

# Zoning Transformation at Sport Center and Its Influence Toward Housing- Case Study: Arcamanik Sport Center and Arcamanik Housing in Indonesia

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## Abstract

Housing and settlements in Indonesia continue to grow to meet the needs of people in their homes. This increase is growing with other facilities, to become a sports facility, as happened in Arcamanik settlement, in city of Bandung, Indonesia. In development of its housing function, there are other function changes that occur in the residential building. That is a change of dwelling house that develops as a place of business. These housing and settlements prioritize quality of community life by building public and social facilities, especially in the health sector such as the Sport Center area. Activity of this sports center is growing up to the national game in Indonesia. By doing research on the activities of the sports center that occurred, and development of changes in function of housing, the resulting transformation zoning that occurs. Expected to improve the health and success of urban areas.

**Keywords:** transformation, function, sport center, housing

## 1. Introduction

Housing is a group of houses that function as a residential environment or residential environment equipped with environmental facilities. While the settlement is part of the environment outside the protected area, both in the form of urban and rural areas that function as a residential environment and place of activity that supports community life, such as the example in (Figure 1) which is part of the *Arcamanik* Housing Estate. *Arcamanik* Housing has good facilities and infrastructure. Settlement environment unit is a residential area in various forms and sizes with arrangement of land and space, structural infrastructure and facilities.



Figure 1. *Arcamanik* Housing and *Arcamanik* Sport Center Entrance

Source: Google Map Satellite

The principle of settlement of housing and settlement based on the principle of benefit, justice and equality, togetherness and kinship, self-reliance, affordability, and environmental sustainability accordance on Housing and Settlements especially at the point of environmental sustainability, togetherness and kinship which closely related to the object of study as Public Open Space. Arrangement of housing and settlement aims to:

- Realizing decent housing and settlements in a healthy (Krieger J, 2002) (Kepmenkes RI, 1999), safe (Undang-Undang

RI, 1992) (WHO SEARO, 1986), harmonious (Yudhoyono, 2011), and orderly environment (Senn CL, 1980). Healthy environment required supporting facilities or infrastructure facilities such as Sport Center or Sport Area. As well, the case study is *Arcamanik Sport Center*.

- Giving direction to regional growth and a rational population spread.
- Supporting development in the economic, social, cultural, and other fields.

*Arcamanik* as residential housing in the *Bandung* city (1), has a purpose as supporting development in the sport field that can impact on economic, social and cultural in Bandung city. *Arcamanik Sport Center* contributes to supporting sport facilities in *Arcamanik* housing as well as Bandung city and West Java province (Provinsi Jabar, (2017). Basically, the problems in development or establishment of residential areas in urban environment is contextual background of urban development activities that arise. Development of residential areas in an urban area (whether in small towns or large cities context), the activities of the establishment residential areas be concerned about the link or contextual urban problems (urban planning criteria) faced by the city. The greater the scale or extent of a city causes more complex urban problems faced. The other problem is lack of attention to the main purpose of housing development, such as ensuring comfort, hygiene, health and others. Health is one of the most important factors of housing development, World Health Organization (WHO) data in 2016 showed 19.5 million people worldwide died from cardiovascular disease or 31% of 56.5 million death worldwide (WHO, 2010). More than 3/4 death from cardiovascular disease occur in developing countries including Indonesia. One of the factors that cause it is a bad lifestyle. The life style formed by a planning or design and construction of unhealthy housing. For example, housing does not offer pedestrian precinct that make the housing community must use private vehicles that cause the decrease of movement activity of the community. Sport area facility is very important to support health. In *Bandung* as the capital city of West Java provinces, it has not been able to meet the capacity needs for sport games. This is what makes city government of Bandung to build sports area in *Arcamanik Sport Center*. *Arcamanik Sport Center* selected as a sports area for PON *Jabar* (*Jabar* is West Java National Sport Week), because it has a conceptual fit with the concept of the *Arcamanik* housings omit the concept of sport. It seen from the naming of sport branches in the road of *Arcamanik* housing, such as *Jalan Golf*, *Jalan Athletic*, *Jalan Tinju* (Boxing), etc.

