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Learning Pattern of Inheritance Tradition of Sustainable Architecture: From Ethno-Architecture to Ethno-Pedagogy

ABSTRACT: *Sustainable architecture is not just a matter of technology-related material, the energy use efficiency, land use efficiency, material use efficiency, the use of technology and new materials, and waste management, but also about cultural attitudes and education. In traditional societies, for example, sustainability is happening not only by artefact form, but rather on a belief in the values underlying the respect and understanding to keep the harmony of nature. Therefore, this study wants to focus on two things. Firstly, describing how the behavior patterns of traditional village culture in interacting with the natural environment and the built environment (architecture) in harmony and sustainable. Secondly, examining how patterns of behavior are maintained and passed through a learning process to the next generation. The ethno-architecture and ethno-pedagogy research will use qualitative research methods, which not only focuses on the process (behavior) but also on artefacts as cultural architecture products. The research focus on ethno-architecture shows that the landscape setting of Ciptagelar cultural village in Sukabumi, West Java, Indonesia is generally fit to the sustainable architecture parameters. Meanwhile, ethno-pedagogy sides shows that the tales, advices, poems and children's songs, myths, symbolisms, and belief are some learning pattern of tradition inheritance which content has an effort to live in a harmony with the nature, environment knowledge, environment awareness, and the implementation of environment conservation.*

KEY WORDS: *Ethno-architecture, ethno-pedagogy, Ciptagelar cultural village, sustainable architecture, and the traditions inheritance learning.*

INTRODUCTION

Exploitative development has spawned a variety of impacts that harm the environment and human life. Therefore, environmental issues have become popular and current issues in the last decade. Global warming and others environmental impacts have been harassing the public consciousness the world to be more sensitive and, then, act wisely in an environmental management (Adams, 2009).

It spawned numerous attempts to produce appropriate solutions for the environmental problems. In connection with the design of the built environment, one of the concepts of problem solving that is sustainable architecture. According to James Steele (1997), sustainable architecture is an architecture that meets the needs of the present without compromising the ability of future generations to meet their own needs. The needs are differ from one society to others and the best when determined by the relevant public. This is in line with the opinion of B. Edwards & P. Hyett (2001) that most of the sustainable design is done with the energy conservation, while also admit that it's also about creating a healthy, economically, and sensitive to local needs.

However, sustainable architecture is not a panacea recipe that can easily resolve environmental issues. Sustainable architecture is not just a question of technology-material concerns, among others, through the efficient use of energy, land use efficiency, efficiency of use of materials, use of technology and new materials, and waste management. Sustainable architecture is related to cultural attitudes

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(Jenks & Burgess, 2000).

Simon Guy & Francis Farmer (2001), by quoting Maxman, states that, "*Sustainable architecture is not a prescription. It's an approach, an attitude. It's should not really even have a label. It's should just be architecture*". Correspondingly, Eko Prawoto (2010) reveals that sustainability is not just a manifestation occur artifact, but rather on the belief in the underlying values, namely respect and understanding to keep the harmony of nature. He plumbed the tradition of Indonesian people who had always been living in harmony with nature, not because of the economic logic of austerity, but really in tune with nature, not against the nature (Prawoto, 2010).

The tradition of Indonesian people, who live in harmony with nature, can still be found in the indigenous villages with traditional architecture formation. Although the general cultural research has been done on indigenous villages in West Java, Indonesia, but a combination of ethno-architectural research and ethno-pedagogical truth has not been much done.

Therefore, this research focuses on two things. *First*, it describes how patterns of cultural behavior of indigenous villagers in interacting with the natural environment and the built environment (architecture) in harmony and sustainable. *Second*, it examines how patterns of behavior are maintained and passed on through the process of learning to the next generation. On both sides, this research is very important. Exploration of the cultural roots and local knowledge is important, to acquire knowledge about patterns of human interaction with the environment and sustainable by heritage learning methods, which will be an inspiration to contemporary civilization and the future of Indonesia.

Indonesia is a country endowed with a wide variety of cultures, very rich, unique, exotic, and contains much wisdom, also the existence and richness of traditional architecture. Unfortunately, the development of Indonesia's modern architecture is based solely on aesthetic rationality, efficiency function formalism, and international style, which relates to the commercialism and consumerism. The development of this kind, as we call it as "the architectural modernism orthodoxy" (Barliana & Permanasari, 2011), proved only to produce a work of architecture arrogant, inhuman, not contextual, and ignore the exploitative environment.

Based on that, the development in Indonesia should be rooted in natural diversity, the uniqueness of the local culture and community respect, without abandoning the concept and elements of modernity. Local wisdom in the form of alignment of human interaction with the environment, which synergized with a wealth of modern science and technology, will produce fusion power architecture of the so-called "sustainable architecture". Sustainable architecture is part of sustainable development (Brundtland, 1987; and May, 2010). Thus, sustainable development is defined as development to meet current human needs without damaging the ability of future generations forward to meet their own needs.

