

NAME and INSTITUTION

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POSTER TITLE

## A Case Study on Environmental Landscape Color Harmony via the Zhengbin Fishing Port Color Scheme

FIELD & TOPIC

Environmental color design - Urban landscape

KEYWORDS

environmental landscape color  
color harmony  
color scheme  
NCS environmental color survey tool  
subjective environmental color analysis

ABSTRACT

The purpose of the study is to analyze the significance of environmental landscape color harmony via the Zhengbin Fishing Port Color Scheme. A multi-color combinations façade of the seafront architecture complex is the target color scheme. A scientific NCS environmental color survey conducted to collect regional colors and to establish an environmental color database. A subjective environmental color analysis evaluated by the color planner to develop a color planning strategy. Based on the principle of color harmony, the color planner designed a multi-color combinations scheme by selecting domain colors and increasing color contrast in compliance with proper lightness, chroma, environment context, and color composition to fulfill the project's objective. The overall performance of the color scheme perceived quite harmonious with environmental landscape colors. Indeed, it was not only to enhance the Zhengbin Fishing Port's regional characteristics and cultural style successfully, but also to become a visual landmark as well.

ACKNOWLEDGMENTS

It is highly appreciated that all the information and materials of color project, funded by the Keelung city government, provided for this research is overwhelmingly. The photos used in this article by courtesy of the photographers are very grateful as well, including famous Mr. Min-Ming Chen, etc.

## Introduction

The aim of this case study is to reveal the significance of color harmony scheme by renovating a new multi-color combinations façade of the seafront architecture complex (Figure 1) in order to create a visual landmark on local environmental landscape.

The color scheme project, funded by city government, of the nostalgic pier of Zhengbin Fishing Port, located at Keelung city harbor in Northern Taiwan. The color project team was led by the architect.

The objectives of color planning strategy is to maintain the balance between the color imagery of harbor city and Zhengbin Fishing Port area, to achieve "colorful diversity", and to develop a proper color scheme to enhance regional characteristics and cultural style of the Zhengbin Fishing Port.



Figure 1: The original façade (a rectangular area) of seafront architecture complex is the target color scheme (left). Geographical location of Zhengbin Fishing Port, located at Keelung city harbor in Northern Taiwan.

## Methods

### Environmental colors data analysis

The color scheme, based on Jean-Philippe Lenclos's methodology of color geography, began with an investigation of the local colors using NCS environmental color survey tool.

The domain colors of environmental landscape in Zhengbin Fishing Port region were collected and analyzed in NCS chromatograms. An environmental color dataset established for the color scheme. (Figure 2)