The last goal of this journal article is to recognize and see aspects of site-planning and the use of thematic design in donation separation within the residential area and *Arcamanik Sports Center* area. So it hoped that there be added value as well as research knowledge of the donation change that occurred in the *Arcamanik Sports Center*, to establishment of better and sustainable housing area (Figure 2) (Chiara, 1978).

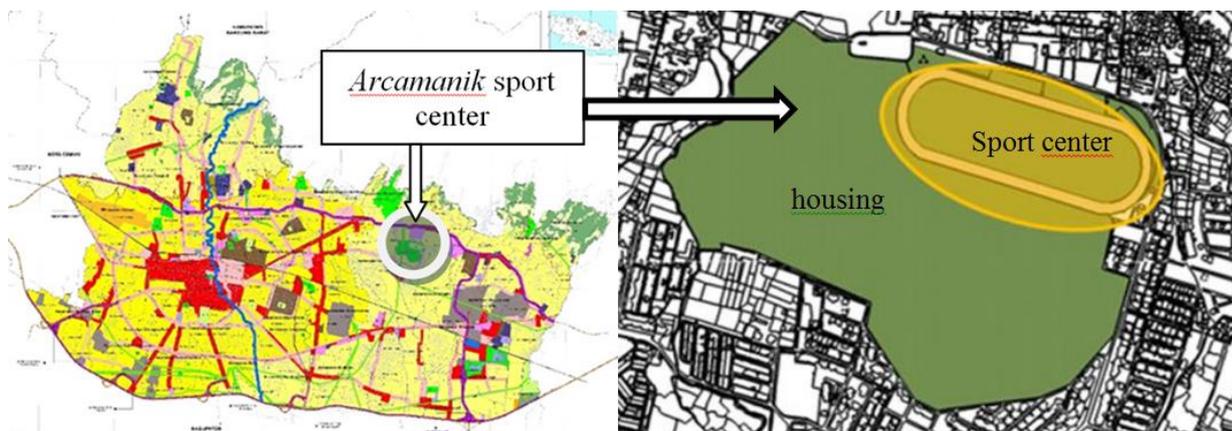


Figure 2. Map of Spatial Planning in Bandung City

*Jakarta* as a special area, the capital of the Republic of *Indonesia* with 9,988,495 polices. *Surabaya* as the capital of East Java province with 2,805,906 polarization, *Medan* as North Sumatera province with 2,465,469 polarized, *Bandung* as West Java provinsi with 2,339,463 based on *Kemendragi* 2015 / not including satellite city (Wikipedia, 2018). City of Bandung surrounded by mountains, so the morphological form of its territory is like a giant bowl (*Suganda*, 2007), geographically in the middle of West Java province, and at an altitude of  $\pm 768$  m above sea level, with the highest point in being to the north with a height of 1050 meters above sea level and the south is a low area with a height of 675 meters above sea level. The climate of Bandung influenced by humid and cool climate of the mountains, with an average temperature of  $23.5^{\circ}\text{C}$ , average rainfall of 200.4 mm and the average number of rain days 21.3 days per month (Bandung.go.id climate, 2010). Bandung has an airport named Husein Sastranegara Airport to connect another city with several other cities in Indonesia such as Jakarta, Surabaya, Denpasar, Manado, Yogyakarta, Batam, Mataram, Makassar,

Bandar Lampung, Palembang, Pangkalpinang, Semarang, and Field. As for overseas routes such as Malaysia, Singapore, Thailand and Brunei Darussalam. The current trade and services sector plays an important role in the city's economic growth as well as the continued growth of the industrial sector. Based on the 2006 Local Socioeconomic Survey (2006), 35.92% of the city's total labor force absorbed in the trade sector, 28.16% in the service sector and 15.92% in the industrial sector. While the agricultural sector only absorbs 0.82%, while the remaining 19.18% in the sector of transport, buildings, finance (Bandung.go.id, PDAM, 2010).

