

**RICS, Asia Commercial Property Professional Group Board**

**“The sustainable eco-house and its contribution**

**to the Tourism Industry growth**

**-The case study of the revitalized classic residence**

**by implementing Blue Economy-“**

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**RICS**

Key words: Okinawa, Eco-tourism, Classic style house, renovation, Air B&B

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## Summary

Japan has been keen to develop our industry as a strong tourism-driven country. This trend has been distinct in Okinawa, the country's most important resort destination. While promoting natural tourism resources in Okinawa, cultural features has also been focused in Okinawa prefecture. Okinawa will see the increase in large scale of tourist numbers in both domestic and international. However, due to the lack of the proper accommodation facility, new supply of tourist accommodation has been seen in the market. Renovated classis residence is the evidence of such trend. For the owner side, it is no more difficult to generate healthy cash flow from the almost abandoned house under the moderate scenario. Nevertheless, risks of laws and regulation change, change in visitors' interests, and unexpected contingency may have to be considered under the scenario analysis. After analyzing the risk factors, the criteria for the success revitalization of classis residence as an accommodation business, would be the following; 1 Strong tourist demand not only current but also future,2 Available existing facility to be renovated,3 Unique and attractive features to be demonstrated to the potential visitors,4 Outstanding operational skills which allows the owner to survive starting period.

Taking into account the above criteria, the sensitivity analysis works to figure out the total investment return. In this paper, under moderate and best scenario, the return could be doubled or tripled however, under the worst case scenario, it may take 10-20 years to pay back all the investment.

## The Author back ground

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Asia Commercial Property Professional Group Board, MRICS. Strong career in Valuation, Research and Consulting.

Joined Bear Sterns (2007) to deal with CMBS transactions, then German real estate banks: Eurohypo (2007-2009), WesstLB Group (2009-2013) to act as an internal consultant. Her strength covers various commercial asset classes including hotels and shopping malls, and she also has wide network in Europe, Asia, South and North America. Since 2013, based on Okinawa, Japan's most famous ocean resort destination, she supported a global energy group (Petrobras) to create the dynamism linking real estate field and the energy industry. Since 2015, she's been supporting the global hotel consulting business, Asset Real as a partner in Japan, <http://www.assetreal.net/>

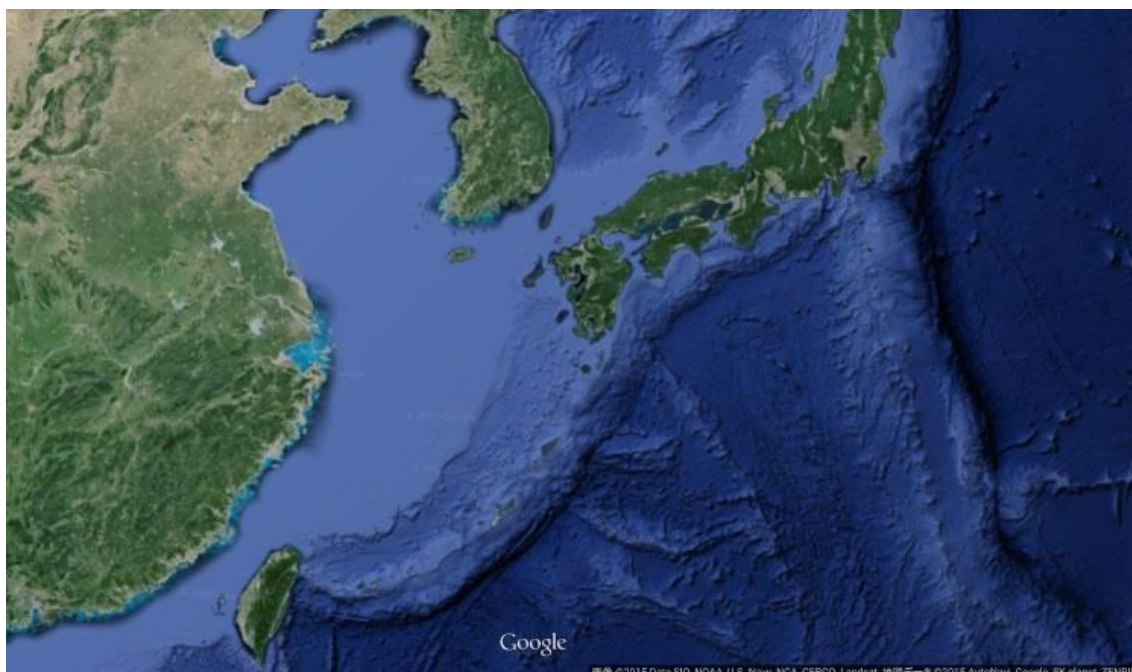
She has also been working for developing natural disaster risk management standard with other RICS members. University of European Tourism-UET- global business coordinator <http://www.uet.international/>