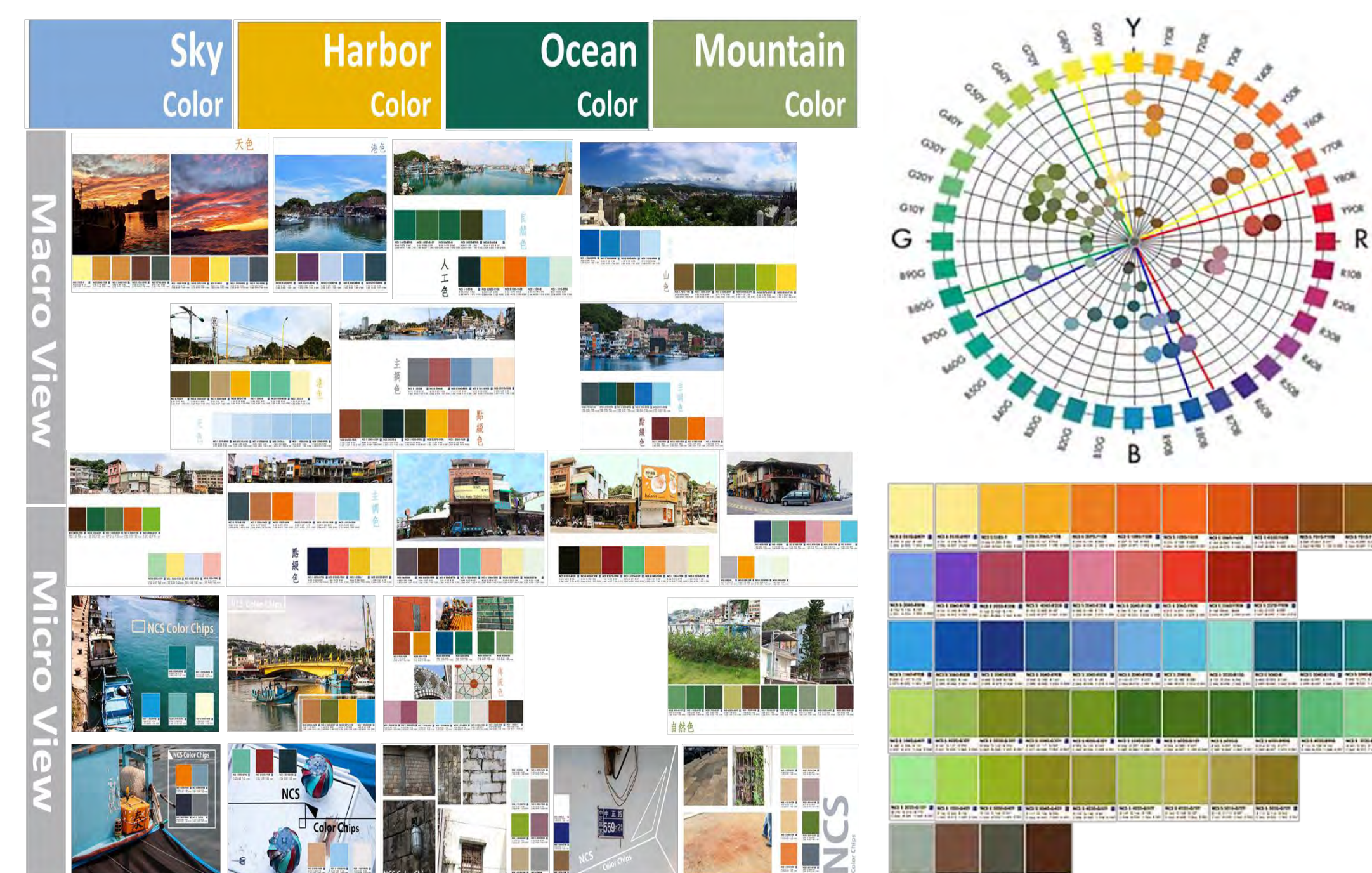


Figure 2: An environmental color survey conducted to investigate the regional landscape colors (left). An environmental color dataset established for the color scheme (right).

### The color scheme planning & implementation

1. The collaborative discussions held by stakeholders, experts, scholars and the color planner to determine medium-high lightness and chroma of colors (warm colors) with higher contrast as the key tone for the color façade of architecture complex at Zhengbin Fishing Port.

2. A proposed color scheme was designed by the color planner, based on color harmony scheme principle.

3. The final approval of color selection of each building was decided by the residents. Owner of houses, 523, 527, 529, 537, 551, 561, chose their preferred colors rather than the color planner's recommendation.

A multi-color combinations scheme for the seafront architecture complex's façade is shown on Figure 4. It was found that color differences existed between NCS color patches and actual color paints.



Figure 3: A multi-color combinations scheme designed for the façade of the seafront architecture complex.

## Results

The color harmony analysis (Figure 4) for the Zhengbin Fishing Port color scheme has shown the overall performance of color combinations on the color scheme perceived quite harmonious in accordance with color harmony scheme principles.