## 2. Theoretical Review

*Arcamanik* Housing which has a health-based sports housing concept seen from the names of the roads that use the names of sports such as Golf, Basket, Boxing, etc. It can form a physical environment with the main goal of housing or healthy house that can change the lifestyle for its community. *Arcamanik* Sport Center is an attraction and sport facility in the *Arcamanik* housing itself. Theoretical that direction of controlling use of space as well as the national territory which has indications of national zoning regulation directives, licensing directives, incentive and disincentive directives, and direction of sanctions that the zoning regulations prepared based on a detailed plan or method of spatial planning for each zone of space use based on the function. This indicates that the zoning rules localized and partial.

Changes *Arcamanik* Sport Center is still Buildings and Environment Plan of Bandung which put the open green space for public. In the past, the use of space in the *Arcamanik* Sport Center area is a combination sport functions of horse racing and golf. The most prominent character is function of the racetrack because it often holds competition of horse race both Bandung and provincial level. In addition, it used as an open space, by Buildings and Environment Plan of Bandung 2011-2031 (Undang-undang, 2011) where some of the racetrack area can still be seen even though only its small part. Even the area for the racetrack can used also for public open space area. Meanwhile, the function other public open areas changes that used a racetrack area into an area for running or jogging. The city or environment the area will always change such as occurrence of social functions (Hillier,1984). It will result in changes that occur in the physical environment, social, also change function the environment or city. Physical environment in the study area has undergone change process since its establishment, which was once a rice field area during the Dutch colonial period in Indonesia until development residential settlement *Arcamanik* which turned it into green open space, one of the functions of horse racing and golf course. This change, of course, will affect the physical, social, and cultural conditions that have grown in the study area. Physically, there is no longer a barrier to society inside and outside *Arcamanik* housing to mingle in the study area. Thus, this mixing occurs socially and culturally. Hence, gradually there will be economic relations (emerging coöperate in trade and services) (Adiyanto, 2006; Mulyadi, 2015).

## 3. Methodology

The method used is a descriptive method of fact-finding with right interpretation. Moreover, it is studying problems in the community surrounding the *Arcamanik* Sport center study area, as well as the applicable rules in the community also certain situations, including about relationships, activities, attitudes, views, and ongoing processes and the effects of a phenomenon associated with the *Arcamanik* Sport Center case study or *Arcamanik* housing (Nazir.2003: 16). In descriptive research, the researcher can compare between interview result, phenomenon through researcher observation and supporting theory study from research to produce in the form of comparative study (Shirvani, 1985). Primary data collected through in-depth interviews consisting of policy makers, NGOs, and local leaders with experience working in coordinating communities around the *Arcamanik* Sport Center study. The author also uses questionnaires to measure indicator of interest in housing community using sport facility to support their health. In total, 100 respondents interviewed, consisting of the *Arcamanik* housing community, the community outside *Arcamanik* housing and the *Arcamanik* Sport Center users. The questionnaires distributed started in August 2017 and completed in October 2017. Qualitative analyzed by using qualitative content analysis especially to explore community response in responding to the *Arcamanik* Sport Center change and see directly the change happened. It requires an in-depth investigation of respondents' attitudes and opinions on these issues (Remenyi, et al, 1998).

## 4. Case Study

*Arcamanik* housing and *Arcamanik* Sport center aselected as the object of research because the researcher experiences the changes directly. The purpose of this study is to decide what changes occur and the effects on the surrounding areas both in cultural and social (Lynch,1969) aspects of the community's concern for health in housing (Maslow, 1954). Previously, *Arcamanik* housing and *Arcamanik* Sport Center are *Sukamiskin* village. *Sukamiskin* village is an agrarian area, the land is largely a vast expanse of rice fields. Since 1979, it began to shift from agrarian areas into residential areas by presence of *Arcamanik* housing. Then, it followed by other residential housing. (The name of the street in the residential *Arcamanik* use sport names, such as: Golf , *Senam Indah*, *Tinju* etc.). Meanwhile, *Arcamanik* Sport Center itself has a history as follows:

\**Arcamanik* Sport Center was formerly a green open space area. In 1985, it designed and rebuilt for the sports activity

space of the golf course. Area of golf course reached more than 60 hectares which used the largest golf course in Bandung city. However, over the years the golf course began to add a new function which was horse racing track named *Pacuan Kuda Arcamanik* (Arcamanik Horse Race) with area of 20 Hectares. So that the golf course wide was 40 Hectares.

