

## Research Article

# Kampung Pelangi Semarang: Its Success, Decline, and the Current Status of the Rainbow Village

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There are many city blocks decorated with murals all over the world. Among them, those developed in the past 15 years in Indonesia have a distinctive feature: houses in slums have murals or are painted in rainbow colors. These villages are called rainbow villages, or *Kampung Pelangi* in Indonesian. Wonosari village (*Kampung Wonosari*) in Semarang City became a rainbow village in 2017 under the slum eradication initiative called the *KOTAKU* program. However, the success did not last long: activity began to decline around mid-2018 and stopped completely because of COVID-19. While many tourist destinations have regained their former bustle in the post-COVID-19 period, activities in *Kampung Pelangi Semarang* have remained sluggish. This study aims to summarize as comprehensively as possible the efforts of *Kampung Pelangi Semarang* and its progress up to the present, based on the existing studies and on-site surveys in 2024. The reasons for the initial success include its good location, its proximity to other tourist destinations, and the cooperation of many organizations, including the city of Semarang. The reasons for its gradual decline include the change in the relationship between stakeholders after the shift from top-down activities by the Semarang City to bottom-up activities by the people involved; the Tourism Awareness Group that took over the role of managing *Kampung Pelangi Semarang* suffered the internal conflicts, resulting in the disruption of its activities. Finally, we overview the remaining issues when improving the slums by modifying Rainbow Village, and the requirements necessary for *Kampung Pelangi Semarang* to regain its vitality.

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## 1. Introduction

Colorful towns can be found worldwide, such as along the canals of Amsterdam in the Netherlands, Gamcheon Culture Village of Busan in South Korea, Nyhavn in Copenhagen, Denmark, Valparaiso in Chile, and Katong in Singapore. Over the past 15 years, some towns in Indonesia have been painted colorfully. In some cases, the walls and roofs of each house are painted in different colors, while in other instances, adjacent blocks are painted in the same color. This is not very different from cases seen in other countries. What is interesting about the Indonesian cases is that most of the areas where this urban development is taking place were once slum-like areas. By painting the houses colorful with the support of local governments, many tourists from both within and outside the country have come, and not only has the town become economically prosperous, but the town's infrastructure and environment have also improved. These villages are often called *Kampung Pelangi*, a combination of *Kampung*, meaning village, and *Pelangi*, meaning rainbow, in Indonesian, and sometimes called *Kampung Warna-warni*, using *Warna-Warni*, meaning colorful. The first Rainbow Village is *Kampung Warna-Warni Jodipan* in Malang City, which has been described in detail in several papers.

This study focuses on *Kampung Pelangi Semarang* in Wonosari, Semarang City, Central Java, and summarizes the efforts of *Kampung Pelangi* as comprehensively as possible. *Kampung Pelangi Semarang* was formerly called *Kampung Wonosari*, and is sometimes called *Kampung Pelangi Kalisari*. It is an area of about 40 hectares including steep terrain, and is located in the center of Semarang City. Since its opening in 2017, *Kampung Pelangi Semarang* has attracted many tourists from both within and outside of Indonesia and has been featured in international media, making it one of the most successful *Kampung Pelangi*. However, activity has stagnated since around mid-2018, and since 2020, due to the impact of the COVID-19 pandemic, there have been no tourists, and currently, there is little activity as a tourist destination. This is in contrast to the resumption of activity in various tourist destinations in Indonesia since 2022. This study introduces the case of *Kampung Pelangi Semarang*, which has undergone a unique process, mainly based on the review of previous studies and a few days of on-site investigation in 2024.

## 2. Backgrounds and Rainbow Village

### 2.1. Composition of the administrative divisions and self-governing organizations

Indonesia consists of some subdivisions with different levels: The first level (*Dati I*) is provinces (*propinsi*); the second level (*Dati II*) includes regencies (*kabupaten*) and cities (*kotamadya*); the third level (*Dati III*) includes Districts (*kecamatan*). In the case of Java, the lower level (*Dati IV*) is distinguished, and

rural and urban villages (*desa* and *kelurahan*) belong to this level. The urban villages consist of self-governing organizations by residents called *rukun tetangga* (RT) and *rukun warga* (RW), which originated from groups called *tonarigumi* and *aza* brought over from Japan during World War II. Typically, RT consists of around 250 residents and RW consists of 10 – 15 RTs or about 3,000 residents<sup>[1]</sup>.

Besides, there is an informal settlement called *Kampung* that is unstructured and unorganized<sup>[1]</sup>. *Kampung* is the origin of “compound” in English<sup>[2][3]</sup>. *Kampung* is used for settlements in villages and urban areas and its size is smaller than *Desa*. *Kampung* may also include RT and RW and thus, it is also an equivalent to urban village or village in English. Although poverty and poor quality of life characterize *kampung*<sup>[1]</sup>, it is not the synonym for slum<sup>[4]</sup>. Normally, *kumuh* is used to mean slum in Indonesian.

	Indonesian	Synonym	<i>Kampung Pelangi Semarang</i>
<b>Administrative divisions</b>			
First level ( <i>Dati I</i> )	<i>Propinsi</i>	Provinces	
Second level ( <i>Dati II</i> )	<i>Kabupaten</i> <i>Kotamadya</i>	Regencies Cities	<i>Kota Semarang</i>
Third level ( <i>Dati III</i> )	<i>Kecamatan</i>	Districts	<i>Kecamatan Semarang Selatan</i>
Fourth level ( <i>Sati IV</i> ) In the case of Java Island	<i>Desa</i> <i>Kelurahan</i>	Rural villages Urban villages	<i>Kelurahan Randusari</i>
(informal settlement)	<i>Kampung</i>		<i>Kampung Wonosari</i>
<b>Self-governing organizations</b>			
	<i>Rukun Tetangga (RT)</i>	<i>Tonarigumi</i>	
	<i>Rukun Warga (RW)</i>	<i>Aza</i>	

Table 1. Administrative divisions and self-governing organizations

Note: The address of *Kampung Pelangi Semarang* is based on Wulandari and Luthfi<sup>[5]</sup>.

While the term *kota* is used to indicate the city-level area (*Kotamadya*) in Table 1, it also means smaller areas (downtown), and the term *Kampung Kota* implies a traditional and spontaneous settlement in urban areas<sup>[1]</sup> (Table 2). A large population, lack of facilities and infrastructure, and informal housing characterize *Kampung kota*. These adverse conditions can result in poor quality of life and poverty, which, combined with the area’s urban sprawl, can lead to conditions that can be considered slums<sup>[6][7]</sup>. *Kampung kota* has been formed to accommodate people who want to find work in the city to improve their lives. Examples of such a *Kampung kota* include *Kampung Jodipan Malang* and *Kampung Pelangi Semarang (Kampung Wonosari)*<sup>[8][9]</sup>.

<i>Kampung</i>	<ul style="list-style-type: none"> <li>It is an informal settlement<sup>[1]</sup>.</li> <li>It is smaller than rural and urban villages (<i>desa</i> and <i>kelurahan</i>) but may include RT and RW and thus <i>kampung</i> may also be equivalent to an urban village or village.</li> <li>It is not a synonym for slum<sup>[4]</sup>.</li> </ul>
<i>Kota</i>	<ul style="list-style-type: none"> <li><i>Kota</i> means 1) a negara or government system, 2) an urban, city or town, or 3) a city’s center (downtown)<sup>[1]</sup></li> </ul>
<i>Kampung kota</i>	<ul style="list-style-type: none"> <li><i>Kampung kota</i> implies a traditional and spontaneous settlement in urban areas<sup>[1]</sup>.</li> </ul>

Table 2. *Kampung*, *Kota*, and *Kampung kota*

## 2.2. Slums in Indonesia

A slum is defined as a settlement that is unfit for habitation due to irregular buildings, high building density, and substandard quality of buildings, facilities, and infrastructure in Law No. 1 of 2011 (*UU Nomor 1 tahun 2011*), and 35,291 hectares of urban slums is identified in Indonesia<sup>[8]</sup>. Based on data from the Ministry of Public Works, Indonesia's annual slum growth rate is 4.1%, the highest in Asia, and 53.7% of Indonesia's population lives in slums<sup>[10]</sup>.

One of the features of slum residents is that they do not hold effective land ownership certificates (*Sertifikat Hak Milik (SHM)*) and illegally occupy the land there<sup>[11]</sup>. They come from local areas to seek jobs to improve their living but population influx increases population density, fragments land, and causes the area to be slum<sup>[11]</sup>. In short, the illegal occupation of land is driven by economic pressures and an urgent need to have a place to live<sup>[11]</sup>. Some types of residential settlements such as *permukiman pinggir* or *kumuh (squatter)* are related to the illegal occupation of lands<sup>[12]</sup>. *Permukiman pinggir* is a settlement that often develops in marginal spaces of the city, such as riverbanks, railway tracks, and government-owned land<sup>[5]</sup>. One of the examples of *permukiman pinggir* was *Kampung Wonosari* in Semarang City.

As more people move to settle, population density increases and residential areas become more fragmented, leading to problems such as poverty, sanitation, and environmental issues. Hartono, Farhan, Hardiyanti, and Yoga<sup>[8]</sup> pointed out that slums locate on the river banks suffer a lack of proper spatial planning that results in and is related to overcrowding of housing, lack of public amenities, road network system, drainage system, water purification services, insufficient waste disposal, and other problems based on their observations. Another problem in slums is, not to say, economic issues such as high unemployment and poverty rates.

## 2.3. Slum Eradication Activities

### 2.3.1. The 100-0-100 Movement and KOTAKU Program

Various efforts have been made to alleviate the issues of slums. The 100-0-100 program is a slogan often used to describe the national goal of universal access, which aimed to achieve 100% access to clean drinking water, 0% slums, and 100% access to clean sanitation facilities by 2019<sup>[13]</sup>. To achieve this goal, various programs have been implemented by the central and local governments. The Malang city government has also launched the 100-0-100 program to realize a slum-free city, and is simultaneously developing Thematic villages (*kampung tematik*) to eliminate slums in fragile watershed areas called *Daerah Aliran Sungai (DAS)*<sup>[11]</sup>. Some villages in Malang City such as *Kampung Wisata Jodipan*, *Kampung Tridi* at Purwantoro, and *Kampung Putih* di Kelurahan Klojen can be regarded as successful examples of the theme villages. Semarang City has also implemented the 100-0-100 movement, and to promote this program, under the support from the Ministry of Public Works and Public Housing (PUPR), a slum-free program called "KOTAKU" has been implemented<sup>[14]</sup>.

KOTAKU is an abbreviation of *Kota Tanpa Kumuh*. The Government Regulation No. 2 of 2015 on the Medium-Term National Development Plan 2015-2019 (*Peraturan Pemerintah No. 2 Tahun 2015 tentang Rencana Pembangunan Nasional Jangka Menengah 2015-2019*) intends to facilitate the development and growth of urban areas through the improvement of the quality of settlements, and as part of this, KOTAKU has been implemented since 2015 to reduce the population of slums<sup>[14]</sup>. The KOTAKU program in Sumaran City has three goals: eradication of slums, prevention of the development of new slums, and promotion of sustainable development in accordance with the conditions of *Kampung Wonosari*<sup>[14]</sup>.

### 2.3.2. The Program GERBANG HEBAT and Kampung Tematik

Tourism promotes sustainable development by realizing potential local markets, promoting tourism services, and enabling the acquisition of foreign exchange, which is an important source of income for some developing countries<sup>[15][16]</sup>. What is unique in Indonesia is that tourism has been promoted by involving the general public, especially slum dwellers. Studies on public perceptions of the impacts of tourism have accumulated over the past decade<sup>[16]</sup>. They include studies that investigated the effects of Thematic villages (*Kampung Tematik*) on local transformation and development<sup>[17][18][5]</sup>, and many others. In terms of policy, the Republic of Indonesia enacted new regional government regulations to promote public participation in local government administration in 2017<sup>[19]</sup>. The regulations have influenced urban development planning, especially the development of urban villages (*Kampung kota*) and slums, and participatory art activities in Rainbow Village are sometimes considered to be a part of this<sup>[19]</sup>.

