

Interior Design of ‘Mangrove Information Center’ with Tropical Modern Ambience as an Education and Recreation Facility

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Abstract—Nowadays, global issues related to pollution and destruction of the environment is very rife. Also the mangrove conservation area ecotourism. In Surabaya, mangrove conservation ecotourism is widely available in Surabaya East Coast, especially in sub region Wonorejo. In there, many mangrove plants in maintained by local managers, but to date mangrove that was there has been damage to the environment, such as a lot of tourists who throw trash in the maintenance of offshore mangrove ie. Seeing the situation Suarabaya city government needs to establish an information center about the usefulness of mangrove plants to be able to educate the public about the usefulness of mangrove. The existence of Mangrove Information Center design is expected to be a forum that provides information to support the development of science, preservation, conservation, and research on the mangrove ecosystem in the area of ecotourism Mangrove Wonorejo Surabaya. And instill values to continue to cultivate crops in order to preserve mangrove ecosystems in the Protected Area Pamurbaya.

Keyword—mangrove, ecotourism, *Mangrove Information Center*

I. PREFACE

Surabaya has a very strategic position and became the center of the development of the eastern part of Indonesia. Surabaya city is a city that has an image of culture, tourism, trade and industry. Surabaya government is trying to develop a regional units in Surabaya. In Review Spatial Planning (RT / RW) in Surabaya, the spatial structure plan of land area divided into 12 Unit Development (UP). One of which will be discussed by the authors in the design times imi is UP. Rungkut As the area located in the eastern city of Surabaya and Sidoarjo regency, UP. Rungkut has developed quite rapidly. UP. Rungkut has many protected areas. One of protected areas that have potential as natural tourist spot is on Mount Anyar and bozem Wonorejo travel. This protected area has been through the development of MIC (Mangrove Information Centre) as a vehicle for outdoor recreation as well as research and education center. In general, the MIC can provide added value to the region UP. Rungkut and against the image of the city of Surabaya, as a city of culture, tourism, trade and industry. Ecotourism Mangrove Wonorejo do development in the form of adding facilities to support natural tourism activities. One of the facilities is needed in this mangrove ecotourism learning facilities such as mangrove and mangrove aquaculture workshop facilities. But on Ecotourism Mangrove Wonorejo not currently provide educational facilities in pretty good shape. Information on the species that exist in the mangrove forest ecosystem is also yet to be seen. So the writer will design a museum exhibiting various species that exist on mangrove forest ecosystems to meet the needs of ecotourism in terms of education .

II. LITERATUR REVIEW

A. *Study Museum / Learning Center*

1.1. Museum Description

Museum is an institution that is destined for the general public. Museum serves to collect, maintain, and present and preserve the cultural heritage of the community for the purpose of study, research and enjoyment or entertainment. Museum is an institution, storage, maintenance, security and utilization of objects material evidence as well as the results of human culture and the natural environment to support the protection and preservation of the cultural wealth of the nation. The museum is a permanent institution, tidakmencari profit, serving the society and its development, open to

the public, acquire, maintain, connect and showcase artifacts concerning human identity and environment for tujuan studi, education and recreation.¹

Museum is an institution, storage, maintenance, security and utilization of objects material evidence of human culture and the natural result and lingkungan yang support the protection and preservation of the cultural wealth of the nation²

The museum is a permanent institution, not profit, serving the society and its development, open to public, acquire, maintain, connect and showcase artifacts concerning human identity and its environment for the purposes of study, education and recreation³

1.2. Museum / Learning Center Requirements

Requirements for making a learning center or museum space are:

- a. Showrooms should be safe from thieves, the danger of fire, scorching rays of the sun, dust, smoke, pollution or industrial vehicles, as well as free of noise, and vibration.
- b. Showrooms should retain moisture. To showrooms painting will lebih good if not exposed to direct sunlight.
- c. Museums must provide land for development in the following years, assuming there will be additional space due to the addition of the collection.
- d. Museum can be supported by a workshop or studio or game in a separate building or separated with showrooms.
- e. Museums should be equipped also with space and other support such as administrative offices, meeting rooms, reading room / library, and all of them are there as much as possible the same floor with showrooms.