\**Arcamanik* Horse Race built with the aim of *Arcamanik* housing community or citizen of Bandung can exercise horses and do horse competition activities or horse racing. It only lasted for 15 years only, in 2000 racetrack activities in *Arcamanik* Horse Track began to go out. That activity was no longer visible, only a few of horses are still available, even nothing at all. Not only horse racing activities are no longer visible but also golf course was no longer maintained and no activity there. Emergence of new problems due to the permanent construction of which there is no license on the *Arcamanik* golf course grounds. The city government of Bandung and West Java province want to rebuild the sports area in *Arcamanik* to support the event PON XIX in 2016. *Arcamanik* Horse Track area that has been unkempt, used for the sports area center by the complete facilities assisting Sport Facilities *Gedebage* and other sport facilities like *Padjadjaran* Sport Center, *Koni* Sport Center, etc. as a venue for PON 2016 with land area in 20 hectares. *Arcamanik* Sport Center development begins in 2014 which completed on time 2016 by implementation of XIX PON (Source: <http://bappeda.jabarprov.go.id>).

## 5. Research

Area Zoning at *Arcamanik* Sport Center includes zones of sport function and public open space at *Arcamanik* Sport Center. This zoning will be a study of function changes in each zone or Zoning Transformation function. Zoning Transformation function in the *Arcamanik* Sport Center area will have an impact on *Arcamanik* housing around the *Arcamanik* Sport Center. This is the basis for the zoning of the housing. The zoning of *Arcamanik* housing is given a limit of 1 kilometer (Kampung Kapitan) around the *Arcamanik* Sport Center which will be the object of research studies other than *Arcamanik* Sport Center itself (Figure 3).

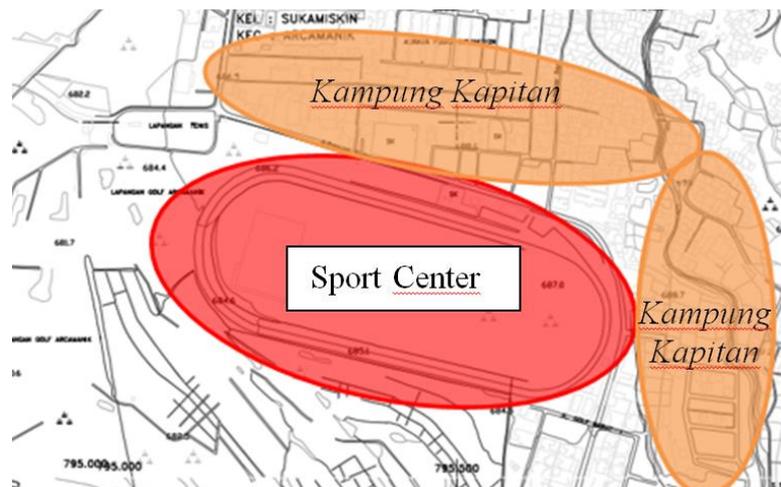


Figure 3. Facility of *Kampung Kapitan*

The research method used is familiarization. It is attempt find new understanding through the process of identifying, decomposing and recompensing. The familiarization method works by selecting regional elements that have the potential to act as *place - defining elements* (Source: Mark Nesbitt, 1995). From object of the study namely *Arcamanik* Sport Center which transforms from year to year so it be analyzed accordance with method of familiarization.