The GERBANG HEBAT program (*Program GERBANG HEBAT*) is a joint movement for the reduction of poverty and unemployment while harmonizing the economy, education, ecology, and community spirit that is promoted by the Semarang City Government in cooperation with many actors such as BUMN (State-Owned Enterprises), BUMD (Regional-Owned Enterprises), banks, the private sector, universities, NGOs, and community organizations and has achieved poverty reduction of more than 1.5% per year<sup>[20]</sup>. The GERBANG HEBAT program began by the former Mayor of Semarang (*Walikota Semarang*), Hendrar

Prihadi (or shortly Hendi) in 2016 and was continued until 2021. Thematic villages (*Kampung Tematik*) are part of the GERBANG HEBAT program<sup>[21]</sup>. *Kampung Wonosari* was designated a thematic village (*Kampung Tematik*) by the Semarang City Government through the GERBANG HEBAT program in 2016<sup>[21][19]</sup>.

### 2.3.3. *Kampung Wisata/Kampung Tematik*

Some existing studies refer to *Kampung Wonosari's* activities as the thematic tourism villages (*Kampung Wisata Tematik*)<sup>[2]</sup> or the tourism villages (*Kampung Wisata, Desa Wisata*)<sup>[14]</sup>. The term tourism village (*Kampung Wisata*) is not limited to the activities in Semarang City under the GERBANG HEBAT program. Tourism villages are those that retain a traditional atmosphere in which small tourist groups stay in or near there and experience village life and enjoy the local environment (Originally pointed out by Inskeep<sup>[22]</sup>; Aryaningtyas, Aprilliyani, and Soehari<sup>[16]</sup>). Note that the tourism village (*Kampung Wisata*) includes rainbow village (*Kampung Pelangi*), but the tourism village (*Kampung Wisata*) also includes other types of villages.

The thematic village (*Kampung Tematik*) and tourism village (*Kampung Wisata*) activities are carried out in various cities in Indonesia. In Semarang City, the thematic village (*Kampung Tematik*) was implemented from 2016 to 2018 to improve the living environment and fundamental infrastructure in slums and meet basic needs<sup>[23]</sup>. The number of thematic villages (*Kampung Tematik*) implemented was 32, 80, and 65 *kelurahan* in 2016, 2017, and 2018, respectively, and a budget of Rp 200 million was given to each village<sup>[23]</sup>. The thematic villages (*Kampung Tematik*) in Semarang City include a hydroponic village (*Kampung Hidoponik*) in *Kelurahan Tanjung Mas*, a milkfish village (*Kampung Bandeng*) in *Kelurahan Tambakrejo Kecamatan Gayamsari*, and *Tabulampot Village (Kampung Tabulampot)* in *Kelurahan Salaman Mloyo*<sup>[21]</sup>. It is interesting that *Tabulampot Village (Kampung Tabulampot)* in *Kelurahan Salaman Mloyo* was originally sought to be a rainbow village (*Kampung Pelangi*), but later changed to a fruit village (*Kampung Buah*), then a waste bank village (*Kampung Bank Sampah*), and finally to *Kampung Tabulampot*<sup>[21]</sup>. This village was aiming to be a rainbow village before the activities of *Kampung Perang Semarang* were started.

A famous and influential thematic village has been conducted in Malang City. In 2001, Malang City established a government policy on slum development in Regional Regulation No. 7 (*Peraturan Daerah Nomor 7 Tahun 2001*) on the Malang City Regional Spatial Plan (*Rencana Tata Ruang Wilayah*) for 2001 to 2011. Based on this, the Malang City Government has been promoting, 1) infrastructure development in slums, 2) development of settlements around river basin areas (DAS) by relocating residents living in the 15-meter river border area to other areas, and 3) development of railway settlements through relocation and improvement of land along the railway<sup>[11]</sup>. The thematic village in Malang City was started in the *Kelurahan Jodipan*, a slum on the banks of the Malang River that was a densely populated area before 2016; the student project transformed it into a colorful village that increased residents' income<sup>[14]</sup>. *Kelurahan Jodipan* is currently, known as the first rainbow village under the name of *Kampung Wisata Jodipan* (also referred to as *Kampung Warna-Warni Jodipan*). The Semarang City Government has completed the construction of more than 133 thematic villages in 16 districts including *Kampung Wisata Jodipan*<sup>[11]</sup>.

Some other cities also have tourism villages (*Kampung Wisata*). In Kalimantan, indigenous people still live in *Kecamatan Samarinda Seberang* in Samarinda City and make a living by weaving traditional textiles. In 2012, the Samarinda City government designated it as a national tourist site called Samarinda Weaving Village (*Kampung Tenun Samarinda*)<sup>[24]</sup>. Like many other examples, Samarinda Weaving Village (*Kampung Tenun Samarinda*) is located along a river (*sungai Rapak Dalam*) and is vulnerable to inundation due to flooding<sup>[24]</sup>. Although Samarinda Weaving Village (*Kampung Tenun Samarinda*) is not an example of a rainbow village, it is sometimes taken up as an example of a tourism village. In Yogyakarta, Sosro Tourism Village (*Kampung Wisata Sosro*) in *Kelurahan Sosromenduran* is a tourism village that was established in 2010. By involving residents in the tourism industry such as private lodgings, homestays, restaurants, and cafes, the local economy has improved and the welfare of residents has been raised<sup>[12]</sup>. The Creative Tourism Village (*Kampung Wisata Kreatif Dago Pojok*) in Bandung City was originally a slum, and it became a tourism village with artistic activities such as murals and paintings as main attractions; this village now attracts many domestic and oversea tourists<sup>[25][26]</sup>.

## 2.4. Characterizing Rainbow Villages

As overviewed in section 2.3, various efforts have been made to alleviate the slum problems. The Semarang City Government has implemented the GERBANG HEBAT program to address the slum issues, and as part of this, it has promoted thematic village development. *Kampung Perang Semarang* is the target of this study and is a thematic village in Semarang City. The similar activities have been carried out in various cities under the name of, e.g., tourism villages (*Kampung Wisata*). In this section, we tentatively discuss the conditions for identifying a village included in thematic villages (*Kampung Tematik*) and tourism villages (*Kampung Wisata*) as a rainbow village.

The first condition is that rainbow villages are usually developed under the support of local governments as thematic villages (*Kampung Tematik*) or tourism villages (*Kampung Wisata*). The development of these villages is aimed at alleviating the slum issues. Thus, the second condition is that the villages were formerly slums or under slum-like conditions. The third condition is that the development is not simply based on top-down, but that some bottom-up activities such as participatory art are observed. The fourth and most notable condition is that the entire village is painted colorfully, as the name Rainbow Villages implies. The above are not necessary conditions for thematic villages (*Kampung Tematik*) or tourism villages (*Kampung Wisata*) to be successful.



Rather, these conditions can be regarded as requirements for villages to be distinguished from the conventional town developments that often feature traditional crafts and murals.

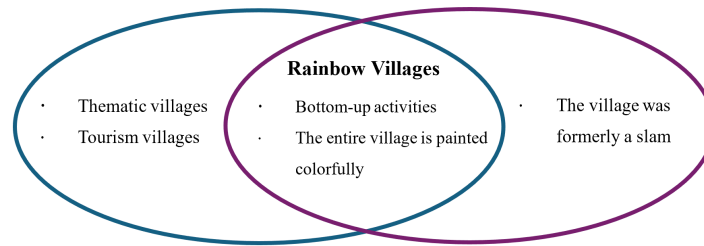


Figure 1. Characterization of Rainbow Villages

The first three conditions are related to each other. Because the main initiative of Rainbow Villages is alleviating slum issues, the top-down approach is necessary as financial and institutional support for residents, and such support is typically built-in tourism village activities promoted by local governments.

Participatory art in urban villages (*Kampung kota*) is an activity in which residents explore the uniqueness of the villages, find a shared identity, and enhance a sense of belonging<sup>[19]</sup>. While participatory art is a necessary condition for a village to be a rainbow village, the existence of participatory art activities does not necessarily mean that the village is a rainbow village (Figure 1). There are some examples. *Kampung Pondok Pucung* in South Tangerang City is a traditional village that has remained amid modern urban development and has minimal facilities. *Kampung Pondok Pucung* is home to a design activist community called Design as Generator (DAG), which has been conducting participatory action research since 2015<sup>[19]</sup>. In Semarang City, the Bustaman Living Museum Project was launched by Hysteria Collective in 2012 in *Kampung Bustaman*. The forgotten historical stories of *Kampung Bustaman* were investigated; once residents shared the findings, participatory artworks such as installation art and thematic murals were created, transforming the village into a living museum<sup>[22][19]</sup>. *Kampung Pondok Pucung* and *Kampung Bustaman* adopt participatory techniques by utilizing arts, their activities do not include painting the whole town with rainbow colors.

## 2.5. Rainbow Villages

This section overviews rainbow village activities throughout Indonesia (Table 3). Village decoration with colorful murals has become popular over the past 15 years, especially in urban villages in Java<sup>[28]</sup>. Villages with the concept of “painting houses colorfully” are not limited to *Kampung Pelangi Semarang*, but also include *Kampung 3D* in Malang, *Kampung Pelangi Banjarbaru* in Kalimantan, *Kampung Pelangi Bejalen* in Yogyakarta and so on. Because available related studies are limited, we will briefly review some representative cases below.

Location	Name (Start year)	Sources
Balikpapan	<i>Kampung Warna-Warni Teluk Seribu</i>	Arieza <sup>[29]</sup>
Bandung	<i>Kampung Pelangi 200</i> (2018-)	Latifah, Purnomo, Nunung, and Tati <sup>[30]</sup>
Banyuwangi	<i>Kampung Warna-Warni Kalilo</i>	Arieza <sup>[29]</sup>
Jakarta Timur	<i>Kampung Penas</i>	Arieza <sup>[29]</sup>
Kalimantan	<i>Kampung Pelangi Banjarbaru</i> (2017-)	Cahyaningrum <sup>[31]</sup>
Lubuklinggau	<i>Kampung Warna-Warni</i>	Arieza <sup>[29]</sup>
Malang	<i>Kampung 3D</i> 1) <i>Kampung Warna-Warni Jodipan</i> (2015-)	Akbar and Alfian <sup>[11]</sup> Melle <sup>[32]</sup> Cahyaningrum <sup>[31]</sup>
	2) <i>Kampung Putih</i> (2017-)	Akbar and Alfian <sup>[11]</sup> Melle <sup>[32]</sup>
	3) <i>Kampung Biru Arema</i> (2018-)	Akbar and Alfian <sup>[11]</sup> Melle <sup>[32]</sup>
Pangkalan Bun	<i>Kampung Sega</i>	Arieza <sup>[29]</sup>
Semarang	<i>Kampung Pelangi Semarang</i> (2017-) (= <i>Kampung Pelangi Kalisari</i> ) (= <i>Kampung Wonosari</i> )	
Ambarawa	<i>Kampung Bejalen</i>	Arieza <sup>[29]</sup>
Surabaya	<i>Kampung Bulak</i>	Arieza <sup>[29]</sup>
Yogyakarta	<i>Kali Code</i>	Cahyaningrum <sup>[31]</sup>

Table 3. Rainbow Villages in Indonesia

Note: This table may include rainbow villages that have already ceased activity.