Based on that understanding, the concept of sustainable development is based on two keywords. *First*, the requirement, which means that development meet the needs of the standard of living for everyone. *Second*, the capacity limit, which means that development should considering the limits of the environmental ability to be able to meet not only current needs but also the future generation needs.

Related to architecture, we know that architecture is very significant as a consumer of natural resources. Through the process of construction, construction material production, and operation of buildings, architecture contributes the high levels of energy consumption, waste production, and pollution. Even, modern architecture is related to the capitalistic economy often contrary to the conservation of the environment and historic buildings (Lethaby, 1912). Therefore, the implementation of the concept of sustainable architecture is a necessary requirement.

There is a notion of sustainable architecture, which seems to contain shades of different meanings, but in fact complementary. Fisher, in S. Hui (2002), states

on environmental architecture containing five basic principles: (1) interior environmental health, (2) energy efficiency, (3) reduction in the use of materials that would damage the global environment, (4) the processing site and architectural form that is sensitive to the environment and climate, as well as (5) design encourage increased physical quality of the environment, spiritualism, and historical.

From above theoretical explanation, already illustrated a number of sustainable architecture concepts. A number of agencies are measuring the implementation of sustainable architecture in the building and environment (Davoudi & Layard eds., 2001). One of the main indicators of measurement developed is by the Leadership in Energy and Environment Design (LEED) system. LEED system was developed by the USA (United States of America) Green Building Council (USGBC) in 2000. Fisher's architecture and environmental theory is adapted and used as a research instrument of LEED indicators (cited in http://www.usgbc.org/leed, 15/12/2013).

The parameters of LEED consists of the following factors: (1) Site design, (2) Water efficiency, (3) Energy and atmosphere, (4) Materials and resource protection, (5) Indoor environmental quality, (6) Locations and linkage, (7) Innovativeness and design/ construction process, and (8) Awareness and education. On the latter, the environmental awareness and education, separated into individual indicators in the research instrument and classified it as a part of cultural behavior.

While modern architecture is facing the problem of conflict and wasteful of energy, traditional societies is already implementing the basic principles of sustainable architecture. Traditional communities have a wealth of local wisdom to build and interact with the environment in harmony. Local wisdom, which is wrapped in the form of customs, myths, symbolism, beliefs, etc., needs to be explored further, to the inspiration for the development and management of the built environment of the present and future (Naping, 2007; and Naing, Santosa & Soemarno, 2009). This is more or less called ethno-architecture, an approach, load value systems, and architectural practices (in the interaction with the built environment and the natural environment) based on local wisdom.

On the other hand, it is interesting to examine how the pattern of inheritance of the tradition of intergenerational learning is happening, so that the traditional village characteristic has enough durability relative to the pressure changes. In other terms, the learning pattern of inheritance of tradition (handling down) can be termed as "ethno-pedagogy". This is in line with the views of A. Chaedar Alwasilah, K. Suryadi & Tri Karyono (2009) and Tatang Suratno (2010), who stated that ethno-pedagogy is an educational practice based on local wisdom in different domains, as well as emphasizing indigenous knowledge, or as a source of innovation and skills. Indigenous education is related to how knowledge is produced, stored, applied, maintained, and passed on to achieve the welfare of the community.

RESEARCH METHOD

This study comprehensively carry out the measurement and analysis of aspects of the *text* (reference historical origin of the formation and development of the settlement, customs, and norms); *behavioral* (human interaction with the environment, learning cultural inheritance); and *artifacts* (cultural product of human interaction and environmentally sustainable). With such a goal, the study uses qualitative research methods. The research object is customary Ciptagelar village in Sukabumi, West Java, Indonesia. It based on the selection of village level resistance (relatively) traditional village to change, the unique characteristics of the architecture, and a wealth of cultural wisdom.

The ethno-pedagogy and ethno-architecture research are emphasizing not only the process but also material aspects. The main data collection techniques area observation, interviews, and documentation are supported. Data collection tool, and, thus, used the observation process scheme adapted from J.P. Spradley (1980). This scheme consists of three steps: a descriptive observation, focused observation, and last observation selective.

Furthermore, the data validation performed as inalienable in the research process by means of triangulation. Data analysis was performed concurrently with data collection. Flow analysis, followed by J.P. Spradley (1980), also proposed technique, namely domain, taxonomic, and componential analysis. The results of all three analyzes continued with the theme of the analysis as a process of interpretation, by thoroughly describing and showing the meaning of the object focus research. To maintain the objectivity of this interpretation is re-used to provide a reference theoretical explanations and extensive knowledge of the domain, taxonomic, and components found in the study.