Transformation of *Arcamanik* Sport Center in 1985-1999 (Figure 4)



Figure 4. Analysis of *Arcamanik* Sport Center Transformation in 1985-1999

*Arcamanik* Horse Racing Track used for horse riding activities, riding trekking and entertainment or horse riding for children. These activities are gradually abandoned by the community and the buildings around the racetrack were not maintained anymore. The impact on the surrounding *Arcamanik* housing area that looks lonely and passive due to absence of such activities.

Transformation of *Arcamanik* Sport Center in 1999-2015 (Figure 5)

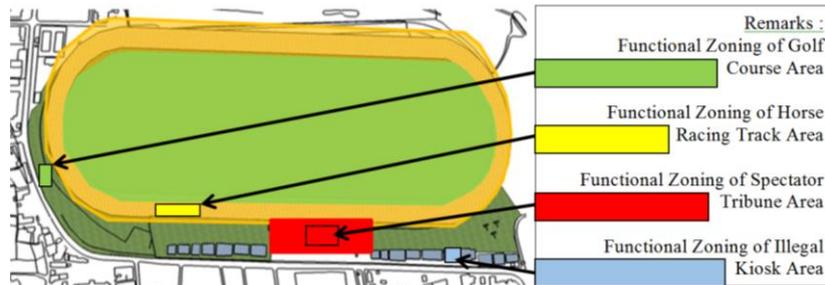


Figure 5. Analysis Arcamanik Sport Center Transformation in 1999-2015

*Arcamanik* Sport Center in 1999 had a change or transformation to a new zoning of functions and form, which arose with cause-and-effect from *Arcamanik* Sport Center activities. Since 2000 until 2009, activities at the horse races were very high, both for regional and provincial competition.

High activity of the house racing track causes the emergence new facility need that is tribune for spectators with the purpose to enjoy the race horse and protect from heat or rain. Meanwhile, at golf course, high activity will cause need of equipment for golf. This led to the emergence illegal kiosks or unlicensed by the government the emergence new problems due to no permit permanent construction of *Arcamanik* golf course grounds (Figure 6).

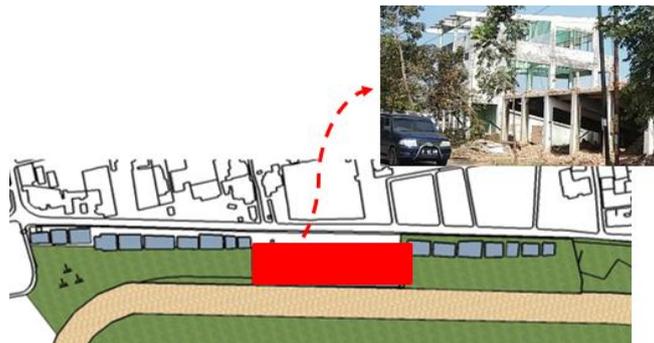


Figure 6. Aerial Photography of Kampung Kapitan Area and Surroundings in 2000

In 2009, the activities that occurred both at horse racing track and the golf course decreased even abandoned. Zoning of function and existing form are not well maintained. Golf courses that are not well maintained and horse racing games that have started abandoned cause activity on the spot, such as wild races and other negative activities. This is one reason for the transformation in *Arcamanik* Sport Center, in addition to help the sport arena in the XIX PON game in 2016.

Transformation of *Arcamanik* Sport Center in 2015-2017 (Figure 7)

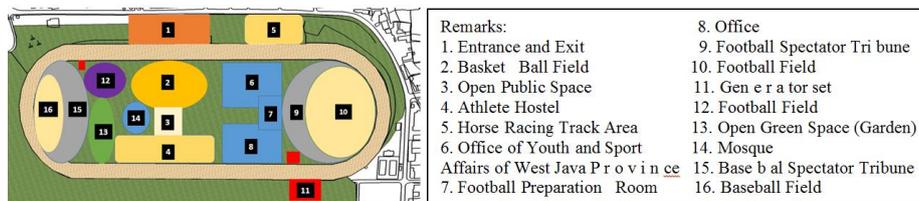


Figure 7. Analysis of Arcamanik Sport Center Transformation in 2015-2017

*Arcamanik* Sport Center from 2015 to 2017 underwent changes or transformation toward the zoning of new functions and forms, which arise with cause-and-effect of *Arcamanik* Sport Center activities. By holding PON XIX West Java in 2016, *Arcamanik* Sport Center changed partially. *Arcamanik* Sport Center was formerly passive and there is only equestrian activity. Now, it is active with variety of sport activities that be done by community. The impact of these changes is the increasing of sports interest of the public. Some houses in front of *Arcamanik* Sport Center undergo changes both function and form resulting from unavailability of commercial areas that make the houses in front of the *Arcamanik* Sport Center

into stores, as follows :