1.3. Circulation Pattern of Museum / Learning Center

The circulation of visitors in the museum is designed to help visitors in viewing an object or works in detail. Circulation patterns are designed so that the circulation of visitors in accordance with a systematic presentation to achieve continuity of the relationship of the objects with objects that are around the object, so that visitors do not pass objects - objects exhibited unintentionally. Here are some of the circulation patterns are applied in a gallery or museum:

- **Linier pattern**, the straight path can be the main organizer element row space. Roads can be curved or turn the direction, cut the other way, branched, or forming round (loop).
- **Radial pattern**, radial configuration having straight streets which evolved from a common center.
- **Spiral pattern**, yaitu A single road being derived and the central point, around the head with a distance change.
- **Grid pattern**, grid configuration consists of two pairs of parallel streets that intersect at the same distance and create a square or rectangular space area.
- **Network pattern**, yaitu ie configuration consisting of roads that connect specific points in space.

B. Mangrove Ecotourism Study

Ecotourism is a type of tourism that activity solely to enjoy activities related to the natural environment with all forms of life in the condition it is and inclined as a venue or environmental facilities for tourists with the communities around the project area attractions.⁴

C. Mangrove Plants Study

At first, mangrove forests known limited only by the environmentalists, especially the marine environment. At first the mangrove forest area known as Vloedbosh, then known by the term "brackish" because of the nature of the brackish habitats. Based on the dominance of tree species, the mangrove, the mangrove area is also referred to as a mangrove forest. The word 'mangrove' is a combination of mangu (Portuguese) which means the plants and grove (English) which take shrub or small woods.⁵

¹ Supriatin Entin, *Ada Lima Unsur dalam Pengelolaan Ekowisata*, on News Tour October, 21 1997 edition

² Government Regulations Republik of Indonesia Number. 19 year 1995

³ *Intenasional Council of Museum (ICOM) : dalam Pedoman Museum Indonesia, 2008*

⁴ Entin Supriatin, *Ada Lima Unsur dalam Pengelolaan Ekowisata*, Berita Wisata edisi 21 Oktober 1997

⁵ Ir. Arifin Arief, M.P., *Hutan Mangrove : Fungsi dan Manfaatnya*, Kanisius, Yogyakarta, 2003

D. Mangrove Cultivation



Picture 1. Results of mangrove Cultivation (syrup and batik)

Mangrove has great benefits for example can be used as syrup, porridge, chips, as well as batik mangrove. Mangrove cultivation alone can attract tourists who want to know how to make it.

E. Display Study

Display object	Amount	space required
Tmangrove plants	15	100 – 200 m ²
Display mangrove	3	70-100 m ²
Documentation of Mangrove Ecotourism	20	Dinding luas 20 – 30 m ²
E-kios	8	5-10 m ²

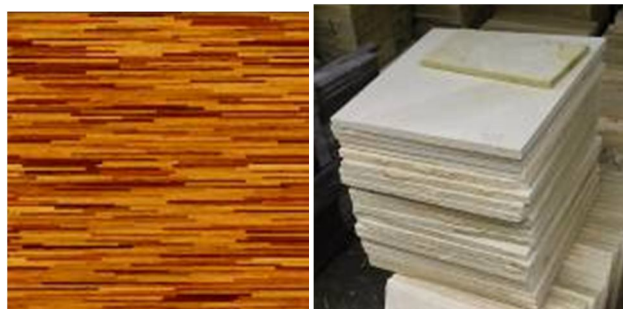
Tabel 1 . Display Objects

Goods in a display at the Mangrove Information Center, a collection of mangrove plant species that exist in Ecotourism Mangrove Wonorejo. Additional display for the visitors information such as mangrove storefront filled with information about marine life, mangrove life cycle, and others.



Picture 2. Mangrove Species Display

F. Materia Study



Picture 3. Wooden Ceramic and Paras Jogja Stone

Material that reflects modern tropical theme is nature-based material. For example, Andesit stone, Paras Jogja stone.

III. DESIGN METHOD

A. Type of Data

Designing this type of data to be used to get the desired results and appropriate is Results of the questionnaire conducted, both to determine the form, function, material and color on the interior of learning center. Hasil exclusive interview to the manager of Ecotourism Mangrove Wonorejo directly related to the maintenance of mangrove plants. Literature and theories related to ergonomic interior museum learning center.

B. Observations

Observations made by examining the needs of students in when the learning activities in the classroom, either through observation directly to the source of the data, or search for data in internet. Data from the observation was eventually used as a self-supporting data table design for students special needs. Besides, it is also the observation function as well as the conclusions of the design development developed at this time to the user..