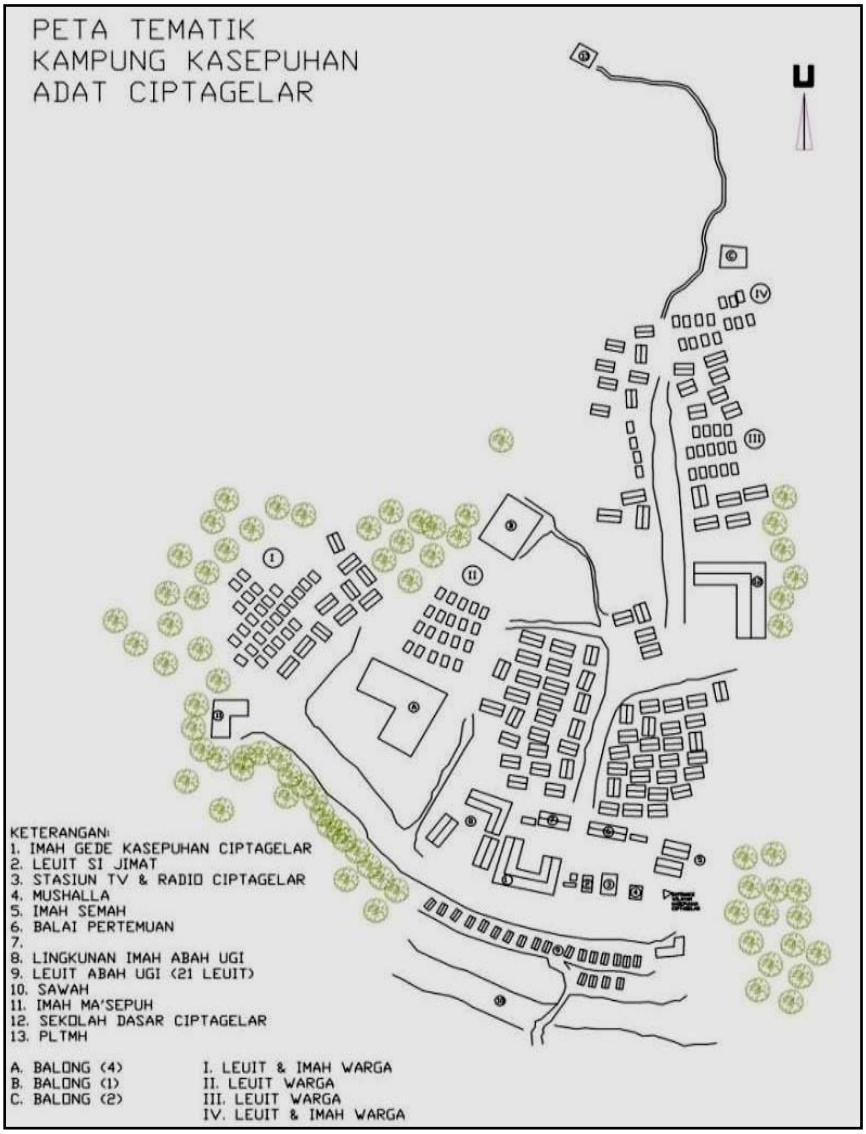

Figure 1:
Map of Ciptagelar Traditional Village

RESEARCH RESULT AND DISCUSSIONS

Overview description of the historical aspects, geography, and culture of Indigenous Village of *Kasepuhan* (Old) Ciptagelar in Sukabumi, West Java, Indonesia adopted, adapted, and prepared on a variety of references, such as studies from: Edi S. Ekadjati (1980); Yusdistira Garna (1984); Kusnaka Adimihardja (2004); Jacob Sumardjo (2007); Nuryanto & Isep Machfudin (2008); Department of Culture at the DISPARBUD (*Dinas Pariwisata dan Kebudayaan* or Exco of Tourism and Culture) West Java in 2009;[1] Bandung Heritage in 2009;[2] and interviews conducted in 2012.

Kasepuhan (Old) Ciptagelar Village is a traditional village that has distinctive characteristics, among others, in terms of location, settlement patterns, forms of architecture, as well as the traditions of the economic, social, and cultural communities still held fast by the community. Ciptagelar community is living in Halimun Mountain areas. Administratively, the village is in the area of Sirnaresmi Village, Cisolok District, Sukabumi Regency, West Java, Indonesia.

[1]See, for example, news entitled "Data Kampung Adat di Jawa Barat, 2009". Available [online] also at: http//www.disparbud.jabarprov.go.id [accessed in Bandung, Indonesia: 15/12/2013].

[2]See also news entitled "Kampung dan Rumah Adat di Jawa Barat, 2009". Available [online] also at: http://www.bandungheritage.org/ [accessed in Bandung, Indonesia: 15/12/2013].