Language: Japanese, English, Italian, Portuguese

## 1 Introduction

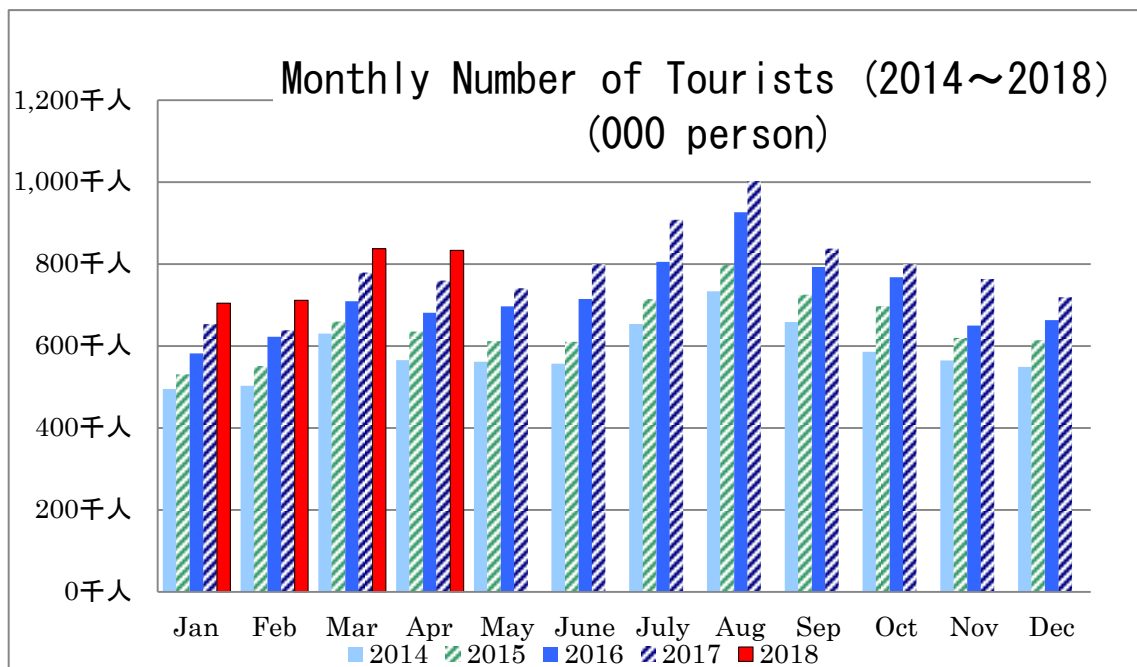
Okinawa has been recognized as the most important resort tourism destination in Japan due to its demographical, political, and cultural positions. While promoting the tourism industry development, Okinawa has been facing the issue of maintaining its culture as well as preserving the environmental resources. This research demonstrates the Okinawa's potential and current status of tourism, then highlight the recent trend which drives the tourism sector growth and analyzes the social resources which can be adopted into the blue economy platform. Finally, by demonstrating the actual renovation case of the abandoned rural farmhouse, this report provides the indication for renovation of the existing structures.