### 2.5.1. Kampung 3D

*Kampung 3D* in Malang is a collective name for *Kampung Warna-Warni Jodipan*, *Kampung Putih*, and *Kampung Biru Arema*, all of which are located on the riverbank. As mentioned above, Malang City has implemented the *KOTAKU* program to realize a slum-free city, and as part of this program, the development of a thematic village (*Kampung Tematik*) is underway<sup>[11]</sup>. *Kampung Warna-Warni Jodipan* is an area that was formerly a slum area, *RT06*, *RT07*, and *RT09* of *RW02* in *Kelurahan Jodipan* (Wulandari, 2018) and is the first thematic village (*Kampung Tematik*) born out of a slum<sup>[11]</sup>. *Kampung Warna-Warni Jodipan* was created under a project by students of the Guys of Public Relations (Guys Pro) of Universitas Muhammadiyah Malang, who aimed to transform the area into a colorful village based on the Kickstarter area of Rio De Janeiro (Wulandari, 2018). They first consulted with the head of *RW02* (*Ketua RW02*), then built a good relationship with the residents by asking each resident what color they wanted to paint their house (Wulandari, 2018). As the area became a famous tourist destination called *Kampung Warna-Warni Jodipan*, the residents started businesses for tourists and their economic conditions improved<sup>[33]</sup>. *Kampung Warna-Warni Jodipan* is sometimes referred to as *Kampung Smart Living* (Wiranto et al., 2020).

The approximate location of *Kampung 3D* on Google Maps using the URL is as follows: <https://maps.google.com/maps?ll=-7982443798254562,112.63729543239916>

## 2.5.2. Kampung Pelangi Banjarbaru

*Kampung Pelangi Banjarbaru* in Kelurahan Kemuning, Kalimantan, was originally a slum along the Kemuning River (*Sungai Kemuning*), and was opened as *Kampung Pelangi* in 2017 thanks to the support of the Banjarbaru City Government<sup>[18]</sup>. The Banjarbaru Municipality provided paint to the residents of five RTs and commissioned ten painters to paint pictures in the village, and the residents have promoted tourism by setting up food stalls and providing parking spaces among others<sup>[18]</sup>. In *Kampung Pelangi Banjarbaru*, the development of the area as a tourist destination has resulted in clean villages without cluttered buildings, and social activities such as environmental cleaning, women's skills training, community service, and *Yasinan* recitation (*Arisan Yasinan*) are carried out by the community members<sup>[18][24]</sup>.

The approximate location of *Kampung 3D* on Google Maps using the URL is as follows: <https://maps.google.com/maps?ll=-3.447094772301295,114.83078330562229>

## 2.5.3. Kali Code

*Kampung Kali Code* in Yogyakarta (RT01 Kelurahan Kota Baru) is also classified as a rainbow village: note that some existing studies do not require roofs to be painted in rainbow colors when classifying rainbow villages. Although the area along the Code River is regularly flooded during the rainy season, many people who migrated to urban areas chaotically built their houses, prioritizing being close to their workplaces, which led to overcrowding, pollution of the Code River, and erosion of the riverbanks<sup>[25]</sup>. The poor tend to prioritize proximity to their workplaces as a residential priority<sup>[36][37]</sup>. Activities in *Kampung Kali Code* include the creation of a livable settlement and the improvement of their life<sup>[35]</sup>.

The approximate location of *Kali Code* on Google Maps using the URL is as follows: <https://maps.google.com/maps?ll=-7783146690887654,110.37113197593058>

## 2.5.4. Kampung Pelangi 200

*Kampung Pelangi Bandung* (RW13 Kelurahan Dago) in Bandung City is also known as *Kampung Pelangi 200*. It was named after the fact that a group *Kampung Pelangi 200* provided each resident with Rp 200,000 in assistance and residents voluntarily painted the roofs of their houses colorfully<sup>[30][38]</sup>. *Kampung Pelangi 200* is located along the Cikapundung River (*Sungai Cikapundung*) and the riverside was overcrowded with residents. Now it is an example of how community-based tourism has improved the economic conditions of residents<sup>[20][38]</sup>.

# 3. Kampung Pelangi Semarang: Overview

## 3.1. Semarang City and Tourism

Semarang City is the capital and administrative center of Central Java Province, established on May 2, 1547, and is one of the economic centers of Central Java<sup>[44]</sup>. It was a trade and service city, but now it become a tourist city with diverse tourist attractions<sup>[16]</sup>. According to Wuri, Hardanti, and Harnoto<sup>[17]</sup>, tourism is defined as a temporary human activity or journey carried out of one's own volition, not to strive, work, or earn money, but to visit, see, and enjoy places, something that cannot be obtained elsewhere in Law No. 9 of the Republic of Indonesia in 1990 (*Undang-undang Republik Indonesia No. 9 Tahun 1990*). The development of tourist destinations in Semarang City is regulated by Semarang Mayor's Regulation No. 5 of 2015 on the Regional Tourism Development Master Plan (*Peraturan Walikota Semarang Nomor 5 Tahun 2015 tentang Rencana Induk Pengembangan Pariwisata Daerah*)<sup>[44]</sup>.

It is often the case that mascots and monuments are designated to attract tourists' attention. Adiwibawa and Prabowo<sup>[39]</sup> point out that a mythical creature called *Warak ngendog* (egg-laying bird) is used in the design of various products and activities in Semarang, but it has been used too much and saturated. Therefore, they conducted a study focusing on the visual characteristics of buildings that represent Semarang to search for alternative symbols. Although their study did not include *Kampung Pelangi Semarang* because it was conducted around the time of its establishment, the characterization of Semarang city with focusing on buildings is an interesting perspective that is also related to the development of *Kampung Pelangi Semarang*. Before moving on to the explanation of *Kampung Pelangi Semarang*, we will briefly overview the famous tourist destinations of Semarang.

Adiwibawa and Prabowo<sup>[39]</sup> selected 10 iconic buildings in Semarang City from 36 socio-cultural buildings, 31 religious buildings, 79 business buildings, 19 special buildings, and 144 residential buildings based on a questionnaire survey. The most popular were Lawang Sewu Building (*Gedung Lawang Sewu*), Central Java Grand Mosque (*Masjid Agung Jawa Tengah*), Blenduk Church (*Gereja Blenduk*), and Sam Poo Kong Temple (*Klenteng Sam Poo Kong* or *Gedong Batu*) (Figure 2). Likewise, in the graduation thesis on *Kampung Pelangi Semarang*, Ramadhani<sup>[44]</sup> listed the Central Java Grand Mosque (*Masjid Agung Jawa Tengah*), Blenduk Church (*Gereja Blenduk*), Sam Poo Kong Temple (*Klenteng Sam Poo Kong*), Avalokitesvara Temple (*Vihara Avalokitesvara*), Great Giri Natha temple (*Pura Agung*

Giri Natha) as religious tourist attractions, and Tugu Muda (*Tugu Muda*), Lawang Sewu Building (*Gedung Lawang Sewu*), and old town (*Kota Lama*) as historical tourist attractions.

The approximate locations on Google Maps using the URL are as follows:

- *Lawang Sewu*  
<https://maps.google.com/maps?ll=-6.983957142847866,110.41062450683586>
- *Masjid Agung Jawa Tengah*  
<https://maps.google.com/maps?ll=-6.983742596436835,110.44568324367137>
- *Gereja Blenduk*  
<https://maps.google.com/maps?ll=-6.96814949543197,110.42744961988761>
- *Sam Poo Kong*  
<https://maps.google.com/maps?ll=-6.99631216430021,110.39803788001238>
- *Vihara Avalokitesvara*  
<https://maps.google.com/maps?ll=-7.006735022449691,110.38466019607756>
- *Pura Agung Giri Natha*  
<https://maps.google.com/maps?ll=-6.998512397922203,110.41065124218265>
- *Tugu Muda*  
<https://maps.google.com/maps?ll=-6.984318663937544,110.40931122544825>
- *Kota Lama*  
<https://maps.google.com/maps?ll=-6.968286505601916,110.42843197732458>

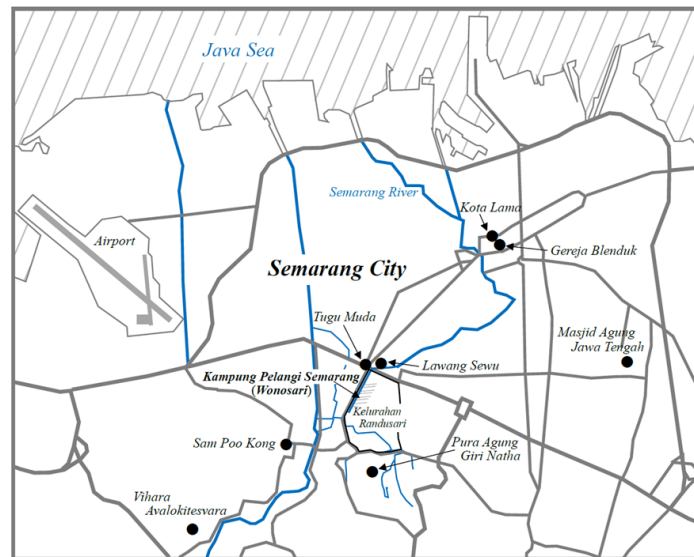


Figure 2. The map of Tourist Attractions in Semarang City

Interestingly, most of these tourist attractions are within a few kilometers of the Ahmad Yani International Airport, and all of them except for the Central Java Grand Mosque (*Masjid Agung Jawa Tengah*) are scattered along a straight line from northeast to southwest (Figure 2). Moreover, *Kampung Pelangi Semarang* is located in the middle of this line. Great Giri Natha temple (*Pura Agung Giri Natha*) is slightly off this line but is relatively close to *Kampung Pelangi Semarang* in a straight line. *Tugu Muda* (*Tugu Muda*) and *Lawang Sewu Building* (*Gedung Lawang Sewu*) are about 500 meters from *Kampung Pelangi Semarang*, thus tourists may be easily reached on foot from there. When the Semarang City Government developed *Kampung Wonosari* into *Kampung Pelangi Semarang*, special attention was paid to its location nearby and on the way to tourist attractions<sup>[14][10]</sup>. Many of these facilities are attractive to both domestic and foreign tourists and they are the leading tourist destination in Semarang city. Thus, *Kampung Pelangi Semarang* has the advantage of its location.

## 3.2. Basic Information

### 3.2.1. Location

The address of *Kampung Pelangi Semarang* is printed on a board on the wall of its office (Figure 3) on the second floor of the flower market (*Pasar Bunga Kalisari*), just off Jl. Wonosari III along Jl. Dr. Sutomo as follows:

*Kampung Pelangi*

Jl. Wonosari V RT 04/03 Kelurahan Randusari Kecamatan Semarang Selatan

The boundaries are as follows<sup>[40]</sup>:

- North side: Dominico Savio Junior High School (*SMP Dominico Savio*)
- East side: Bergota Public Cemetery (*Pemukaman Umum Bergota*)
- South side: Dr. Kariadi Hospital (*Rumah Sakit Dr. Kariadi*)
- West side: Jalan Raya Doktor Sutomo (*Jalan Raya Doktor Sutomo*)

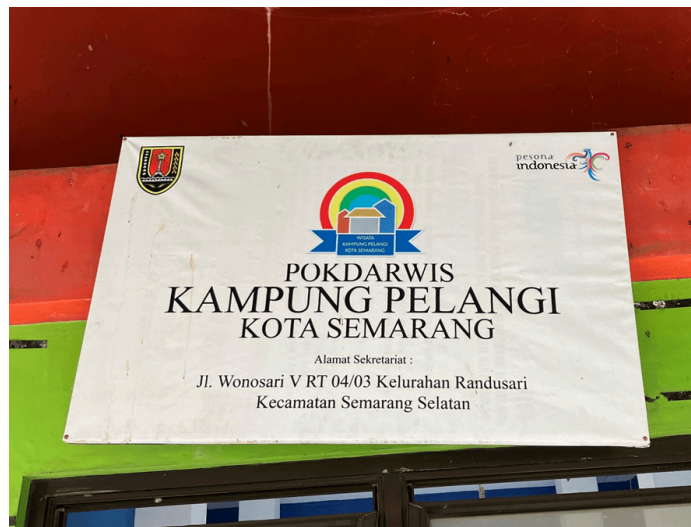


Figure 3. Picture of the board on the wall of the *Kampung Pelangi* office

Source: Taken by Kawata on Aug. 7, 2024.