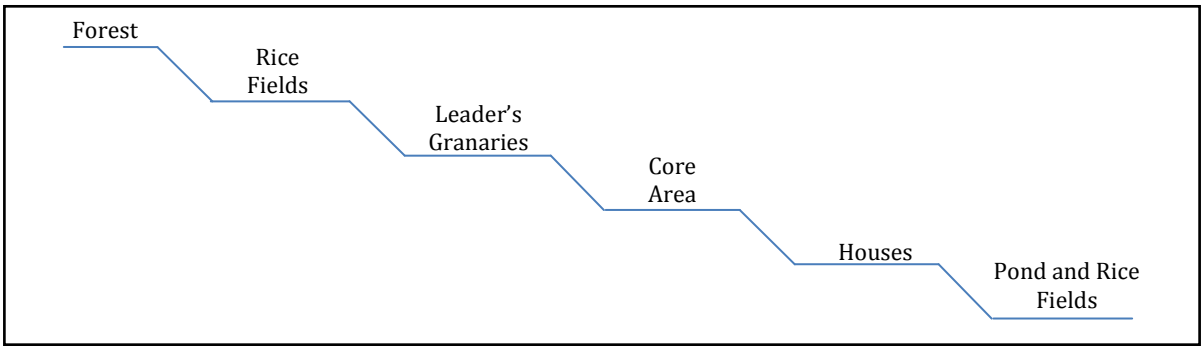

Figure 2:
The Spatial Structure of the Village Follows the Topography Form

Distance from the Village of Sirnaresmi is 14 km (kilometers), and 27 km from the District of Cisolok, and from the administrative center of Sukabumi is 103 km and 203 km from Bandung as the capital city of West Java Province.

Ciptagelar Village led by a headman/village head called *Jaro*, but customarily, Ciptagelar settlements village led by *sesepuh girang* (traditional chief) who is better known as *Abah Anom*. People living in the community called *Kampung Ciptagelar Kasepuhan*. The term is derived from the word old with prefix – *ka* and suffix – *an*. So, based on this understanding, the term of *kasepuhan* is the abode of the elders. This refers to *kasepuhan* leadership system model of a community or society based on customs of the parents or old fashioned.

Kasepuhan name is actually a term for a group of people outside the traditional village communities. Own citizens, in the past, called themselves as the descendants *Pancer Pangawinan* (center of genealogy) term. In the 1960s, *Kasepuhan* Ciptagelar Village has had special names that can be considered as the original name of the society, namely *Perbu*. Name of *Perbu,* then, disappeared and changed into *kasepuhan* or *kasatuan*. In addition, they were referred to as indigenous/traditional (interview with Abah Ugi, 7/6/2012).

Kasepuhan Ciptagelar traditional village, actually, is the new name or the development of the Ciptarasa village. In 2001, around July, the village moved from the Ciptarasa village or Sirnarasa to Sirnaresmi village. The event is closely related to the formation and migration of the traditional leaders, migrate through vision. The vision is a "parent command" that achieved or received by *Abah Anom* after going through his ritual process, the results of which may not be so, it must be done. Therefore, removals Ciptagelar traditional village for residents is a form of loyalty and obedience to the ancestors. In this Sirnaresmi village, precisely in Kampung Sukamulya, *Abah Anom,* or Encup Sucipta as the top leadership of the traditional village, named a place "Ciptagelar" as new emigration. So, *Ciptagelar* means making to spread out or making to open and exposure.

About moving village based on vision, it is not the first time; *Abah Anom* as earlier ancestor also do the same. Since the establishment of this traditional village in Bogor area, predicted 640 years ago, with some community leaders of *kasepuhan* village, has had several relocations based on the vision. In the past, when the government was formal and modern yet present, this move may not experience problems with the availability and ownership of customary land (communal). However, now and in the future, it seems that it would be a problem, including harmonization with Forestry Ministry of the Republic of Indonesia.

However, awareness of the limits of individual villages and land borders remains a very important part in *Kasepuhan* people's beliefs. Limit is one important part of the village that serves as a pattern delimiter residential areas. In addition, the limit also has the meaning of consciousness to respect the rights of their neighbors, meaning that

they will feel safe and calm when in the community environment (*cf* Barkes, 1999; and Knapp ed., 2003). Limits, indirectly, become a shield for activity occupants in it.

Environment of Ciptagelar, physically, is restricted by rivers, forests, fields, gardens, hills, bamboo fencing and pond. Boundaries are partially surrounds and partly scattered around the village, and comes from the surrounding environment as a natural formation. Non-physical boundaries are dealing with confidence in things unseen. Non-physical boundary is difficult to prove, as it relates to the conviction of citizens, but it can be perceived as: fear, haunted, creepy, and others.

