tlogosari Village with a percentage of 52.2% and

Earth Elements with a total of 47.8%. Even though Tlogosari Village as a whole is in the Gunungsewu Karst Area of the Wonosari formation and has hilly geomorphology, the surrounding hills are not given a name.

### **Tlogoharjo Village**

57.4% of earth elements dominate the appearance of objects in Tlogoharjo Village. The elements of the earth in Tlogoharjo Village are mountains, lakes, caves and luweng. Some of the earth's elements are given names, and many more are not. Meanwhile, 42.6% of the man-made features in Tlogoharjo Village include fields, village halls and mosques. Man-made features have only been identified a little due to the lack of public facilities for artificial objects in Tlogoharjo.

### **Ngargoharjo Village**

In Ngargoharjo Village, there are 52.6% earth elements, and 47.4% man-made features that have been named. Earth elements such as mountains, lakes, caves and luweng. Meanwhile, man made features include mosques, reservoirs, markets, dams and so on. Conditions in Ngargoharjo Village are similar to Tlogoharjo. Due to its hilly morphology, many earth-like elements have been

identified. Meanwhile, man-made features are rarely found.

### **Jatirejo Village**

The appearance of man-made objects is dominant in Jatirejo Village. This is shown in the data above, which states that 74.1% of objects are man-made compared to only 25.9% of natural objects. Note that the object is an object that already has a name. Jatirejo village as a whole is in the Wonosari formation, but many of the earth's elements, such as mountains, are not named.

### **Spatial Distribution of Toponymy**

Toponymy is studied in more depth and will have various categories, including language, history, geography and folklore/culture. Toponymy, from the language category itself, is defined as the origin of the naming of an object, which is related to the origin of the existence of the object, which will be linked to an existing language or local wisdom. Referring to Spradley's (1979) idea to reveal local wisdom values from toponymy in certain regions with deep natural settings. So toponymy, which falls into the category of language itself, is naming which is related to linguistic meaning, whether Javanese, foreign languages or other languages.

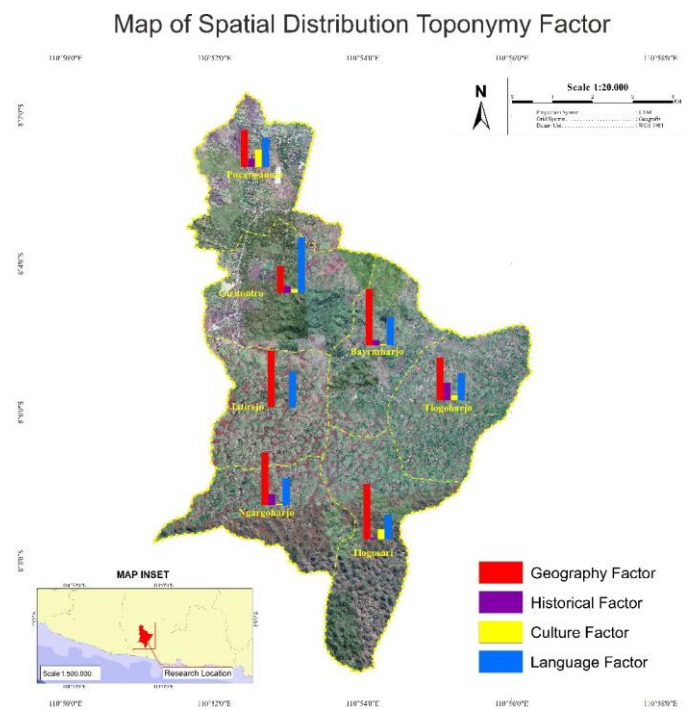


Toponymy from the Geographical category is the origin of the naming of an object, which is based on the Entity or geographical form of all relatively permanent elements in natural and artificial landscapes, including marine landscapes, which have known entities (Muhyidin, 2018). So, toponymy, which is categorized as geographical, is the naming of an object that is associated with space, which includes all aspects of nature.

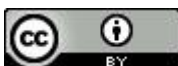
Toponymy from the Folklore category is the origin of naming an object that originates from society and develops in society (Yetti, 2011). So, the toponymy of an object that falls into the category of folklore is one of the cultural products in

the form of non-objects and has developed from generation to generation in society.