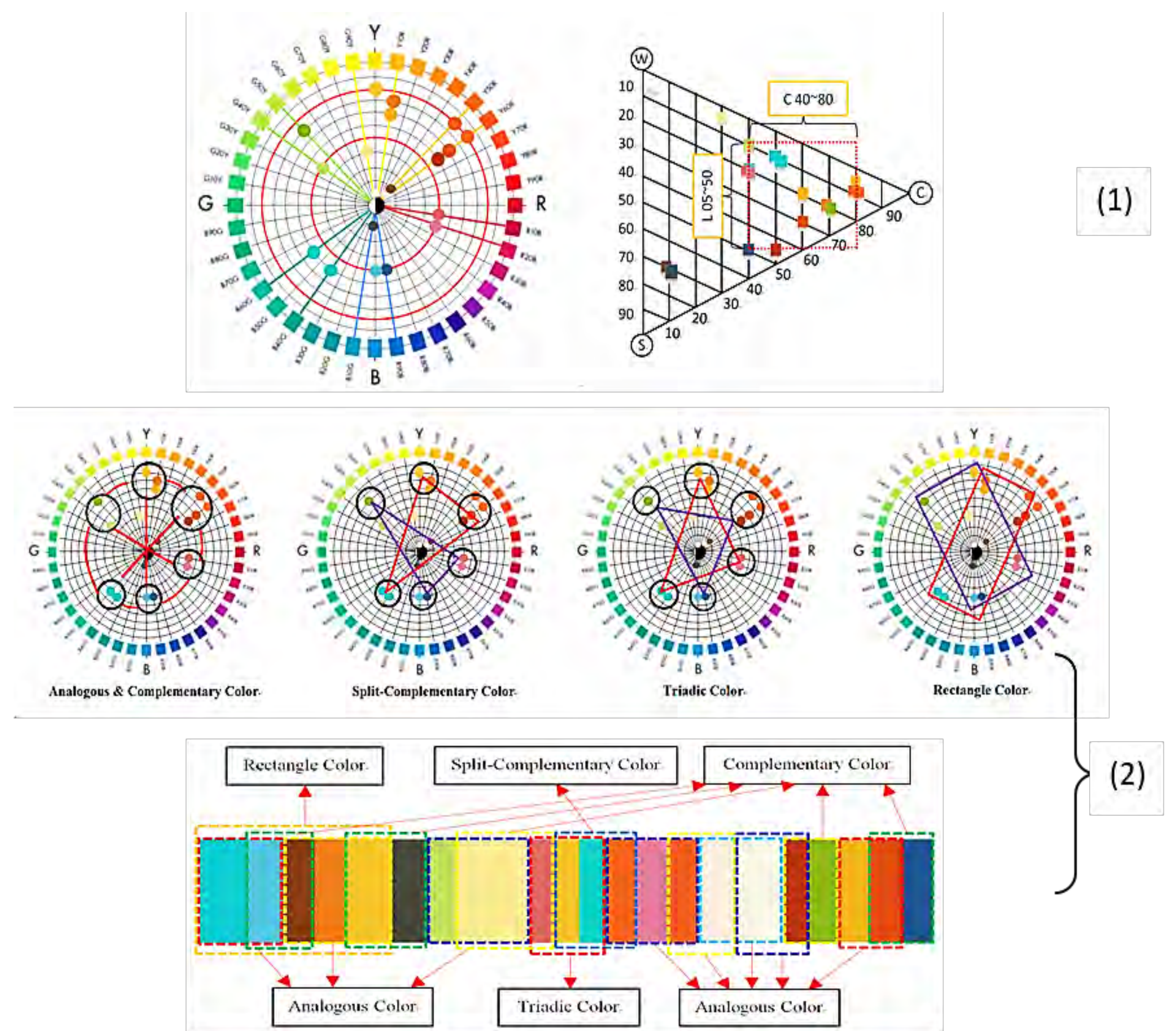


Figure 4: (1) The distributions of each selected color hue, chroma and lightness are plotted and analyzed by NCS Colour Circle and Triangle. (2) Color harmony schemes analyzed in two, three, four and multiple colors combinations.

## Discussions

1. The Jean-Philippe Lenclos's methodology of color geography adopted into this project proved very effective and successful. Due to the environment limitations, a perfect color harmony scheme for the façade might be hardly to be achieved, but the overall performance of multi-color combination color scheme perceived quite harmonious with environmental landscape colors, see Figure 5.

2. This project set up a good example that the colors selection for color scheme was decided according to collaborative discussions among stakeholders, experts, scholars and the color planner.

3. The final approval of color selection for each building was determined by the residents, not by the color planner or the city government administrators. Personal color preference turned out to be a significant factor influencing the color harmony of color scheme.