Ciptagelar citizens have the same cosmic view of things unseen. They believe that around the village, there is a bad force that comes from spirits. Spirits or ghosts are a kind of demon, because it likes to annoy people, particularly girls, children, and pregnant women. Spirits by the Sundanese people known as *dedemit* (male ghost)*, jurig* (bald ghost)*, ririwa* (long haired ghost)*, kuntilanak,*[3] *kelong wewe* (female ghost), and others. Among the spirits there who like to annoy humans. People who are bullied or possessed by spirits called *kasurupan* (posessed by a spirit). Places that are rarely or never entered by humans believed to have the power of evil, such as *leuweung tutupan* (forbidden and closed forest), tombs, and a large tree (interview with Abah Ugi, 9/6/2012).

Belief in fine spirits, indirectly, involved into the village limits and it is a testament to their recognition of the existence and the close relationship between the visible with the invisible. Relationship is evident in the implementation and delivery of various ritual offerings in order to respect or expect a blessing. This is a characteristic of traditional societies who still believe in prohibition, such as the presence of creatures or beings are sacred, supernatural, and cannot be proved experimentally about its existence. Thus, this is a matter of trust.

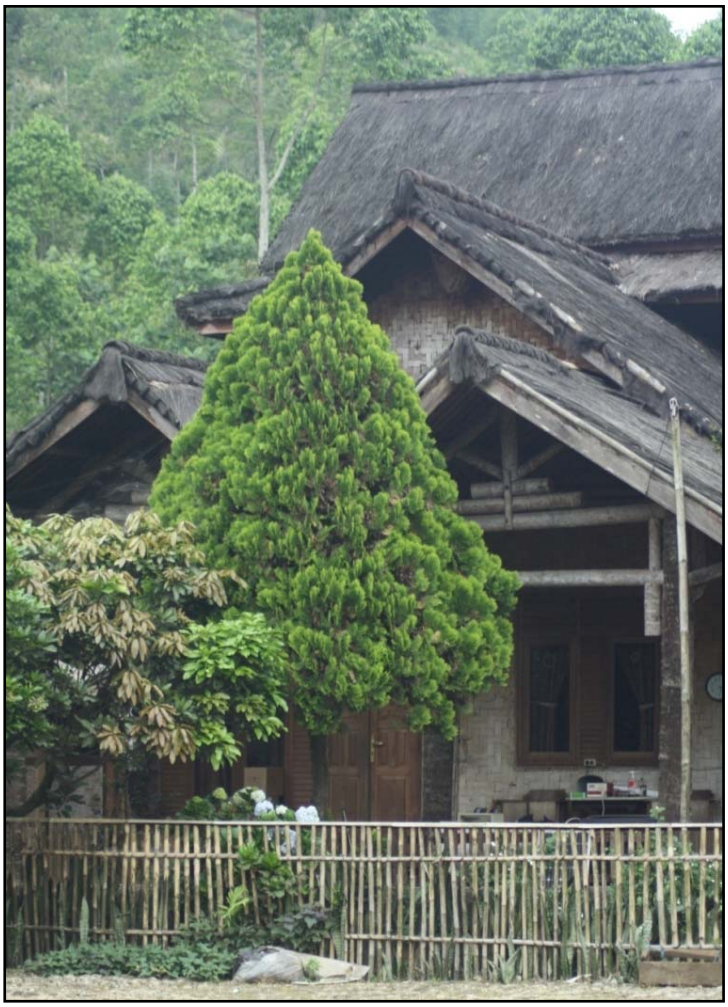

Figure 3:
Imah Rurukan (Leader's House)

Natural environment in Ciptagelar consists of mountains and hills. The condition was also supported by the contours of uneven ground; thus, indirectly, influence the placement pattern of the building mass in the village layout. The lay out made to organize the layout of the building mass or group (function), such as houses and stables, building mass and non-indigenous custom, personal and communal, so it does not mix. Orderly spatial indirectly reflect the residents who used to live orderly.

The research results, with an ethno-architecture focus, indicate that based

[3]According to John M. Echols & Hassan Shadily (2003:318), *kuntilanak* is a malicious supernatural being that is the spirit of a woman who died in childbirth and that appears as a beautiful young woman with a hole in her back.

Figure 4:
The View of Ciptagelar Traditional Village

on domain analysis, taxonomic, and componential, it can be concluded that the governance aspects of the environment/ landscape/footprint of Ciptagelar indigenous villages, generally, meet the criteria/ parameters of sustainable architecture. It mainly deals with aspects of topography and spatial structure, vegetation, and the ratio of land area (*cf* Inoue, 1985).