Toponymy from the History category is the origin of naming an object which is related to events in the past and attempts to reconstruct the reality of the present, as well as predicting the future, which is a form of scientific study that is very closely related to efforts to form national identity (Prasetyo & Amin, 2017). So, the toponymy of an object that can be included in the category of Historical Toponymy is the naming of an object due to past events and is still believed in today. The Spatial Distribution Toponymy Factor Map is shown in **Figure 2**.



**Figure 2.** Map of Spatial Distribution Toponymy Factor



### **Giritontro Village**

The Language category dominates the spatial distribution of toponymy in Giritontro Village at 60.7%, the Geographic category at 28.6%, the History category at 7.1%, and the Folklore category at 3.6%. For example, in the Giritontro sub-district area, there is the name Hamlet Hamlet, which in linguistic terms is "Tanggung", which comes from Indonesian, which means something that will be partially completed. At the same time, Hamlet Hamlet itself is a hamlet which, if combined into one neighbourhood, would have too large an area, whereas if split into two neighbourhoods, would be too small.

### **Bayemharjo Village**

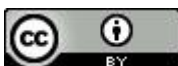
The majority of toponymy in Bayemharjo Village is based on geographical categories that are typical in the area, such as mountains, vegetation associations, forests, etc., as much as 62%. In addition, 30.8% of toponymy is associated with language categories. This includes place names related to the local language or names that have a particular linguistic meaning. 3.8% of the naming of objects in Bayemharjo Village is based on folklore,

which shows the culture that exists there. Places or objects named after folklore or legends are passed down from generation to generation. Meanwhile, the other 3.8% is based on the historical category. The names of these objects may be related to past events in the village.

For example, there is Ngelo Hamlet, which is the same as the majority of naming systems for the surrounding areas, namely based on the vegetation that dominates in the area. The term Ngelo comes from the elo tree that grows there. The elo or fig tree is known as a historic tree and has various potential benefits, namely as a plant for rehabilitation and preserving water sources in the surrounding area. The Elo tree is also called the fig tree, fig tree, and loa tree. The Loa tree (*Ficus racemosa*) is a type of ficus that has been cultivated since 5000 BC and originates from West Asia. This plant is widely distributed in subtropical and tropical climates. Not surprisingly, this plant can adapt well even in dry areas such as karst areas.

### **Pucanganom Village**

Pucanganom Village comes from the Javanese terms "Pucung", which means





shoot, and "Anom", which means young. Pucanganom Village itself is one of the forerunner villages in Giritontro District. Another example is the naming of Kepuh Hamlet in Pucanganom Village, "Kepuh" itself is a type of tree with the Latin name *Sterculia foetida*. It is called Kepuh Hamlet because, in ancient times, there was a Kepuh Tree.

The spatial distribution of toponymy in Pucanganom Village is dominated by the Geographic category at 40.4%, the Language category at 31.9%, the Folklore category at 19.1%, and the History category at 8.5%. Geographic names shape social space by labelling places and associated ideas and images (Azaryahu, 2011; Cooper, 1993; Rais et al., n.d.; Rose-Redwood et al., 2017; Vuolteenaho et al., 2009). Many places are identified by several geographic names and a phenomenon known as toponymy. So, the inherent geographic impression is the basis for people to give names.

#### **Tlogosari Village**

The spatial distribution of Tlogosari Village toponymy is dominated by the Geographical category at 60.4%, the Language category at 26.4%, the Folklore category at 11.3%, and the History category at %. In Tlogosari there

is a name for the hamlet, namely Mbergung Hamlet, which comes from the words "Sumber" which means origin or power and "Agung" which means big or many. Because there was once the source of TLogosari Lake which was located in that village. Characteristics of the Karst Region are many surface landforms, for example dolines, poljies, and sinkholes (Fiorillo, 2009; Ford & Williams, 2007; Goldscheider et al., 2020; Kuzichkin et al., 2021; Parise et al., 2018; Stevanović, 2018; Wijayanti et al., 2022). Doline is one of the natural landscapes of the Karst Region in the form of a basin with surface water above it. So people often use it as their water source.