Randusari village (*Kelurahan Randusari*) is surrounded by Pekunden village (*Kelurahan Pekunden*) to the north, Mugassari village (*Kelurahan Mugassari*) to the east, Bendungan village (*Kelurahan Bendungan*) to the south, and Barusari village (*Kelurahan Barusari*) to the west<sup>[14]</sup>.

The city of Semarang is composed of 177 *kelurahan* and 16 *kecamatan*<sup>[14]</sup>. *Kelurahan Randusari* consists of 7 *RWs* and 52 *RTs*, of which *Kampung Pelangi Semarang* is in the area of *RT03* and *RT04*<sup>[14]</sup>. *RW03* consists of 10 *RTs*, and *RW04* consists of 9 *RTs*<sup>[40]</sup>. *Kampung Pelangi Semarang* is now officially registered as Wonosari area (*wilayah Wonosari*), but was formerly Mount Brintik area (*wilayah Gunung Brintik*) and called *Kampung Gunung Brintik*<sup>[28][14][10]</sup>. Before that, it was called *Bergota*<sup>[28]</sup>. *Kampung Pelangi Semarang* has an area of 4.5 hectares, of which 73.2% is residential areas (personal communication with the staff of the Semarang Ministry of Public Works and Housing), and is shown on maps and directions (*papan penunjuk arah dan peta*) in Figure 4. Between the flower market street (*Pasar Bunga Kalisari*) and *Kampung Pelangi Semarang* is the Semarang River (*Kali Semarang*), which widens as it flows north through the city and flows into the sea.



**Figure 4.** Maps and directions (*papan penunjuk arah dan peta*) at Jl. Wonosari 6  
 Source: Taken by Kawata on Aug. 7, 2024.

### 3.2.2. The Beginning

As mentioned above, *Kampung Pelangi Semarang* was developed as part of the slum eradication initiative under the *KOTAKU* program led by the Semarang Municipal Government, starting after the completion of the Kalisari Flower Market (*Pasar Bunga Kalisari*) renovation located along the main road in front of the village. When the development of the flower market was completed in December 2016, Wonosari village (*Kampung Wonosari*) behind it had the scenery of a slum, and its dirty appearance was visible from the flower market due to its location on a hillside, thus the landscape improvement was started<sup>[51][28][14]</sup>. The development of Wonosari village was proposed and planned by the former mayor Hendi<sup>[14]</sup>. The idea of turning it into a rainbow village was inspired by the examples of slums being transformed into rainbow villages in Malang and Surabaya<sup>[14]</sup>.

Semarang City was among the top 10 cities with the largest slums in Indonesia in 2012<sup>[46]</sup>. Wonosari village (*Kampung Wonosari*) was previously known as a slum with street children and beggars<sup>[21]</sup>. The territory of Wonosari village is state land (*tanah milik negara*) consisting of three areas: irrigation area (*area irigasi*), residential area (*area pemukiman*), and burial area (*area pemakaman*)<sup>[2]</sup>. Due to its convenient location and state land as is often the case for areas where slums develop, many people have relocated to the village, especially after 1985, and about 300 household heads did not have land title certificates<sup>[51][28]</sup>. Due to the steep hills and limited land, buildings were built irregularly with the increase in relocation, making the boundaries of houses unclear<sup>[6]</sup>. The crowded houses, with their cement walls, and exposed wooden planks with unpainted walls or walls without plastered, created an unpleasant impression on people<sup>[51][9][14]</sup>.

In Wonosari village (*Kampung Wonosari*), the paths were previously poorly lit, and the condition of the Semarang River (*Kali Semarang*) was terrible because of garbage dumping, giving off a foul odor<sup>[14]</sup>. In Indonesia, there are still some areas where the government does not adequately collect garbage<sup>[41]</sup>. Dumping of garbage into rivers has also been pointed out in many other rainbow villages and tourist villages: For example, *Kampung Jodipan* in Malang<sup>[33][11]</sup>, *Kampung*

Perca (Kelurahan Tugurejo) in Semarang<sup>[21]</sup>, Kampung Pelangi Banjarbaru in Kalimantan<sup>[18]</sup>, and Kali Code in Yogyakarta<sup>[35]</sup>. In addition, the majority of people were unemployed before the 1990s<sup>[10]</sup>.

The above situation was initially improved in a top-down manner under financial support and initiatives by the Semarang City, and the inauguration ceremony of *Kampung Pelangi Semarang* (peresmian *Kampung Pelangi Semarang*) was held on April 15, 2017<sup>[14]</sup>. Furthermore, in May 2017, Wonosari village was given the name *Kampung Pelangi Semarang*<sup>[28]</sup>. In the initial phase, bridges, boundary walls of public spaces, and the walls of about 300 residents' homes were painted colorfully, and the condition of the Semarang River (*Kali Semarang*) that flows in front of the village has also been improved<sup>[28]</sup>.

### 3.2.3. The Socio-Economic Conditions of Residents

The age-based population structure of *Kampung Pelangi Semarang* (Wonosari) is listed in Putri<sup>[40]</sup> and Ramadhani<sup>[14]</sup> based on the Profile *Kampung Pelangi* (Profil *Kampung Pelangi*); 1,405 and 861 residents for RW03 and RW04, respectively, totaling 2,266 residents (Table 4). Ramadhani<sup>[14]</sup> also lists the population of *Kelurahan Randusari* as of March 2023, as shown in Table 4. The total population of *Kampung Pelangi Semarang* (Wonosari) and *Kelurahan Randusari* is 2266 and 7451: the population of *Kampung Pelangi Semarang* is about 30% of that of *Kelurahan Randusari*. The total number of males and females in RW03 and RW04 of *Kampung Pelangi Semarang* (Wonosari) is 1,110 (= 707 + 403) and 1,156 (= 698 + 458), both of which are about 30% of those of *Kelurahan Randusari*, suggesting there is no bias in the gender ratio.

	Wonosari					Randusari	
	RW3		RW4				
	Male	Female	Male	Female		Male	Female
0 – 5	73	61	28	29	0 – 4	465	499
6 – 10	69	69	30	32	5 – 9	308	329
11 – 15	67	69	23	36	10 – 14	358	359
16 – 20	50	51	40	36	15 – 19	353	358
21 – 25	64	36	28	36	20 – 24	334	358
26 – 30	57	48	23	18	25 – 29	271	256
31 – 35	57	48	30	31	30 – 34	285	322
36 – 40	52	64	28	35	35 – 39	295	328
41 – 45	48	49	41	41	40 – 44	218	222
46 – 50	39	49	32	44	45 – 49	164	176
51 – 55	47	50	33	29	50 – 54	136	150
56 – 60	38	48	18	26	55 – 59	140	126
61 –	46	56	49	65	60 – 64	148	136
					65 –	201	156
Sum	707	698	403	458	Sum	3,676	3,775

Table 4. Age-specific population

Notes: Original source is Kota Semarang issued by from the Regional Development Planning Agency (Badan Perencanaan Pembangunan Daerah (BAPPEDA)) and Kelurahan Ramdusari. Sources: Tables 2 and 6 of Ramadhani<sup>[14]</sup>

Information on the number of houses was fragmented. Irwandi, Sabana, Kusmara, and Sanjaya<sup>[28]</sup> wrote the number of houses to be 300 in 2017 based on interviews in RW04. Aryaningtyas, Aprilliyani, and Soehari<sup>[14]</sup> wrote the number of houses to be 700 in *Kampung Pelangi* district in Wonosari village (*kawasan Kampung Pelangi di kampung Wonosari*). Ramadhani<sup>[14]</sup> obtained information from a 2023 interview that the number of houses was 800 in *Kampung Pelangi*

Semarang. Ramadhani<sup>[14]</sup> also reported that 300 houses in RW03 and RW04 of *Kampung Pelangi* were given free land certificates (*sertifikat tanah gratis tersebut*), although the timing is unclear.

The population composition by educational level is shown in Table 5. Data for *Kampung Pelangi Semarang (Wonosari)* are from *Profile Kampung Pelangi (Profil Kampung Pelangi)* appeared in Table 2.1 of Putri<sup>[40]</sup>, and data for *Kelurahan Randusari* are from *Kelurahan Randusari* appeared in Table 4.5 of Ramadhani<sup>[14]</sup>. There are more than twice as many Bachelor's degree holders (*Lulus Sarjana*) in RW04 compared to RW03 in *Kampung Pelangi Semarang (Wonosari)*, suggesting a higher level of education. Agitha and Kurniati<sup>[6]</sup> stated that almost everyone in *Kampung Pelangi Semarang (Wonosari)* completed high school. Although a simple comparison between the data of *Kampung Pelangi Semarang (Wonosari)* and *Kelurahan Randusari* is not appropriate because their sources are different and they are compiled using different categories, the total percentage of College (*Perguruan Tinggi*) and Academy Graduate (*Tamat Akademi*) in *Kelurahan Randusari* is 14.1% (= 7.4% + 6.7%), which suggests that *Kelurahan Randusari* does not necessarily superior to *Kampung Pelangi Semarang (Wonosari)* in terms of the ratio of people with higher education.

Wonosari	RW03	RW04	Randusari	
Bachelor's degree holder ( <i>Lulus Sarjana</i> )	76 (7.6%)	72 (18.0%)	College ( <i>Perguruan Tinggi</i> )	462 (7.4%)
			Academy Graduate ( <i>Tamat Akademi</i> )	418 (6.7%)
High School Graduate ( <i>Lulus SMA</i> )	444 (44.3%)	161 (40.3%)	High School Graduate ( <i>Tamat SLTA</i> )	1,371 (22.0%)
Junior High School Graduate ( <i>Lulus SMP</i> )	187 (18.6%)	74 (18.5%)	Junior High School Graduate ( <i>Tamat SLTP</i> )	887 (14.3%)
Elementary School Graduate ( <i>Lulus SD</i> )	183 (18.2%)	48 (12.0%)	Elementary School Graduate ( <i>Tamat SD</i> )	1,155 (18.6%)
Not graduate from elementary school ( <i>Tidak Lulus SD</i> )	113 (11.3%)	45 (11.3%)	Not Graduated from Elementary School ( <i>Tidak Tamat SD</i> )	210 (3.4%)
			Elementary school student ( <i>Belum Tamat SD</i> )	1,268 (20.4%)
			Not Attended School ( <i>Tidak Sekolah</i> )	449 (7.2%)
<b>Total</b>	<b>1,003</b>	<b>400</b>	<b>Total</b>	<b>6,220</b>

Table 5. Population by Education

Notes: Same as notes of Table 4. Sources: Tabel 2.1 of Putri<sup>[40]</sup> and Table 4.5 of Ramadhani<sup>[14]</sup>.

The population by occupation in *Kampung Pelangi Semarang (Wonosari)* is shown in Table 6. Data on the population by livelihood type aged 16 years and over in *Kelurahan Randusari* is available in Ramadhani<sup>[14]</sup> but is not shown in Table 6 because the categories are different. Comparing RW03 and RW04, it is somewhat notable that there are 27 (4.2%) and 0 (0.0%) Teachers (*Gurus*), and 17 (2.6%) and 25 (9.4%) Civil Servants (*Pegawai Negeri*) in RW03 and RW04, respectively but there are no other major differences. According to Ramadhani<sup>[14]</sup>, the majority of the population in *Kelurahan Randusari* are service workers (*Jasa*) with 2,762 (58.8%) and employees (*Karyawan*) with 1,039 (22.1%).