Capitalize philosophy of life: "*Gunung luhur kayuan; Lamping gawir awian; Legok balongan; Lebak sawahan; Datar imahan"* (High mountain planted by trees; Slope planted by bamboo; Sunken land to create pond; Low land for rice field; Flat land to create home), the Ciptagelar community arranging environment with harmony without excessive land alteration. It can be interpreted that people did not make over-engineered settlement arrangement.

The layout and function of zoning is very dependent on the condition of the existing land. In the land that lies above the altitude (mountain and hill), then, therein lies the forest (tree planting area) as a water source is located. On sloping land as the edge of the cliff/river, planted bamboo to withstand erosion and save a backup of water, the basin area can be made for pond, the low area used for rice fields, and the flat land that can be used to build houses.

The research findings also indicate that the layout of the building follows the contours of the land, the extent and number of houses adapted to the area of land available in the same contour. Also found in the contours of the land is occupied by only one house, because it is only enough to build one. Accordingly, there is no over-engineered land. Spatial structure of the area also follows the topography. Rice field located at the top, followed by a set of leader's granaries. Then below, occupies an ample flat land, there is *Kasepuhan Ciptagelar* core area, which consists of *Imah Gede* (grand house), *Imah Rurukan* (leader's house), *Leuit si Jimat* (sacred granary), and other buildings. Furthermore, houses are below, followed by rice fields.

The layout of the building is also following the contours of environmental elements. With the customary provisions regarding living forest (forbidden forest, woods and forests entrusted, and tombs), then, there is a very abundant vegetation as well conserved. The

large number of vegetation diversity, one type of wood that consist of up to 40 species. On the steep topography of vegetation planted as diverse as *Pacar Tere* (step-fiance) and *Sarang Madu* (honey nest, the lavender).

Comparison of the building and land, the settlements in micro level are not ideal (building area on average > 50% over the yard). However, in a macro level settlement, environment and forests, generally, the proportion of construction area is around 5%. Only the residential building of community leaders follows the North-South orientation.

Meanwhile, the others residential buildings do not follow the direction of the movement of the sun and wind, but following extensive conditions and existing land contours. Similarly, in terms of the orientation of the pedestrian that lack adequate levels of safety and comfort based on modern parameter. Thus, in this aspect, it is not in accordance with the parameters of sustainable architecture.

Figure 5:
The Utilize of Nature Material

In the aspect of the building, it can be concluded that, generally, following the principles of sustainable architecture. The use of natural materials around the village, such as wood, bamboo, and stones, is very common. Similarly, the pavement surface, using natural stone and soil, nature insulation/ isolation, unless the use of non-toxic paints material; material usage with the principles of reuse, reduce, recycle, textures and colors that appear are the natural colors that absorb heat. Therefore, this reality is matches of sustainable architecture parameters (*cf* Knox 2005; and Schefold *et al*. eds., 2008).

The structure of the roof, it is adaptive to the tropical climate, both in terms of material usage and construction of the roof slope. Roof covering material used *injuk* (kind of sugar palm fiber) and *kirai* (kind of palm tree), not tile.[4] Made fibers coated with a steep slope, i.e. > 30° for ordinary buildings, and 60° for *leuit* (rice store room). Palm fiber roof material does not store the sun's heat. High slope is also a good thermal insulation in the building shell, thus reducing heat transfer, whether from the sun or cold loss from within. In addition, the slope of the roof will facilitate the flow of rain water on the roof. The steep roof slope the faster flow of water, so do not give excessive weight on the roof, and the air inside the building becomes more dry.

There is a transition space as sun and rain protection; shape of the building is generally elongated and slender. Only in the use of natural light aspects, it is less along the parameters of sustainable architecture. The residential buildings only have the openings less than 15% of floor space.

[4]Tile made from soil, not used as a roof covering. This is based on the belief that only people who died is buried under the ground. Thus, human life should not be shaded by something that comes from the ground. Interview with Ki Arta and Ki Aang, on 5th June 2012.

In the infrastructure sector, largely, meet the rules of sustainable architecture (*cf* Holes, 1997; and Chappell & Willis, 2005). Management of water resources to apply the concept of reduce, reuse, and recycling. The water flowed from the spring water to the shelter for cooking and drinking water needs. Meanwhile, water from the river is flowed into the rice fields and also filtering tub, and use for bathing and washing. Some surface water runoff, water from rice fields and bath dirty water flowed into the pond. From the ponds flowed into the river and rice fields lower.

Figure 6:
The Slope Angle of *Leuit* (Rice Store Room)

Water waste management, such as water closet, in a leader's house, flowed into the septic tank. For residents, water closet directly above the pool, and the water impurities in eating fish. On the edge of the pool also put *saung lisung* to pound the rice, and then the waste is also for feeding the fish. Drainage environment is also quite good, because rain water and sewage is connected through the open sewer, so that the rate of infiltration into the soil is high.