## 2 Analysis on the potential of Okinawa



Okinawa prefecture has over 8million tourists per year (Graph1). Given its

population and geographical area, Okinawa prefecture is the most important tourist destination in Japan. As Okinawa includes the national border, the government considers Okinawa as the significant location in terms of national defense, diplomacy, and the domestic distribution. Moreover, the government has supported Okinawa by allocating 3.3 billion dollars national budgets which is the largest among all prefectures. As the number of tourists has doubled in past 10years, the number of Naha Airport flights also has reached approximately 200,000 a year. The air cargo volume in Okinawa has reached about 50,000 tons, 10 times increase in the past 5 years, the third largest volume in Japan. To catch up with those rapid changes, several projects have been rapidly promoted; the extension of the airport runway, the expansion of the port terminal building, and the development of major roads.



(Source: Okinawa Prefecture)

Graph1 Number of inbound Tourists coming to Okinawa

In addition to its rich natural resources, Okinawa's traditional diets and foods for longevity have attracted visitors. Therefore, it is expected that the number of tourists and immigrants to Okinawa would continue to rise in future.

### 3 The current trend in the tourism industry in Okinawa

Tourism is the leading industry in Okinawa, and its impact on the local economy reaches 7 billion dollars, equivalent to approximately 9% of the Okinawa's local GNP. The state government budgeted 90 million dollars a year to Okinawa for the tourism industry promotion. This budget amount is as five times large as it was in 4 years ago.

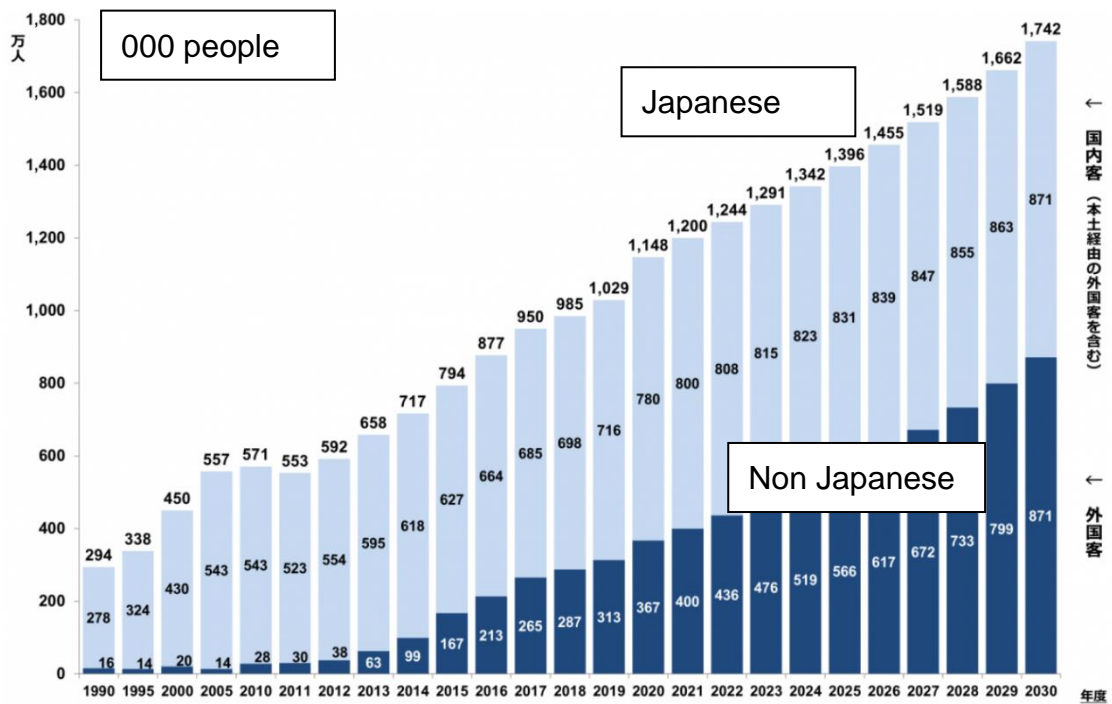
As for tourism facilities such as hotels and golf courses, there has not been sufficient supply for potential demand. However, the current and future growth trend in Okinawa would further promote the foreign investments

The intensive resort developments have been done mainly in the west coast of Okinawa Main Island and several spots in adjacent islands.