	RW03	RW04
Grocery Trader ( <i>Pedagang Kelontong</i> )	39 (6.1%)	24 (9.0%)
Flower Trader ( <i>Pedagang Bunga</i> )	53 (8.2%)	18 (6.8%)
Private Employee ( <i>Pegawai Swasta</i> )	347 (54.0%)	144 (54.1%)
Civil Servant ( <i>Pegawai Negeri</i> )	17 (2.6%)	25 (9.4%)
Paper Flower Crafter ( <i>Pengrajin Bunga Kertas</i> )	10 (1.6%)	0 (0.0%)
Food and Beverage Trader ( <i>Pedagang Makanan Minuman</i> )	13 (2.0%)	0 (0.0%)
Tailor ( <i>Penjahit</i> )	2 (0.3%)	0 (0.0%)
Vegetable Seller ( <i>Penjual Sayuran</i> )	2 (0.3%)	0 (0.0%)
Food Processing ( <i>Olahan Makanan</i> )	4 (0.6%)	0 (0.0%)
Cork Ribbon Crafter ( <i>Pengrajin Pita Gabus</i> )	1 (0.2%)	0 (0.0%)
Teacher ( <i>Guru</i> )	27 (4.2%)	0 (0.0%)
Other ( <i>Lain-lain</i> )	128 (19.9%)	55 (20.7%)
<b>Total</b>	<b>643</b>	<b>266</b>

Table 6. Population by Occupation in Kampung Pelangi Semarang (Wonosari)

Notes: The data in Table 6 is from Table 2.2 of Putri<sup>[40]</sup> (source: Profil Kampung Pelangi) and Table 7 of Ramadhani<sup>[14]</sup> (source: Bappeda Kota Semarang), and the data from both are the same.

Data on income is limited in the existing literature. Agitha and Kurniati<sup>[6]</sup> wrote that the average monthly income in *Kampung Pelangi Semarang (Wonosari)* is between Rp 1 million and Rp 3 million. Aryaningtyas, Aprilliyani, and Soehari<sup>[16]</sup> reported that, based on a non-randomly sampled survey, 13 people (13.0%) earn < Rp 1 million, 25 people (25.0%) earn Rp 1 million – 2 million, 35 people (35.0%) earn Rp 2 million – 3 million, 17 people (17.0%) earn Rp 3 million – 4 million, and 10 people (10.0%) earn > Rp 4 million.

### 3.2.4. Early-Stage Financial Support and Training

The *Kampung Pelangi* program was launched on April 17, 2017, and then the painting began for about 391 houses<sup>[21]</sup>. Ramadhani<sup>[14]</sup> stated that based on information from Taufiq, the budget of the Semarang City Government was Rp 3 billion. The 391 houses also received 675 million rupiah, 431 and 60 cans for wall and roof painting by CSR.

The physical developments supported by the Semarang City were the painting of houses, constructions or installations of eight bridges to each alleyway over the Semarang River (*Kali Semarang*), observation deck (*gardu pandang*), and the Rainbow Village signboard (*tulisan Kampung Pelangi*) at the top of the hill, water tank (*bak tandon*), directions and maps (*papan penunjuk arah dan peta*, Figure 5)<sup>[40][14]</sup>. A detailed map of Kampung Pelangi Semarang is shown in Figure 6. The residents were happy to have their houses painted without paying<sup>[5]</sup>. Semarang City provided tools, paints, and painters free of charge<sup>[5]</sup>, and 50 volunteers were sent in 2017<sup>[12]</sup>. Most of the manpower and materials were provided by The Indonesian Builders Association<sup>[42]</sup>, and there were also donations of funds, products such as paints and labor from *PT Nippon Paint*, *Bank BRI*, *PLN (Perusahaan Listrik Negara)* *Perusahaan Djarum*, *Brand Kosmetik Wardah*, etc.<sup>[14]</sup><sup>[10]</sup>. Residents also self-financed and painted their own houses<sup>[5]</sup>. Semarang City also provided training such as food production and English programs to support its development as a tourism destination<sup>[5]</sup>.





Figure 5. Direction (*papan penunjuk arah*, upper) and map (*peta*, lower). Source: Taken by Kawata on Aug. 7, 2024.



Figure 6. Map of the Kampung Pelangi Semarang. Note: Gang means narrow roads. Some narrow roads may be omitted.

### 3.3. Development Programs

#### 3.3.1. Overview

Ramadhani<sup>[14]</sup> classified the Kampung Pelangi Semarang development programs by Semarang City conducted through Pokdarwis (see section 4.7) as in Table 7.

Program	Explanations
Infrastructure Development Program ( <i>Program Pengembangan Infrastruktur</i> )	This was the physical improvement, such as painting houses, building and maintaining roads, bridges, and waterways, and normalization of rivers and streams in the initial phase.
Human Resources Quality Improvement Program ( <i>Program Peningkatan Kualitas Sumber Daya Manusia</i> )	This was education and training for residents to provide a better experience for tourists. It aimed to develop human resources by improving cooking skills, etc.
Local Community Empowerment Program ( <i>Program Pemberdayaan Masyarakat Lokal</i> )	This program empowered local people to participate in the management of <i>Kampung Pelangi</i> and facilitate small and medium enterprise businesses to cater to tourists.
Marketing and Promotion Program ( <i>Program Pemasaran dan Promosi</i> )	The program promoted <i>Kampung Pelangi</i> to tourists through branding and marketing such as adding <i>Kampung Pelangi</i> to tours and promotion using social media.
Sustainability and Nature Conservation Program ( <i>Program Keberlanjutan dan Konservasi Alam</i> )	This program aimed to protect the nature and culture of <i>Kampung Pelangi</i> through waste management, environmental conservation, and the development of a sustainable tourism village.
Partnership and Cooperation Program ( <i>Program Kemitraan dan Kerjasama</i> )	This program encouraged collaboration between the government, private sector, and the community in the development of <i>Kampung Pelangi</i> .

Table 7. The *Kampung Pelangi Semarang* development programs

Notes: Titles of programs are the same as those in Ramadhani<sup>[14]</sup>.

Existing studies divided the development process of *Kampung Pelangi Semarang* into several stages. Cahyaningrum<sup>[21]</sup> divided the process of community empowerment through tourism development into three stages: the first stage was the socialization process of painting residents' houses, the second stage was the capacity development process such as food processing training and skills training, and the third stage was infrastructure development such as parking lots and observation decks. Wulandari and Luthfi<sup>[2]</sup> stated that the first stage was the maintenance and painting of houses, the second stage was river improvement, the third stage was the marketing of *Kampung Pelangi Semarang*, and the fourth stage was strengthening the community, and suggested that by going through these stages, a prosperous society and beautiful cities will be realized. The next two sections provide a further overview of structural measures (hardware) and non-structural measures (software).

### 3.3.2. Structural Measures

Based on previous studies and the author's observations, structural measures are shown in Table 8 that were implemented in *Kampung Pelangi Semarang*. It is interesting that the Rainbow Village signboard (*tulisan Kampung Pelangi*) (Figure 7) at the top of the hill uses the old Indonesian spelling, *Kampoeng* instead of *Kampung*<sup>[28]</sup>, just like the name of Sukarno (*Soekarno*), the first president of Indonesia.



Figure 7. Picture of the Rainbow Village Signboard. Source: Taken by Kawata on Aug. 7, 2024.

Although not explicitly stated in Table 8, there were intermediate efforts between structural and non-structural measures. The front of the house was transformed into a commercial activity and tourist rest area to receive tourists: residents moved their laundry drying area and bike parking space away from the front of the house and moved furniture and materials to the terrace so that snacks and drinks could be sold<sup>[12]</sup>.

Houses	Painting of house walls <sup>[5][43]</sup>
	Addition of galvalume roofs on the front terrace of houses <sup>[43]</sup>
Paths	Construction of gates for the village's eight alleys <sup>[44]</sup>
	Painting of roads <sup>[15][43]</sup>
	Installation of handrails on road steps <sup>[44]</sup>
	Installation of maps and directions ( <i>Papan penunjuk arah dan peta</i> ) <sup>[28][43]</sup>
Semarang River	Renovation of the Semarang River ( <i>Kali Semarang</i> ) <sup>[6][44]</sup>
	Construction and repair of embankments <sup>[31][44]</sup>
	Construction and repair of bridges over the Semarang River <sup>[31][44]</sup>
	Painting of embankments <sup>[46]</sup>
	Painting of bridges over the Semarang River <sup>[44]</sup>
Facilities	Installation of observation deck ( <i>gardu pandang</i> ) and the Rainbow Village signboard ( <i>tulisan Kampung Pelangi</i> ) <sup>[5][14][43]</sup>
	Establishment of Kasmaran Park <sup>[6]</sup>
	Installation of parking lots <sup>[31][6][43]</sup>
	Installation of public toilets <sup>[6]</sup>
	Development of public space for food stalls <sup>[6][31]</sup>
	Installation of libraries <sup>[43]</sup>
	Installation of water tanks ( <i>bak tandon</i> ) <sup>[40]</sup>
	Installation of trash cans ( <i>tempat sampah</i> ) <sup>[40]</sup>
	Painting of Kalisari flower market ( <i>Pasar Bunga Kalisari</i> ) <sup>[43]</sup>

Table 8. Structural Measures

### 3.3.3. Non-structural Measures

Non-structural measures include empowering residents and holding various events and contests to promote the tourism development of *Kampung Pelangi Semarang* (Table 9). Empowerment involved various training to residents so that they could support tourist activities and successfully conduct businesses<sup>[5][28][43][10]</sup>. In Table 9, “regular programs” are mainly regular events aimed at residents, and “events” are mostly events aimed at attracting tourists.

The most frequently mentioned event in previous studies is the fishing tournament (*Lomba memancing*) held on August 17, 2018, to celebrate the first anniversary of *Kampung Pelangi Semarang*<sup>[44]</sup>. Previously, the Semarang River (*Kali Semarang*) had a foul odor, but after river improvements, it became beautiful and attractive, and residents began fishing in the river<sup>[44]</sup>. The city of Semarang and *Pokdarwis*, who observed and wanted to continue this change, organized the fishing tournament<sup>[44]</sup>.

The most recent program is *PAKAS* in 2021. *PAKAS* is an abbreviation of Semarang River Calling (*Panggilan Kali Semarang*), an environmental conservation community, and they held an event called *PAKAS* to celebrate the 474th anniversary of Semarang City. The event included a mural exhibition, a fishing contest, and a tour of the *Bergota* cemetery<sup>[19]</sup>.

Maintenance	Building inspection <sup>[40]</sup>
	Home environment cleaning program every Sunday morning ( <i>program kegiatan membersihkan lingkungan rumah setiap hari minggu pagi</i> ) <sup>[40]</sup>
	Care and maintenance of village decorations (umbrellas, chairs, flowers, etc.) <sup>[5]</sup>
Empowerment (Pemberdayaan)	Training in making goods from recycled materials ( <i>pelatihan pembuatan barang-barang dari bahan recycle</i> ) <sup>[40]</sup> -
	Training in Screen printing t-shirt making ( <i>pelatihan pembuatan kaos sablon</i> ) <sup>[40]</sup>
	Training in making cultural arts <sup>[10]</sup>
	Training in traditional food making ( <i>Pelatihan membuat makanan tradisional</i> ) <sup>[40]</sup>
	Training in basic tourism activities <sup>[10]</sup>
	Training in traditional contemporary dance ( <i>tari kontemporer tradisional</i> ) <sup>[40]</sup>
	Financial assistance for start-up capital for small and medium enterprises (MSMEs) and art groups <sup>[31][10]</sup>
Regular programs	Big Day Activities for residents ( <i>Kegiatan Hari Besar</i> ) <sup>[40][28]</sup>
	August 17th Commemoration (August 17th Commemoration) (Karaoke competition, cooking competition, healthy walking competition, tennis competition, chess competition, etc.) <sup>[40]</sup>
	Religious study activities to commemorate Muhammadiyah Day ( <i>Kegiatan pengajian dalam rangka memperingati hari Muhammadiyah</i> ) <sup>[40]</sup>
Contests	Student Work Competition (LKS) in the field of photography ( <i>Lomba Kerja Siswa (LKS) di bidang fotografi</i> ) in 2018 <sup>[40]</sup>
	Semarang City Pokdarwis Competition ( <i>Lomba Pokdarwis Kota Semarang</i> ) in 2018 <sup>[40]</sup>
Events	A walk with the mayor of Semarang in 2017 <sup>[40]</sup>
	A painting contest ( <i>Lomba melukis</i> ) in which children participated in 2017 <sup>[40]</sup>
	A fishing tournament ( <i>Lomba memancing</i> ) with the mayor of Semarang in 2018 to celebrate the first anniversary <sup>[40][14]</sup>
	Culinary Festival ( <i>Festival kuliner</i> ) <sup>[40]</sup>
	Festival Kampung Pelangi for celebrating the second anniversary by competitions such as fishing, mural painting ( <i>melukis mural</i> ), wall coloring ( <i>mewarnai</i> ), and making spring rolls ( <i>memasak lumpia</i> ) on Nov. 2-3, 2019 <sup>[14]</sup>
	An event called PAKAS in 2021 <sup>[19]</sup>

Table 9. Non-structural Measures

## 4. Kampung Pelangi Semarang: Its Success and Recline

### 4.1. Painting: The Trigger for the Success

Needless to say, the name *Kampung Pelangi* comes from the fact that the entire village is painted with rainbow colors. *Kampung Pelangi Semarang* (Wonosari) also painted the entire village rainbow colors under the support of the Semarang City and the voluntary participation of residents, following the example of rainbow villages in Malang and Surabaya<sup>[14]</sup>. The visual change of the village had significant impacts on the residents' awareness and success of the village as a tourist destination. The effects of such visual change are not limited to rainbow villages. Irwandi, Sabana, Kusmara, and Sanjaya<sup>[19]</sup> referred to these activities as participatory art projects and examined how participatory action fosters the creation of place identity among residents in three urban villages in the Java Island, including *Kampung Pelangi Semarang*.