4. The communication between stakeholders and the color planner regarding the consensus of color selection for the architecture complex on the color scheme needs to be further improved.

5. It is to suggest that the psychophysics experiment method could be adopted to support the rationale of multi-color combinations scheme as additive for the color planner's aesthetical design.

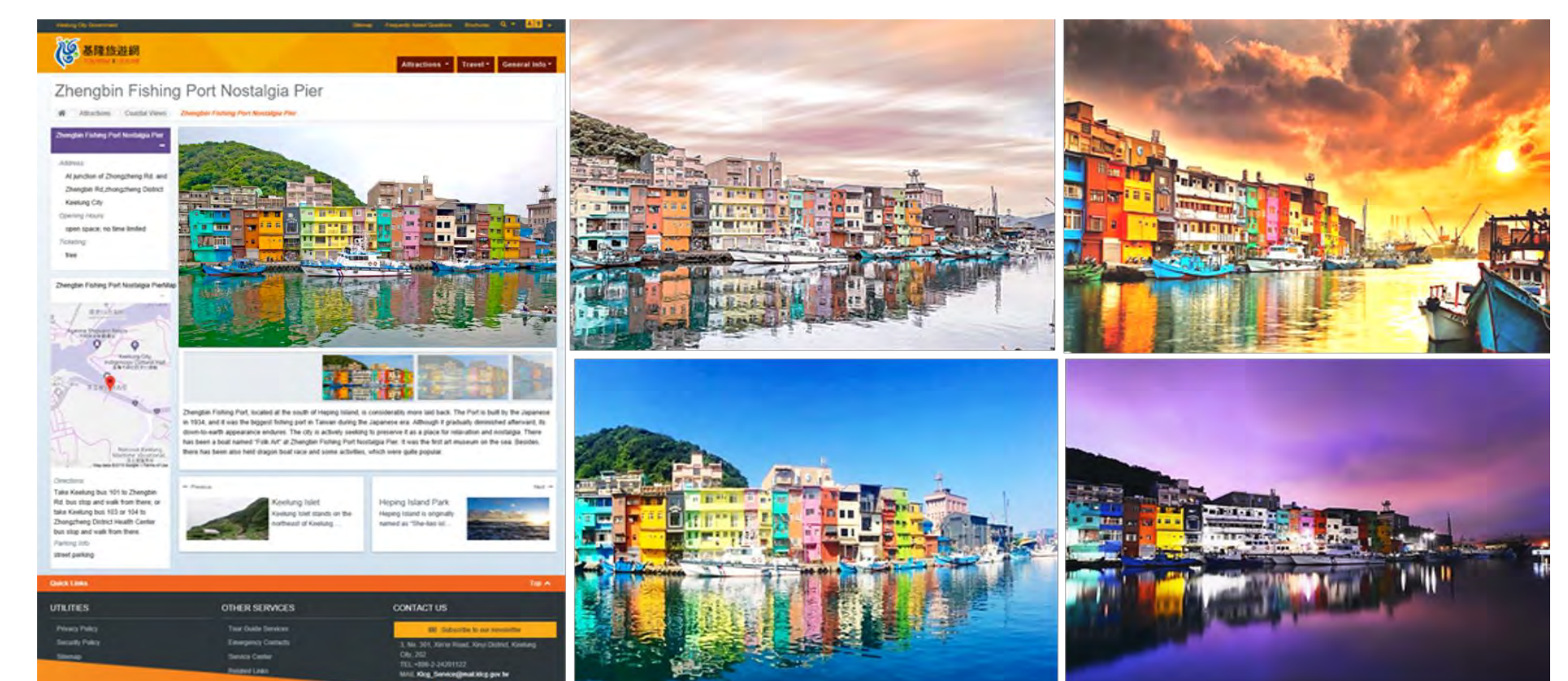


Figure 5: Keelung city government tourist website and popular photos posted by courtesy of the photographers.

## Conclusions

Zhengbin Fishing Port color scheme has captured public attention and compliments after the implementation of project. It has become a new landmark and tourist attraction, which known as "Zhengbin Color Houses" that inspired from the Italy Venetian Island of Burano (colorful island).

## References

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