However, those developments also brought

environmental issues; the shortage of water (2014 Okinawa prefecture: Tourism Handbook)

resources, increasing wastes, and the congestion of cars. We think that environmental problems would be worsened if we continue the present resort developments without any consideration. Therefore we suggest implementing blue economy concept in recycling local products and waste in resort facilities over many stages. By promoting the eco-tourism, we think that we can accomplish the development of sustainable tourism industry.



(Source Okinawa Convention Bureau <http://www.ocvb.or.jp/topics/1709>)

Graph 2 The number of inbound Tourists in Okinawa



(Source: Okinawa Fund for Middle to Small Business)

Graph 3 Annual change of the number of accommodations in Okinawa



#### 4 Natural resources available in Okinawa

##### Available ocean resources

Although there are many precious species living in Okinawa islands, they are about to disappear because of the over-developments. We think these species should be protected and not be involved in the blue economy scheme. For instance, the coral reefs surrounding the Okinawa islands are protected as national natural parks. Therefore, it is also difficult to include those living creatures in coral reefs into the blue economy scheme. Thus, plants available in our daily life have to be considered as the principle material in the blue economy platform.

#### 5 Eco-tourism and social resource recycling

The Okinawa government has the two main pillars in promoting the eco-tourism for the sustainable society. The first pillar is to improve the business model of the local travel agents. The second pillar is to support the local people's activities to improve the cultural & ecological environment.

Regarding the activities driven by local travel agents, the concept is intended to reduce wastes by improving the environmental friendly business models. Specifically, the government made the guidelines for the "environmental friendly business" and they are supporting the companies according to this guidelines. For example, a pine-apple process company targeted the zero emission by practically implementing the cascade recycling of organic wastes. At present, the company produces the soap and the vinegar by recycling the

organic waste of pine-apple, and the achievement ratio of the recycle is only fifty percent. In near future, given its progress and government support, it is expected to achieve the zero-emission, because these products will be well recognized and R&D activities will be further promoted.



(Source: Izena Tourist Information)

Figure 1 Mearu Family Residence

As for the activities driven by local communities, the concept is intended to promote the local tourism activities to enhance its recognition among potential visitors. Specifically, the government has supported the venerable & well known families, local communities and NPO(non-profit organization) by protecting environment and encouraging the human resources development. For instance the most venerable family in Izena island refurbished an abandoned old

house and converted it into the stylish hospitality accommodation. This has caught tourists' attentions and helped Izena promotion as a tourist destination. In the near future, similar practices are likely to be promoted, as this Izena project gains more attention from tourists.



(Source: Mekaru Family )

Figure 2 Mekaru Family Renovation

## 6 Financial Analysis of Renovation

In order for the family to take an initiative for this renovation project, they relied on a specialist' analysis on the performance improvements, as well as the investment return. The basic information of the renovation is as follows;

	JPY	USD
Renovation Cost	15,000,000	136,000
Number of Rooms	4	
Guest per Room	4	
Guest capacity	16	
Accommodation per person	5,000	50

(Source: developed by the author based on the demonstrated data from the property owner)

Figure 3 Assumptions for the Feasibility Study

It has been more than 100 years old since the residence was built and major renovations are roof, interior walls, tatami mats, kitchen, each guest rooms, bathroom, and living and dining rooms. Due to the recent construction material increase and the lack of workers, the total construction cost was higher than 20—30 percent than the average market in Okinawa. However, when it comes to the revenue side, its quite unique and demonstrating the classical atmosphere, relatively high per person accommodation fee can be charged. The occupancy and the expense ration are estimated based on the data analyzed for past 5 years, in terms of the ADR and occupancy. .

Based on the assumptions above, the concise feasibility study was made (Figure 4). The initial investment can be returned within three years and would bear more than hundred percent of add value to the asset, based on this calculation. However, it has to be highlighted that this is the revitalization of a family holding asset. Thus in case of the total new investment where the investor purchase the land, building a improvement and lease it, it would be separate analysis would be needed. At least this case study demonstrated that if the existing classic residence is available and if it is generating no cash flow, you could make it a well profitable asset by investing some initial renovation cost.