By painting the entire village in rainbow colors, it attracted attention from domestic and international media, and many tourists flocked to the village. Various murals were drawn on house walls, and the slopes of the houses built on hills and river banks were also colorfully painted (Figure 8). The residents, who had begun to share a place identity, always tried to keep the entire village clean to welcome a large number of domestic and international tourists. The change in the village's colors brought a bright atmosphere<sup>[28]</sup>. More residents started businesses for tourists, which in turn facilitated the environment-cleaning activities



because cleanness was considered a must to sustain their businesses. Business success improved the economic conditions of residents. The results such as a clean village environment and improved economic conditions motivated Semarang City to continue support such as the provision of training programs<sup>[28]</sup>.









Figure 8. Murals and painted hill slopes and river banks. Source: Taken by Kawata on Aug. 6 and 7, 2024.

There are eight small streets in *Kampung Pelangi Semarang*<sup>[14]</sup>: if you walk along the alleys and climb the hill, you will reach the observation deck (*gardu pandang*). The village boundary is clearly defined with its rainbow color and gates. Because it is located on a hillside, the entire village can be seen upwards from the *Kalisari Flower Market (Pasar Bunga Kalisari)* and downwards from the observation deck (*gardu pandang*). The village is compact and can be easily navigated on foot. *Ramadhani*<sup>[14]</sup> applied the term *blusukan* to describe visitors' activities of going around the village through eight narrow alleys (Figure 6). *Blusukan* comes from the Javanese meaning "to walk through narrow or cramped spaces." It originally described physically entering small alleys, crowded markets, or dense neighborhoods — places that might be hard to access or overlooked. The use of this word is not limited to *Kampung Pelangi*. Within the village, many houses are lined up along small paths, and some of them have various wall paintings, such as angel wings, designed for residents to stand in front of and take photos. The slopes are steep in some places, but some paths run parallel to the hills and tourists could avoid climbing up continuously. There were many stalls (*angkringan*) in the alleys, where they could take a rest for a while<sup>[14]</sup>.

In short, two components brought success to *Kampung Pelangi Semarang*. First, it is a rainbow-colored village that attracted tourists and is distinct from the surrounding areas. Second, it is easy to navigate anywhere in the village because of its compact size while visitors could enjoy wall paintings of houses by seeing them and taking photos, which reduced fatigue while increasing the length of stay. As such, painting the entire village in rainbow colors was the main factor of success in the early stages of *Kampung Pelangi Semarang*. Another benefit was that the participatory art projects, painting the village in rainbow colors in the case of *Kampung Pelangi Semarang*, triggered bottom-up activity among residents and they became more sensitized to village issues and involved in the projects more proactively<sup>[19]</sup>.

Regular repainting is necessary to maintain the vivid atmosphere of the village. *Akbar and Alfian*<sup>[11]</sup> stated that maintenance is needed once every 1-2 years in the case of the thematic village (*Kampung Tematik*) in Malang City while *Ramadhani*<sup>[14]</sup> wrote that maintenance is needed once every 2-3 years in the case of *Kampung Pelangi Semarang*. *Agitha and Kurniati*<sup>[6]</sup> pointed out that the color of the painting in *Kampung Pelangi Semarang*, which started in 2017, had already faded and needed repainting in their 2018 article. Based on these previous studies, it follows that repainting is necessary once every few years. According to *Ramadhani*<sup>[14]</sup>, the first painting was done in 2017 and the third in 2021, thus the village was repainted about once every two years and further pointed out that without repainting by 2023, the paint on people's houses will become dull and no longer look beautiful. In fact, the paint on many of the houses was dull when the authors visited in the summer of 2024. Regular repainting is key to the success of *Kampung Pelangi Semarang* and an indicator of the sustainability of its activities.

According to *Bariklana*<sup>[10]</sup>, PT Nippon Paint provided paint support for all the houses in Rainbow Village Semarang in 2017 and again in 2021. When one of the authors visited the village in August 2024, the bridges and roads over the Semarang River (*Kali Semarang*) were repainted from the 6th to the 7th. In Indonesia, August 17th is a national holiday every year to commemorate independence on August 17, 1945, and 2024 was the 79th anniversary. On Jl. Wonosari 6, the bridge road was colored, and on Jl. Wonosari 5, not only the color of the bridge road was repainted but also the letters of Nippon Paint on the bridge girder were visible again (Figure 9).





Figure 9. Before (upper) and after (lower) repainting the bridge on Jl. Wonosari 5. Source: Taken by Kawata on Aug. 6 and 7, 2024.

#### 4.2. SNS: The Initial Motivation for Visitors

*Kampung Pelangi Semarang*, which became a rainbow village, was widely promoted through varied media and social networking services (SNSs). The colorful village was shared on social media such as Facebook, Twitter, Instagram, LINE, and WhatsApp, and many followers found *Kampung Pelangi Semarang* to be attractive<sup>[33][5][14]</sup>. The village was featured in *The Independent* (UK), *The Daily Mirror* (UK), online Arab News (Dubai), BuzzFeed (USA), and BoredPanda from (Lithuania) among others<sup>[31][14]</sup>.

Wiranto, Hermawan, Hardiyanti, Yoga, and Dwi<sup>[44]</sup> investigated how to develop *Kampung Pelangi Semarang*, a tourist village in East Java, to resemble *Kampung Jodipan Malang*, and they pointed out that the main reason visitors come to tourist destinations is because they were interested in photo spots there. Tourists can add comments, and edit pictures to be more attractive before uploading photos to Instagram<sup>[5]</sup>. The distinctive feature of SNSs compared to existing media is that they cost almost nothing, and in the case of *Kampung Jodipan Malang*, *Guys Pro* uses SNSs to promote the village<sup>[33]</sup>.

It has been pointed out that young people who visit are obsessed with an activity called *selfie* or its Indonesian equivalent *Swafoto*, both in *Kampung Jodipan Malang*<sup>[33]</sup> and *Kampung Pelangi Semarang*<sup>[44]</sup>. *Selfie* is derived from the word self and is a synonym of narcissistic, referring to the act of immortalizing oneself in a moment that one considers important<sup>[33]</sup> by taking photos of oneself. *Swafoto* is a more formal Indonesian word: *swa* means self and *foto* means photo. While *swafoto* is often used officially and in media, Indonesians usually use *selfie* daily because it's simple and globally recognized. The visit by ministers of

counties in the European Union on 24 January 2018<sup>[45][14]</sup> and the filming for the Asian Games in *Kampung Pelangi Semarang* on 6-8 June 2018<sup>[5]</sup> also contributed to the earlier success of the village.

#### 4.3. Other Factors of Success

We saw that painting the village in rainbow colors was the catalyst for success in Section 4.1, and that promotion of the village through posting pictures on social media and spreading information attracted more visitors worldwide in Section 4.2. In the following sections, we will look further into factors that made the initial success possible. This section provides a fragmented overview of some of the success factors. The next section 4.4 treats interactions between residents and tourists, which have both positive and negative aspects. The increase in business opportunities due to tourist visits is one of the driving forces that sustain *Kampung Pelangi Semarang*, which is closely related to the improvement of the village's conditions: They are discussed in Sections 4.5 and 4.6. Unfortunately, the gradual decline of village activities was witnessed because of the outbreak of COVID-19 and the internal conflicts of *Pokdarwis*: the latter is explained in Section 4.7.

One of the factors behind the success of *Wonosari Village* may be the fact that many residents were born and raised in the village and had an attachment to it before becoming *Kampung Pelangi Semarang*<sup>[28]</sup>. Through bottom-up activities such as participatory art projects and the Semarang River (*Kali Semarang*) conservation activities, residents had not only increased their awareness of place identity but were also reviving the village's stories and creating a new culture called *Jatilan* art (*kesenian jatilan*)<sup>[44]</sup>. The high level of education may also be behind the success of the village. Akbar and Alfian<sup>[41]</sup> argued that in the slums of Malang City, most residents have education up to junior high school, and the educational level is sufficient. In *Kampung Pelangi Semarang*, almost everyone has finished high school<sup>[6]</sup>, and 18% of RW04 residents are bachelor's degree holders (*Lulus Sarjana*) as shown in Table 5, thus the educational level is even higher. However, Putri<sup>[40]</sup> pointed out that the low level of education is hindering the activities of *Pokdarwis*. Not only in *Kampung Pelangi Semarang*, but in Indonesia in general, there is a custom of mutual aid called *gotong-royong*, and the Javanese word *guyub* also means community unity and harmony, thus community-based problem solution has prevailed throughout the country<sup>[49]</sup>. In addition to these factors, as already pointed out, *Kampung Pelangi Semarang's* success can also be attributed to its advantageous location near tourist attractions such as *Tugu Muda* and *Lawang Sewu*.

#### 4.4. Preparation for Visitors and Interaction with Them: Light and Darkness

There were positive and negative aspects of tourists' visits to *Kampung Pelangi Semarang*. Aryaningtyas, Aprilliyani, and Soehari<sup>[16]</sup> pointed out that the development of tourism infrastructure leads to: 1) the reduction of agricultural land; 2) an increase in crime; 3) traffic congestion; 4) environmental degradation; 5) migration due to urbanization; 6) the emergence of illegal stores; and 7) the opening of shopping centers. In the case of *Kampung Pelangi Semarang*, 1) there is no agricultural land large enough to be developed; 2) no serious crimes have been reported as far as authors know; and 7) being located in the city center, there have been souvenir shops such as *Bandeng Juwana Elrina Pandanaran* and large shopping malls such as *DP Mall Semarang* and *Pollux Mall Paragon Semarang* nearby already before the development. As for 3) and 4), 3) traffic congestion had been a concern because traffic volume on *Jl. DR. Sutomo* was high even before the development of the village<sup>[2]</sup>, and because it is located in the city center and at the edge of a busy highway<sup>[16]</sup>. Similarly, solid waste, air and water, noise, and land pollution due to increased tourism activity were also concerns<sup>[16]</sup>. Based on a survey of communities about the development of *Kampung Pelangi Semarang*, Aryaningtyas, Aprilliyani, and Soehari<sup>[16]</sup> found that 3) traffic congestion and 4) environmental degradation had more positive than negative impacts. Regarding 5) migration due to urbanization and 6) the emergence of illegal stores, there is a lack of information to make a definitive statement.