The electricity power source of *Kasepuhan* Ciptagelar Village comes from the microhydro power source, which processes debit Cibareno River. However, the villagers do not have awareness of energy efficient. Communities lights all night and day, because even the electrical system in the building does not provide a switch on/off the lights.

Society also stuttered when faced with product instant food consumption and inorganic industrial production, namely plastic waste. Before the entry of plastic waste, making the organic waste into natural fertilizer, enough to collect and dump it into the garden or make it into compost. When the plastic garbage in, it is a problem. Thus, waste management is not optimal. To solve plastic waste problem, it is carried by fire and causing air pollution. On the other hand, the behavior of littering is still visible, thus making it looks a pile of garbage in some places, especially near the pond.

The last thing that appears to be related to the cultural behavior and learning patterns aspects of cultural inheritance (ethno-pedagogy), knowledge, awareness, and implementation of environmental awareness is high. It appears in the form of the water resources management wisdom, soils, vegetation/forest, as well as environmental and building layout.

Local wisdom handed down by tradition from generation to generation without rationality, but through myth and symbolism. Instead, the management aspects of electrical energy, as a source of modern energy, people do not have a precedent, so it does not have awareness of energy saving.

The results of the research, with focus on ethno-pedagogy, show that there is some form of learning inheritance tradition consist an effort to live in harmony with nature, environmental knowledge, environmental awareness, and implementation of environmental conservation. The form includes a tales, advices, rhymes and children's songs, mythos, symbolism, and beliefs. In this paper, due to page limitations, only given three examples.

First, which is tells the tale of *Lutung Kasarung*, royal knight who helped Princess Purbasari lost and miserable in the middle of the forest. *Lutung Kasarung* (Prince

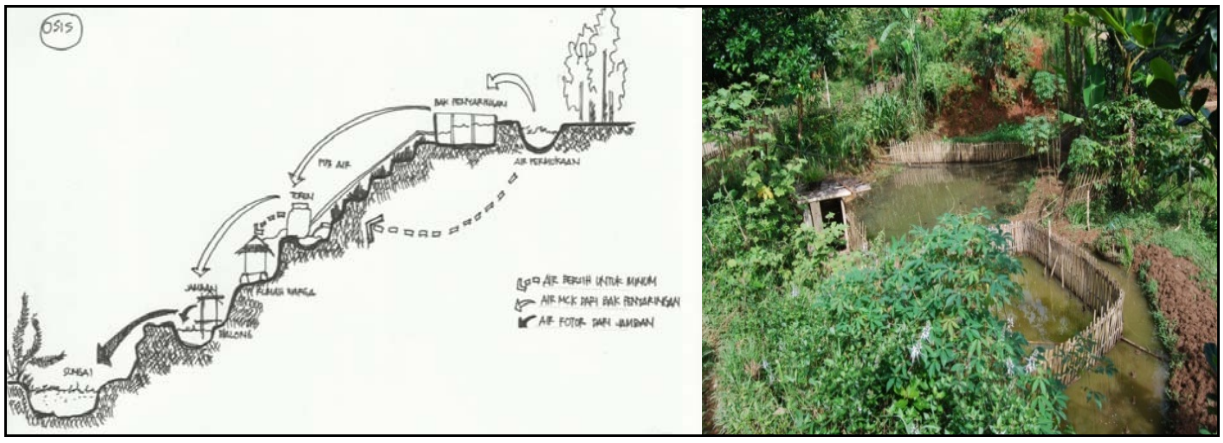

Figure 7:
Water Circulation Pattern (left) and Figure of Pond (right)

Guruminda) taught Purbasari on how to live in the forest, but did not destroy the forest with the principle *leuweung tempat hirup jeung kahirupan; akur jeung leuweung bakal hurip* (forest is place to live and life; keep the forests alive will save the life). The belief of *nu ngageugeuh leuweung*, the non-physical creatures, is believed by community to protect the forest, which is includes ancestor soul, genie, and also demon.

Tale contains also a forest ranger (power) which is invisible to always keep the forest. Humans must respect and live in harmony with these forces, in order to avoid a hazard. *Nuar satangkal, melak sapuluh*, meaning a cut tree trunk, had to replant ten trees or more, due to the forest preserve is not bald.

Second, advices proverb, among others: *mipit kudu amit, ngala kudu menta*, meaning to take the tree in the forest had to ask permission to the guard, as the forest or any place there must inhabit/guard, as a proof of honor; *Gunung luhur kayuan, lamping gawir awian, legok balongan, datar imahan, lebak sawahan*, meaning high mountain planted by trees, slope planted by bamboo, sunken land to create pond, flat land to create home, low land for rice field. The whole meaning is that human must be capable of processing nature potential with very different forms of natural topography for their welfare (Adimiharja, 1999).