- In the first design, the residential houses in front of or around *Arcamanik Sport Center* have a large enough park and a garage that can accommodate 3-4 Cars (Figure 8). Changes that occur because *Arcamanik Sport Center* does not give a trading area. In contrary, there are so many visitors at the *Arcamanik Sport Center* especially on Saturday and Sunday.



Figure 8. Residential House Design

Housing Settlements often use homes as limited business activities without harm and do not interfere with residential functions. Limitation of residential use as a business activity does not change the form of the building and in it, it only adds a bit of new function. While residential houses that have significant changes or major changes categorized as commercial buildings instead of residential homes.

- Changes of *Arcamanik* housing design around the *Arcamanik Sports Center* (Figure 9).



Figure 9. Change of Type 1 of *Arcamanik* Housing Design

Zoning of change or transformation of function and form of *Arcamanik* housing around the *Arcamanik Sport Center* on type 1 do not drop the functioning of the residential house and do not change the form of the original residential house. However, in this type 1 there is addition of new function and forms of stores that support the needs of the *Arcamanik Sport Center*.

- Zoning of change or transformation of function and form on type 1 is small (Figure 10).



Figure 10. Change Type 2 of Arcamanik Housing Design

Zoning of change or transformation of function and form of *Arcamanik* housing around the *Arcamanik* Sport Center on type 2 do not drop function of the residential house and do not change the form of the original residential house. However, in this type 2, there are addition of 2 functions, 2 new forms (2 stores in front of the house) and change place of the carports which was originally in the right place to move into the middle place. One Store to support the needs of *Arcamanik* Sport Center and other stores do not support the needs of *Arcamanik* Sport Center.

- Zoning of change or transformation of function and form on type 2 is moderate because it does not change from the function and form of the original house (Figure 11).



Figure 11. Change Type 3 of Arcamanik Residential House Design

Zoning changes or transformation of functions and forms of *Arcamanik* housing around *Arcamanik* Sport Center on type 3 remove function of the residential house and changes the form of the original residential house. In type 3, there are changes or very significant transformation. Change by removing the park in front of the house and change the park into a new function: store or workshop. Zoning of changes or transformation of functions and forms in type 3 is very large and categorized as a commercial building as it alters the overall function and form of the original residential house.

## 6. Conclusions

*Arcamanik* Sport Center is a public sport facility in *Arcamanik* housing. It becomes the most complete sport facility in Bandung city causing the enormous number of visitors especially in holiday. As a sport facility filled with visitors, the suggestion is *Arcamanik* Sport Center can give trade facilities which visitors can easily sell or buy their needs without making the negative impact on the surrounding area. However, at this time *Arcamanik* Sport Center does not give it. Moreover, the rule about the layout and function of the buildings around the *Arcamanik* Sport Center area is not clear. It has an impact on the change of residential house into commercial area.

According to the results of the analysis about the existence and transformation or changes of *Arcamanik* Sport Center, in general, the conclusion proves that the influence between changes or transformation *Arcamanik* Sport Center to *Arcamanik* housing and its surroundings. The influence is great which existence of commercial activities that affect the

change or transformation of function or form of residential house around *Arcamanik* Sport Center.

The role of government in dealing with this decision is very big governance of the *Arcamanik* Sport Center area. Moreover, the rules of land use and building functions around the *Arcamanik* Sport Center or *Arcamanik* housing be clear and firm. It is to avoid the negative impact in other aspects.

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