#### **Tlogoharjo Village**

As much as 45.6% of the total toponymy in Tlogoharjo Village is dominated by geographic categories. For example, the toponymy of the names of Klepu, Kelor, Sambirejo hamlets, the naming of which is based on the association of vegetation that stands out and dominates in the area. A total of 5.9% of the naming of objects in Tlogoharjo Village comes from folklore passed down from generation to generation, for example Ginade Hamlet. Ginade Hamlet, in the past, Ginade Hamlet came from the word "gade"



which added the word "in" which means pawn and the word "nade" which means house facing south. Ginade also comes from the Javanese term "gunane gede" because in the past Ginade hamlet was the largest hamlet which is now divided into Ginade Wetan and Ginade Kulon. In ancient times, Ginade hamlet was a place to pawn goods and land. In Ginade hamlet there is also a regulation that requires all residents to build houses facing south.

Meanwhile, 29.4% comes from language, and 19.1% of all objects in Tlogoharjo Village are named based on past history, including the origin of the names of Kranggan Hamlet, Mount Tapan, Mount Tanggulasi, etc. Names that have practical value can be used as identities because a name is more easily attached to the human mind to recognize an object, whether an individual, thing or place, compared to a long description.

### **Ngargoharjo Village**

The majority of toponymy in Ngargoharjo Village uses geographical categories at 56.7%, followed by language at 24%, history at 15%, and folklore at 3.3%. Based on this data, it can be concluded that the people of Ngargoharjo Village are more likely to

name places by associating them with geographical elements in that place.

The majority of place names in Ngargoharjo Village are geographically based. Naming based on geographical factors refers to any location, influencing element or area on the earth's surface that is the same or similar. The most widely used geographic category is associated with the name of a tree. For example, Ngringin Hamlet is made from banyan trees, Ngasem Hamlet is made from Javanese tamarind trees, Gedangan Hamlet is made from banana trees and so on. Apart from that, it is also associated with administrative locations, such as Telaga Pringkuku because it is located in Pringkuku Hamlet, the Gedangan spring in Gedangan Hamlet and others. There is also geography based on its shape. Examples are Mount Kendil which is shaped like kendil pottery furniture, Mount Tampah which has a flat peak like a tampah, and so on.

### **Jatirejo Village**

The majority of objects in Jatirejo Village are named based on their geographical aspect. That is 69.2% of all objects in the village area. Then followed by the language category at 23.1%, and the history and folklore categories at only 3.8% each.



For example, Giribelah Hamlet is located on the north side of the village. The term giribelah comes from two words, namely giri and belah. Giri is a word that means a mountain, while belah is a loanword from Indonesian. So the meaning of this area is a split mountain. In this area there is a mountain that was deliberately split for the construction of road infrastructure connecting the center of Giritontro sub-district to the south, namely Paranggupito sub-district. Due to this artificial appearance, the people nicknamed the area around Mount Belah as giribelah.

The name Sengon Hamlet comes from one of the trees that grows in the area. The tree in question is the sengon tree. This tree has strong characteristics but can be a substitute for teak wood products. Many people plant sengon in this area because it has quite a profitable selling value and harvests faster than teak trees. With the large amount of vegetation covering the land with sengon trees, this hamlet is called Sengon Hamlet. This naming is included in the geographical category by relating it to the presence of trees in the hamlet area. In Sengon Hamlet there is a man-made object which has been named Sengon

Square. The field was named based on its location in the Sengon Hamlet area.

## CONCLUSIONS

Based on the research that has been carried out, it can be concluded that the objects whose toponyms are identified are dominated by man-made features with a spatial distribution of Giritontro Village 92%, Pucanganom Village 72%, Tlogosari Village 52% and Jatirejo Village 78%. Meanwhile, the rest is dominated by the earth's elements of the Karst Region, such as caves, hills, springs, with a spatial distribution of Bayemharjo Village 63%, Ngargoharjo 53% and Tlogoharjo Village 66%. Meanwhile, the spatial distribution of toponymy in Giritontro District, whose origin is dominated by language, is known to be spread across Giritontro District with a percentage of 60%. Apart from that, the toponymy found was predominantly geographically spread across Pucanganom Village with a percentage of 40%, Tlogosari Village 60%, Jatirejo Village 61%, Bayemharjo Village 61%, Ngargoharjo Village 57% and Tlogoharjo Village 46%. The geographical conditions referred to tend to be conditions that are attached to the object or the proximity of the object to



geographical objects (associations) which are dominant in the Karst Area.

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Hopefully this is useful for readers and please provide suggestions and input for future improvements. Of course, also to the Giritontro District and Jerowaru District Governments who are willing to become partners. Hopefully everything that has been implemented will bring sustainable benefits.

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