C. Sampling

In this design, used questionnaires, be it the desire to obtain data about the visitor. In addition, the poll regarding visual style, layout, style of drawing, and detail design will be based on the right target audience in order to have a visual display that corresponds to the needs and wishes of the user.

D. Analysis

Results of analysis and study of existing users will define the objectives to be achieved, while analysis and the scientific aspects of the existing studies will determine solve the problem, or solution and reach the goal. By crossing what is to be achieved by means This achievement, will find what is mentioned researcher as a design concept

IV. DESIGN CONCEPT

Determined development concept into the makro concept and micro concept that can be applied to the interior design 'Mangrove Information Center'. The concept of the macro as the main sign to be applied to the concept of micro. While the concept of micro is a detail of the application macro concept.

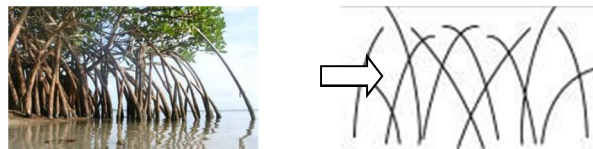
A. Macro Concept

Tropical modern concept taken by the harmony between the selected object with a design that will be created. Tropical Tropical comes from the word meaning a natural climate in Indonesia. Tropical building characteristics usually many openings and the use of colors / shades are natural. While Modern interior style is one that follows the times and always be present. Characteristics of modern interiors applied to the geometric formations and colors that are clean.

B. Micro Concept

Micro concept is more in-depth explanation of macro concept and include more detailed and profound

1. Shape Concept



Picture 4. Analogy of Mangrove Roots Characteristic

Most of the interior elements Mangrove Information Center forms an analogy of character mangrove roots

2. Color Concept



Chart 1. Color Theory of Shigenobu Kobayashi

According to color theory Shigenobu Kobayashi, warm and soft pick some characteristics that is pretty, casual, natural. The author chose the character of casual and natural colors for use in interior design museum mangrove.

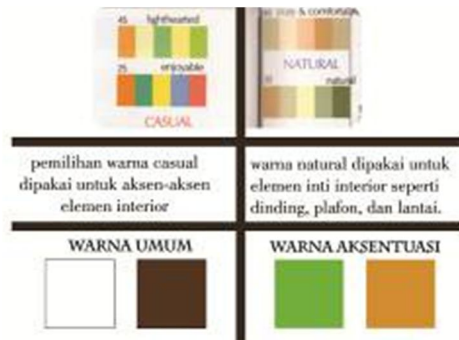


Chart 2. Selection of colors according to the theory of Kobayashi

Color selection is based on the concept of Tropical Modern style that uses a blend of modern and tropical colors. While the color accentuation election by bright colors seen in several species of mangrove forest ecosystems in accordance with the character of the flora and fauna typical of Mangrove Wonorejo.

3. Furniture Concept



Picture 5. Analogy of mangrove roots on furniture

Furniture concept in the capture is through the analogy of mangrove roots, which is one of the most prominent characteristics of the mangrove.

V. CONCLUSION AND SUMMARY

The design of this interior design focuses on the delivery of information about mangrove to visitors that the public will better understand the importance of mangroves. Analogy characteristics of mangrove roots as a supporting element of the interior so that more visitors to feel the atmosphere in the area of mangrove conservation area.

ATTACHMENT



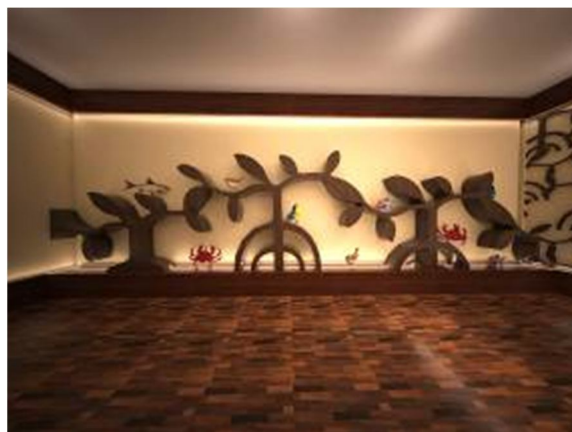
Picture 6. Mangrove Cultivation Area



Picture 7. Batik's Mangrove Workshop Area



Picture 8. Mangrove Ecosystem Area



Picture 9. Display Mangrove Ecosystem Area



Picture 10. Mangrove Species Area

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