Based on the state of the village since 2017 and the initiatives implemented, Irwandi, Sabana, Kusmara, and Sanjaya<sup>[28]</sup> pointed out that locals and visitors interact in three aspects: cognition, behavior, and emotion. These three factors intertwine to form people's attachment to *Kampung Pelangi Semarang*. Providing cultural activities for tourists promotes the preservation of *Kampung Pelangi Semarang's* culture and leads to the creation of new crafts and art<sup>[14]</sup>. One example is the "*jathilan*" art attraction initiated by local artists<sup>[40]</sup>.

Since the launch of *Kampung Pelangi Semarang* on April 15, 2017, there have been many tourists in every alleyway, and villagers were able to sell food, drinks, and snacks to tourists<sup>[2]</sup>, which improved the economic conditions of residents who ran businesses. Initially, however, the presence of tourists caused a problem. The arrival of many tourists had a negative impact, especially in the period when villagers were not used to tourists. In the early days of *Kampung Pelangi Semarang*, villagers felt anxious about the safety of their village because of tourists around their houses and they responded by closing doors and sitting in front of their houses<sup>[2]</sup>. Wulandari and Luthfi<sup>[5]</sup> reported a resident's voice on May 11, 2018, saying that because of their anxiety, they keep their doors closed when they go out and when they sit in front of their houses. Over time, the residents got used to the presence of tourists and began to treat them with the 5S (*Senyum, Salam, Sapa, Sopan, dan Santun*) (Smile, Greet, Say Hello, Be Polite and Courteous)<sup>[2]</sup>. Villagers became more open, oriented, and welcoming towards visitors<sup>[2]</sup> and willing to provide information about tourist routes and tourist attractions in the village<sup>[14]</sup>. Gradually, the arrival of tourists became a source of enjoyment for residents and relieved boredom<sup>[14]</sup>.

Tourist behavior also became a problem. Some tourists visited only to take photos or to spend their free time, causing congestion and noise, and did not contribute economically to the residents<sup>[5]</sup>. There were also concerns about tourists arriving late at night, disrupting residents' rest and children's studies, and the impact of foreign visitors bringing culture and customs that are not compatible with Indonesia<sup>[5]</sup>. In the case of *Gili Trawangan* in the northern part of Lombok (*Kabupaten Lombok Utara*), Irianto (2011) pointed out the problem of people imitating the behavior of foreign tourists, which does not match Indonesian cultural values. Irianto (2011) pointed out issues many of which were subsequently experienced by the community of *Kampung Pelangi Semarang*, such as the fact that tourism activities in the village increase the income of the area, that people who can communicate in English particularly benefited income improvement, and that creating and maintaining aesthetics is important to attract foreign tourists.

#### 4.5. Income Improvement: Continuous Motivation for Residents

The launch of *Kampung Pelangi Semarang* brought many tourists and residents began selling drinks and food<sup>[21]</sup>. Many people started businesses in front of their houses because there were many unemployed people in the village as well as housewives<sup>[5][16][10]</sup>. Typical Indonesian or local products such as chips (*keripik-keripik*), cassava snacks (*cemilan-cemilan jajanan dari ketela*), rainbow ice cream (*es pelangi*), and traditional herbal medicine (*jamu tradisional*) sold well among Indonesians but not attractive for foreign tourists<sup>[14]</sup>. As mentioned above, training in handicraft production was provided by Semarang City and other organizations; the handicrafts were popular and purchased by foreign tourists<sup>[14]</sup>.

Through the above process and experiments, villagers were empowered and their living standards were improved<sup>[16]</sup>. For example, Ramadhani<sup>[14]</sup> introduced an example of an increase in income of Rp. 300,000 per day and Aryaningtyas, Aprilliyani, and Soehari<sup>[16]</sup> provided an example of a 50% increase in income in *Kampung Pelangi Semarang*. Ramadhani<sup>[14]</sup> also noted that daily earnings could reach Rp. 400,000 while citing Agus<sup>[46]</sup>. Wulandari<sup>[33]</sup> wrote an example from *Kampung Jodipan Malang* on May 15, 2017, where most families started their businesses at home, earning Rp. 40,000-50,000 per day on weekdays and Rp. 750,000-100,000 on weekends and holidays. As a result, people could meet their daily needs, nutritional needs, clothing, housing, furniture, and medical expenses, and cover school fees<sup>[17]</sup>. In the case of thematic villages (*Kampung Tematik*) in Malang, the number of shops selling daily necessities and other items increased with the development of the village due to tourism<sup>[11]</sup>.

As mentioned earlier, the development of arts by *Grup jathilan* in *Kampung Pelangi Semarang* is closely related to the development of business activities. However, there are challenges in craft training, such as a lack of clarity about what kind of craft products should be developed; there are issues such as insufficient branding although training and marketing opportunities are sufficient<sup>[14]</sup>.

#### 4.6. Garbage Reduction and Hygiene Condition Improvement: Another Benefit

As mentioned above, the existence of visitors especially from overseas has changed the consciousness of the villagers<sup>[14]</sup>. By dumping waste at the temporary dumping site (*tempat pembuangan sementara*) along the Kalisari Flower Market (*Pasar Bunga Kalisari*), residents have stopped dumping waste around their houses and in the river, and their consciousness of the cleanliness of the village environment has increased<sup>[5][15][16][14]</sup>. This change was not only due to increased income from business opportunities but also because those who did not have regular jobs and housewives started businesses at home, which allowed them to perceive the cleanliness of the environment as a familiar issue. Many residents felt that the village become more comfortable and cleaner since becoming *Kampung Pelangi Semarang*<sup>[21][28]</sup>. The change in attitude occurred not only among residents but also among the general public. *Kampung Wonosari*: previously they considered *Kampung Wonosari* to be a slum, but because it was transformed into a colorful town, and the sanitation level was improved, they found the village an attractive tourist destination for both domestic and foreign visitors<sup>[5]</sup>.

These changes did not occur immediately and completely. For example, Wulandari and Luthfi<sup>[2]</sup> pointed out that environmental concerns have not fully permeated the entire community, and garbage and soil are still dumped in the river. Residents' attitudes were led to change not only through spontaneous changes but also through the implementation of environmental activities. Initially, the aim was to eliminate littering, as residents tended to dump waste in front of their houses or between houses or pile up unnecessary items in front of their houses<sup>[14]</sup>. Heads of RT/RW (*ketua RT/RW*) appealed to residents not to throw waste in the village or in the river during the meetings (*perkumpulan RT/RW*)<sup>[5]</sup>.

Environmental improvements have also been reported in other rainbow villages and thematic villages (*Kampung Tematik*). *Kampung Pelangi Banjarbaru* in Kalimantan was once a slum, with a large amount of garbage in the river near the village, and the river was polluted, but it has now been cleaned up<sup>[18]</sup>. In *Kali Code* in Yogyakarta, residents dumped garbage in the river and dumped bath and toilet wastewater into the river, making the area prone to flooding. However, after the town revitalization, waste management was implemented and the wastewater was channeled into infiltration wells (*sumur-sumur resapan*)<sup>[23]</sup>. In *Kampung Warna-Warni Jodipan*, Malang, villagers used to dump garbage in the nearby *Brantas River* (*Sungai Brantas*), and the accumulated garbage made the river flow unstable, emitted a foul odor and spoiled the scenery, but this habit disappeared after the area became a tourist destination<sup>[33]</sup>. Cleaning staff collect

garbage from each house every morning, and part of the entrance fee to *Kampung Warna-Warni Jodipan* is used to pay for them<sup>[23]</sup>. Akbar and Alfian<sup>[11]</sup> reported that in the slums of Malang, garbage piled up and was scattered all over the river area, making it a high risk of flooding, but by becoming a thematic village (*Kampung Tematik*), residents' awareness changed and they started cleaning every morning.

#### 4.7. Internal Conflict of Pokdarwis: A Main Factor Behind the Slow Down

##### 4.7.1. Formation and early success of Pokdarwis

The development of *Kampung Pelangi Semarang* involves various stakeholders. Bariklana<sup>[10]</sup> divided these actors into four categories: universities, industry, government, and civil society. Irwandi, Sabana, Kusmara, and Sanjaya<sup>[28]</sup> divided them into government (*pemerintah*), companies (*perusahaan*), civil community (*komunitas warga*), educational institutions (*lembaga pendidikan*), and creative community (*komunitas kreatif*). Universities include Semarang State University (*Universitas Negeri Semarang*) and Diponegoro University (*Universitas Diponegoro*), while the government includes the Tourism Office, the Environment Office, the Trade Office, and the Public Works Office<sup>[10]</sup>. Civil society includes the Rainbow Village community, which is the target of the policy, as well as small NGOs that support human resource development and tourism programs<sup>[10]</sup>. Other actors include state-owned companies such as *BRI Bank* and *PLN*<sup>[10]</sup>.

Local leaders of village self-governing organizations, such as *RT* and *RW* Heads (*Ketua*), were involved as civil society actors before the establishment of *Kampung Pelangi Semarang*<sup>[5][31]</sup>. When *Kampung Pelangi Semarang* was started in 2017, the Tourism Awareness Group was established, named "*Pokdarwis*" from *kelomPOK saDAR WISata* (the Tourism Awareness Group). The purpose of *Pokdarwis* is to sustain *Kampung Pelangi Semarang* as a tourist destination<sup>[5]</sup> and was expected to play a role in a bottom-up manner to sustainably conduct activities such as regular repainting, implementing and improving human resource development programs, and holding events, which were what Semarang City had initially promoted in a top-down manner.

The development of *Kampung Pelangi Semarang* needed to start in a top-down manner. In Section 2.4, we listed four characteristics of Rainbow Villages: 1) they are supported by local governments; 2) they are slums; 3) both top-down and bottom-up approaches are observed; and 4) the villages are painted like rainbows. Because *Kampung Pelangi Semarang* was once a slum, it was difficult to become *Kampung Pelangi Semarang* without financial support. As mentioned above, the renovation of *Kalisari Flower Market (Pasar Bunga Kalisari)* was the catalyst for the launch of *Kampung Pelangi Semarang*, initiated by the Semarang City Mayor Hendi. Thus, activities were initially implemented in a top-down manner. Bariklana<sup>[10]</sup> pointed out that from the establishment of *Kampung Pelangi Semarang* in 2017 to 2018, the actors in the policy networks were mutually cooperative and functioning. This is because Semarang City still held the authority of the policy network coordinator and thus, the system was virtually in a top-down framework.

It was not realistic to maintain *Wonosari Village* as *Kampung Pelangi Semarang* in a top-down manner forever. The thematic villages (*Kampung Tematik*) in Semarang City were implemented from 2016 to 2018, covering a total of 177 *kelurahan*, with each thematic village (*Kampung Tematik*) receiving a budget of Rp 200 million. The budget and policy period were limited, and villages were expected to operate independently<sup>[10]</sup>. Therefore, a mechanism to ensure the sustainability of the villages was necessary, and *Pokdarwis* was entrusted with that role. In the case of *Kampung Pelangi Semarang*, *Pokdarwis* was formed in 2017 and was responsible for finding companies to become sponsors to help with the procurement of funds, paint, and equipment, as stated in Wulandari and Luthfi<sup>[5]</sup>. In the early stages, *Pokdarwis* functioned well, and the policy networks involving other actors such as civil society, the government, and the private sector were running smoothly<sup>[10]</sup>. It is safe to say that the initial success of *Kampung Pelangi Semarang* was achieved through the cooperation of various stakeholders.