Year	1	2	3	4	5
Occupancy	25%	40%	50%	60%	65%
Revenue	7,300,000	11,680,000	14,600,000	17,520,000	18,980,000
Expense Ratio	90%	60%	50%	50%	50%
Expense	6,570,000	7,008,000	7,300,000	8,760,000	9,490,000
NOI	730,000	4,672,000	7,300,000	8,760,000	9,490,000
PV Factor	0.93458	0.87344	0.81630	0.76290	0.71299
PV of NOI	682,243	4,080,712	5,958,990	6,683,004	6,766,275
Accumulated PV	682,243	4,762,955	10,721,945	17,404,949	24,171,224
Return	6.8%	47.6%	107.2%	174.0%	241.7%

Figure 4 The feasibility analysis of the classic residence conversion (JPY)

This scheme works when the following criteria are considered

- 1 Strong tourist demand not only current but also future
- 2 Available existing facility to be renovated
- 3 Unique and attractive features to be demonstrated to the potential visitors
- 4 Outstanding operational skills which allows the owner to survive starting period

## 7 Scenario Analysis

Nowadays in Japan nation wide, Air B&B or accommodation business has been subject to stricter regulations. Although this property will be operated as a small inn category, which is different from Air B&B, the simulation of “what if the new regulation towards Air B&B is applied to this property” seems to be useful. Under the worst case scenario, the assumptions are 1 operation allowance is limited to 100 days per annum, 2 fixed cost which was set out at the initial stage of this accommodation looks hard to reduce, and 3 the negative cash flows caused in a first couple of years have to be compensated by the owner. Based on the above assumptions, the investment for the renovation would not be fully paid back even after 5 years. For the owner to paid back all the initial investment for this classic residential accommodation, he needs to spend at least 10-20 years.

In addition to the change of laws and regulations, sudden market change or contingency like natural disaster would cause the similar outcome as simulated under this worst case scenario.

Year	1	2	3	4	5
Occupancy	15%	25%	33%	35%	35%
Revenue	4,380,000	7,300,000	9,636,000	10,220,000	10,220,000
Expense Ratio	180%	100%	75%	70%	70%
Expense	7,884,000	7,300,000	7,227,000	7,154,000	7,154,000
NOI	-3,504,000	0	2,409,000	3,066,000	3,066,000
PV Factor	0.93458	0.87344	0.81630	0.76290	0.71299
PV of NOI	-3,274,768	0	1,966,467	2,339,051	2,186,027
Accumulated PV	-3,274,768	-3,274,768	-1,308,301	1,030,750	3,216,777
Return	-32.7%	-32.7%	-13.1%	10.3%	32.2%

Figure 5 The feasibility analysis under worst case scenario (JPY)

On the other hand, due to the historical value of this residence and the landmark function of this property, the operator can expect the subsidized fund, tax benefit, or cost reduction by implementing the eco-energy system like solar power generation. Taking into account all those factors, below simulation shows that the investment return would be three times as high as the return under the standard scenario.

Year	1	2	3	4	5
Occupancy	25%	40%	50%	60%	70%
Revenue	7,300,000	11,680,000	14,600,000	17,520,000	20,440,000
Expense Ratio	70%	50%	40%	40%	40%
Expense	5,110,000	5,840,000	5,840,000	7,008,000	8,176,000
NOI	2,190,000	5,840,000	8,760,000	10,512,000	12,264,000
PV Factor	0.93458	0.87344	0.81630	0.76290	0.71299
PV of NOI	2,046,730	5,100,890	7,150,788	8,019,605	8,744,109
Accumulated PV	2,046,730	7,147,620	14,298,408	22,318,013	31,062,122
Return	20.5%	71.5%	143.0%	223.2%	310.6%

Figure 6 The feasibility analysis under best case scenario (JPY)

## 8 Conclusion

Okinawa has the strong potential to grow as the global resort tourism destination. Taking into account the nation wide policy, the tourism would be more and more stimulated in Japan. On the other hand, the lack of accommodation has been evidenced in Okinawa as well then one of new challenges to have the benefit from the increased number of tourists would be the revitalization of classic residence. Under the moderate scenario and best

scenario, the investment would doubled or tripled however, under the worst case, it may take more than 20 years to paid back from the investment. Thus, for the property owner to decide whether or not to go with the conversion, the owner needs to understand the contents of renovation, careful analysis for the critical term change in future.



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