Third, myths, such as prohibited to use of tile roofing materials, means as to burying yourself alive. Those who violate it will receive the wrath of the ancestors. Indirectly, this implies prohibition of exploiting the earth by digging the ground that ultimately destroys the natural habitat, including water resources;

With regard to cultural behaviors that include knowledge and awareness of the environment, as well as its implementation in daily life, the position should be placed in three ways.

First, a paternalistic social structure. The position of *Sesepuh Girang* (indigenous leader) is as a role model. Thus, what is said and done by the *Sesepuh Girang*, Abah Ugi, will be followed by the citizens of the community, including in the management and conservation of the environment (*cf* Nababan, 1995; and Halliday, 1997).

Second, the belief that supernatural things are set up, coaching, and watching his/her life, in interaction with the environment. "*Hirupna manusa teu saukur akur jeung batur salembur, oge natangga jeung nu ngalebur*", which means that human life is not just a village with their neighbors, but also with the invisible spirit (interview with Abah Ugi, 7/6/2012). This gives the meaning that humans and supernatural beings must respect one another.

Third, commonality aspects, where people concerned with social harmony. Nature and the environment is considered to belong together, not just belong to human beings, but also beings another creators, who must live together side by side. "*Nyukcruk galur,*

mapay hawangan, nete taraje, nincak hambalan; *legok ku tapakna, genteng ku kadekna, cilaka ku polahna".* It means that speech and action should be careful, respect our fellow creatures, not to be harmed by their actions (interview with Abah Ugi, 7/6/2012). This implies that courtesy to others of God's creatures (both seen and unseen) is very important, because as evidence of mutual respect and appreciation, for example, into the forest, cutting and planting trees, and others.

Figure 8:
House on Stilts Constructions

CONCLUSION [5]

The research results, with an ethno-architecture focus, suggest that the environmental aspects of the layout/ landscaping Ciptagelar indigenous villages, generally, meet the criteria/parameters of sustainable architecture. It mainly deals with aspects of topography and spatial structure, vegetation, and the ratio of land area. Only the aspects of solar orientation, residential building residents do not follow the direction of the sun and wind movement, but following extensive conditions and existing land contours. Similarly, in terms of the orientation of the pedestrian, that has lack adequate levels of safety and comfort by modernity standard.

In the building aspect, the general conclusion has been following the principles of sustainable architecture, only the aspects of the use of natural light less along that parameter. In the infrastructure sector, largely to meet the rules of sustainable architecture, except for the resource management and electrical energy aspects. The last thing that appears is related to aspects of cultural behavior and learning patterns of cultural inheritance (ethno-pedagogy).

Knowledge, awareness, and implementation of environmental awareness are high, in the form of wisdom on the management aspects of water resources, soils, vegetation/forest, as well as environmental and building set. Local wisdom handed down by tradition from generation to generation without rationality, but through myth and symbolism. These different aspects of the management of electrical energy, as a source of modern energy, people do not have a precedent, so it does not have awareness of energy saving.

The research results, focusing on ethno-pedagogy, show some form of learning inheritance tradition with consist an effort to live in harmony with nature, environmental knowledge, environmental awareness, and implementation of environmental conservation. In the aspect of the text, the form includes a tales, advices/proverb, rhymes and children's songs, myth, symbolism, beliefs, and philosophy of life.

In the aspect of environmental context, the traditional village of Ciptagelar is still provide a place for recognition, appreciation, and awareness of the environment through environmental manifestation seen, felt,

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impregnated, and experienced by children in their everyday lives. In the aspect of social interaction, there are also various behaviors payload containing educational efforts to live in harmony with nature, environmental knowledge, environmental awareness, and implementation of environmental conservation. The charge contained in the behavior, rituals, parenting patterns, the pattern of children's games, and kids pattern recognition to the environment through the work of parents.

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Village of *Kasepuhan* (Old) Ciptagelar in Sukabumi, West Java, Indonesia
(Source: www.google.com, 4/2/2014)

People watch the ceremony of *Ngadiukeun*, or put of rice, into *Leuit si Jimat* (sacred granary) on *Serentaun* (ceremony of new year/ season change) in *Kasepuhan* Ciptagelar Village. *Leuit si Jimat* is devoted to accommodate most of rice harvest owned by people. Based on the architecture's perspectives, about the structure of the roof, it is adaptive to the tropical climate, both in terms of material usage and construction of the roof slope. Roof covering material used *injuk* (kind of sugar palm fiber) and *kirai* (kind of palm tree), not tile. Made fibers coated with a steep slope, i.e. > 30° for ordinary buildings, and 60° for *leuit* (rice store room). Palm fiber roof material does not store the sun's heat. High slope is also a good thermal insulation in the building shell, thus reducing heat transfer, whether from the sun or cold loss from within.