##### 4.7.2. Transition from top-down to bottom-up

To transition from a top-down to a bottom-up approach and to ensure the sustainability of *Kampung Pelangi Semarang* under a bottom-up approach, the involvement and cooperation of both *Pokdarwis* and the village residents was necessary. First, let us take a look at the residents' side. Cahyaningrum<sup>[21]</sup> pointed out that it was not enough for the residents of *Wonosari* village to accept the activities that began in a top-down manner, but that activities in the village should be carried out with the support of residents. Therefore, Semarang City involved the local community in the planning process of *Kampung Pelangi Semarang* by including village leaders in decision-making processes. The different literature evaluated differently the extent to which residents were actively involved and the bottom-up approach was strengthened. According to Cahyaningrum<sup>[31]</sup>, the concept of painting houses colorfully (*konsep mengecat rumahnya warna-warni*) was created by the residents. Ramadhani<sup>[14]</sup> quoted Mr. Woko, head of *Pokdarwis (ketua pokdarwis)*, as saying that not only those prepared by the Semarang government but also people from *RW03* and *RW04* of *Wonosari* village cooperated in the painting. On the other hand, Irwandi, Sabana, Kusmara, and Sanjaya<sup>[12]</sup> interviewed 30 residents to investigate the level of participation in 2017. Irwandi, Sabana, Kusmara, and Sanjaya<sup>[12]</sup> found that those who voluntarily painted their houses were limited in *RW04*, and residents were not involved in the decision-making process. Moreover, a resident of *RW03* explained that

Semarang City carried out activities in Kampung Pelangi Semarang entirely. These differences in descriptions are likely influenced by how and at what stage the observers recognized the process in which top-down activities were replaced by bottom-up activities, and by whether evaluators were for or against the Kampung Pelangi Semarang activities. In the early stages, some residents could not adapt to the transition of *Kampung Pelangi Semarang*. However, as we saw in Sections 4.4 to 4.6, most residents were satisfied with the results and adapted to the changes.

Next, let's look at *Pokdarwis*. After the establishment of *Kampung Pelangi Semarang* in May 2017, painting and physical improvements were completed in about two months, and in August, the Decree of the Head of the Semarang City Culture and Tourism Office No. 556/1610 on the Establishment of the Tourism Awareness Group (*Pokdarwis*) (*SK Kadisbudpar Kota Semarang No 556/1610 mengenai pembentukan Kelompok Sadar Wisata (Pokdarwis)*) was issued, and *Pokdarwis* was formed<sup>[40][14]</sup>. SK stands for *Surat Keputusan* (law). This means that the authority of the policy network coordinator that the Semarang government had was delegated to *Pokdarwis*. *Pokdarwis* had not only authority but also responsibility, and were expected to: continuously maintain the established network; use the training provided by Semarang City to find appealing points of the village and connect them to innovation; come up with ideas and increase the possibility of attracting investors; and ensure that the village is not dependent on the government for funding the development of facilities and infrastructure<sup>[14][10]</sup>.

#### 4.7.3. Internal Conflicts and Sluggish Activities of *Pokdarwis*

Initially, Semarang City provided various training programs for *Pokdarwis* through the Tourism Office (*Dinas Pariwisata Kota*). However, information sharing within *Pokdarwis* became insufficient in 2018, and *Pokdarwis* members could not receive training provided by the city anymore<sup>[14]</sup>, which came to light when some members directly contacted the Tourism Office. Due to a lack of communication, various problems arose in the operation of *Kampung Pelangi Semarang* from around the middle of 2018, and the village's development stagnated also due to the lack of active involvement of the villagers to cover these problems<sup>[14]</sup>. In 2019, some members held the *Festival Kampung Pelangi*<sup>[14]</sup>, but from the beginning of 2020, COVID-19 began to influence. The stagnation of *Kampung Pelangi Semarang's* activities can be mainly attributed to internal conflicts among *Pokdarwis* members.

In March 2023, some of the members were changed, and on April 4, the 2017 decree was updated with the Chief Cultural and Tourism Officer Decree (*Pokdarwis*) No B/1442/556/IV/2023 for the Tourism Awareness Group (*SK Kadisbudpar Kelompok Sadar Wisata (Pokdarwis) Nomor B/1442/556/IV/2023*). The 2023 decree is to change the composition of the *Pokdarwis* members, but there is no change in the goals, and it is a continuation of the 2017 decree<sup>[14]</sup>.

Bariklana<sup>[10]</sup> pointed out that in the policy networks of *Kampung Pelangi Semarang*, the interactions between actors became unbalanced, resulting in an imbalance in the allocation of resources and authority, making it difficult for *Pokdarwis* to maintain the policy networks. Bariklana<sup>[10]</sup> pointed out that the reasons for the failure were, 1) the instability of the policy networks, 2) internal conflicts among *Pokdarwis* members, and 3) the continued dominance of Semarang City.

## 5. Kampung Pelangi Semarang: Current Status and Future Possibilities

### 5.1. Changes in the Number of Visitors

Since the opening of *Kampung Pelangi Semarang* on April 15, 2017, many tourists visited every alley<sup>[5]</sup>. However, since 2018, the number of tourists has decreased year by year<sup>[16]</sup>. As mentioned above, *Pokdarwis's* activities have completely stalled since mid-2018. Ramadhani<sup>[14]</sup> pointed out that since 2019, the village has entered a period of decline, and there were no longer any tourists enthusiastic about interacting with the people of *Kampung Pelangi*. In a 2023 survey, Ramadhani<sup>[14]</sup> interviewed villagers and wrote that the paint on their houses and road signs have become indistinguishable, the lights on the Rainbow Village signboard (*tulisan Kampung Pelangi*) at the top of the hill have been turned off, tourists have stopped coming, and business activity has stagnated.

### 5.2. Impacts of COVID-19 and Afterwards

The impact of COVID-19, which began at the end of 2019, gradually became more severe. The president of Indonesia at that time, Joko Widodo, closed the border and strengthened restrictions on civil life in March 2020, further reducing the number of tourists and causing many roadside stalls (*warung*) to close<sup>[16]</sup>. Ramadhani<sup>[14]</sup> and Bariklana<sup>[10]</sup> cited Agus<sup>[46]</sup> and reported that in 2022, there were no visitors, the paint was deteriorated, grass was growing on the roads, and no businesses were operating in the village. Later, in 2022, during the transition period toward the end of the virus, activities resumed as usual in various parts of Semarang, and tourist sites were reopened, but activities did not resume and no tourists visited *Kampung Pelangi Semarang*<sup>[14]</sup>. During the author's visit in August 2024, there were no open roadside stalls (*warung*) and no tourists. Ramadhani<sup>[14]</sup> repeatedly points out that residents have stopped paying attention to maintaining cleanliness.



### 5.3. Future Challenges

Finally, we point out the remaining issues for *Kampung Pelangi Semarang*. The first is the physical structure of the village. The village is long from northeast to southwest, and many houses are built on the northeast side, even in the steepest part. There are many narrow alleys in the village. It is not easy to significantly improve such physical conditions. Chakam and Ristianti<sup>[2]</sup> pointed out that the Street for Life principles are not met in *Kampung Pelangi Semarang*, and that it is not easy to improve them. Ratnasari, Sumartinah, and Septanti<sup>[15]</sup> mentioned that private space decreased as tourists passed in front of houses and residents ran businesses there. Akbar and Alfian<sup>[11]</sup> pointed out that the thematic village (*Kampung Tematik*) in Marang City has many simple buildings, a chaotic spatial layout, and buildings are very close to each other, and the terrain is uneven, making spatial planning by the city difficult. Furthermore, they pointed out that while it is possible to improve the culverts and make buildings more durable, it is difficult to change the structure and layout of the village. However, there is still room for improvement. For example, according to Aryaningtyas, Apriliyani, and Soehari<sup>[16]</sup>, a staircase of 999 steps for visitors was planned: however, it was canceled later.

Such problems related to the structure of the village are also related to disasters. Slums are often formed along rivers in urban areas. Wiranto, Hermawan, Hardiyanti, Yoga, and Dwi<sup>[44]</sup> pointed out that the riverbanks supporting the buildings in *Kauman Jember* are weak and prone to landslides. *Kampung Pelangi Semarang* is also located next to the Semarang River (*Kali Semarang*) and is formed on the hills behind it. Even if the village is changed to a thematic village (*Kampung Tematik*) or something, this alone does not sufficiently reduce the risk of flooding during the rainy season. This is the second remaining issue. In general, flood problems can be improved to some extent through the development of stormwater and drainage channels, and the reduction of littering, but this does not eliminate flood damage. However, *Kampung Pelangi Semarang* is less exposed to this problem than other thematic villages (*Kampung Tematik*) because it is located in a hilly area and the river has been renovated.

The third is revitalization as a tourist destination. The COVID-19 pandemic ended, and *Pokdarwis* was reorganized in 2023. According to Ramadhani<sup>[14]</sup>, in early March 2023, many local tourists visited, and actress Titi Kamal and others filmed a drama for SCTV in *Kampung Pelangi Semarang*. However, the current situation is completely different from that in 2017. To increase the value of *Kampung Pelangi Semarang* as a tourist destination in the future, the provision of new products and programs is expected as existing studies pointed out. For example, the idea of water tourism using rubber boats on the Semarang River (*Kali Semarang*) has been proposed<sup>[14]</sup>. Currently, there is little business activity for tourists, and it has been pointed out that *Pokdarwis* faces financial constraints and needs to carry out innovative activities to attract visitors<sup>[10]</sup>. Some villagers continue to have negative impressions towards *Pokdarwis*<sup>[14]</sup>, so active participation of villagers is desired under the reorganized *Pokdarwis*. Previous studies have made various recommendations, such as raising awareness of cleanliness, developing new ideas, providing guide services, improving English skills, improving toilets and roads, and providing homes for homestays<sup>[16][14]</sup>.

## 6. Conclusions

This study summarizes the history of *Kampung Pelangi Semarang* from its establishment to the present, based on existing literature and the authors' onsite investigation. *Kampung Pelangi Semarang* is a world-famous case, and there are already many studies on it, but most of the previous studies are focused on specific topics and are often written in Indonesian. This study summarized the details of *Kampung Pelangi Semarang* as comprehensively as possible based on existing literature. In Indonesia, similar village development has been carried out in various places over the past 15 years. The background and effects of villages developed as *Kampung Pelangi* are common in many cases. Therefore, this paper can also be used as a reference to check the background and effects of other *Kampung Pelangi* cases. *Kampung Pelangi Semarang* is different from other cases in that it is a world-famous case, and activities visibly decreased about a year and a half after opening, and have not returned to their previous state even after ceasing the COVID-19 pandemic: this study also focused on these points.

Since the purpose of this study was to summarize the current status of the efforts, there is not much discussion except for some in section 5. Thus, the authors' views and suggestions for future research are stated briefly. First, previous studies pointed out that the environmental condition of *Kampung Pelangi Semarang* is once again deteriorating, but as far as the authors have observed, there is almost no garbage in the Semarang River (*Kali Semarang*) and on the village paths, and the environment is maintained in good condition. Second, although there are few tourists, the villagers are still kind and cheerful when they come to visitors. Third, although the paint is deteriorating, they keep efforts for improvement under constraints, such as repainting part of the bridge in preparation for Independence Day. From these observations, it can be said that if the conditions are met, the groundwork is in place to return to a tourist destination.

On the other hand, there are some concerns. First, there are transportation issues when visiting the town. For example, although parking lots are in place, the number of cars that can be parked is limited. Because Grab and Gojek are also popular in Semarang, people who come from abroad or outside Semarang city by public transportation may not face inconvenience. The second concern is related to the state of the Semarang River (*Kali Semarang*). The proposal for water tourism is attractive, but it may not be feasible unless the water level is high. Thirdly, although *Pokdarwis* was reorganized in 2023, no noticeable improvement and/or activities have been observed. In 2017, the novelty of *Kampung Pelangi Semarang*'s activities and impression helped attract many tourists. A rehash of the

activities in 2017 would lack impact. To revive the village as a tourist destination again, as mentioned in previous studies, it is necessary to develop the programs and products that have not been provided so far. Holding new events and selling products in a state where tourists have not returned enough is risky. Finding solutions to this difficult problem is the biggest challenge for *Kampung Pelangi Semarang* now.

## Statements and Declarations

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### Conflicts of interest

No potential competing interests to declare.

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