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Session 1 Measurement and economic analysis of regional tourism

VISUALIZATION AND QUANTIFICATION OF REGIONAL TOURISM BY THE SPATIAL CHARACTERISTICS ANALYSIS OF TOURIST FACILITIES- UTILIZING TOURISM REGIONAL ECONOMIC RESEARCH AND PHONE DATA

※ I have a stuttering. Please listen my presentation if my pronunciation is bad.

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Background

●Need to use regional tourism statistics in Japan

- With the rapid development of tourism statistics, it has been able to watch economic trends in tourist regions.
- it is a few cases that researches understand the regional tourism industry .

● Regional Tourism Economic Survey (RTES)

- With the rapid development of tourism statistics, it has been able to watch economic trends in tourist regions.
- it is a few cases that researches understand the regional tourism industry .

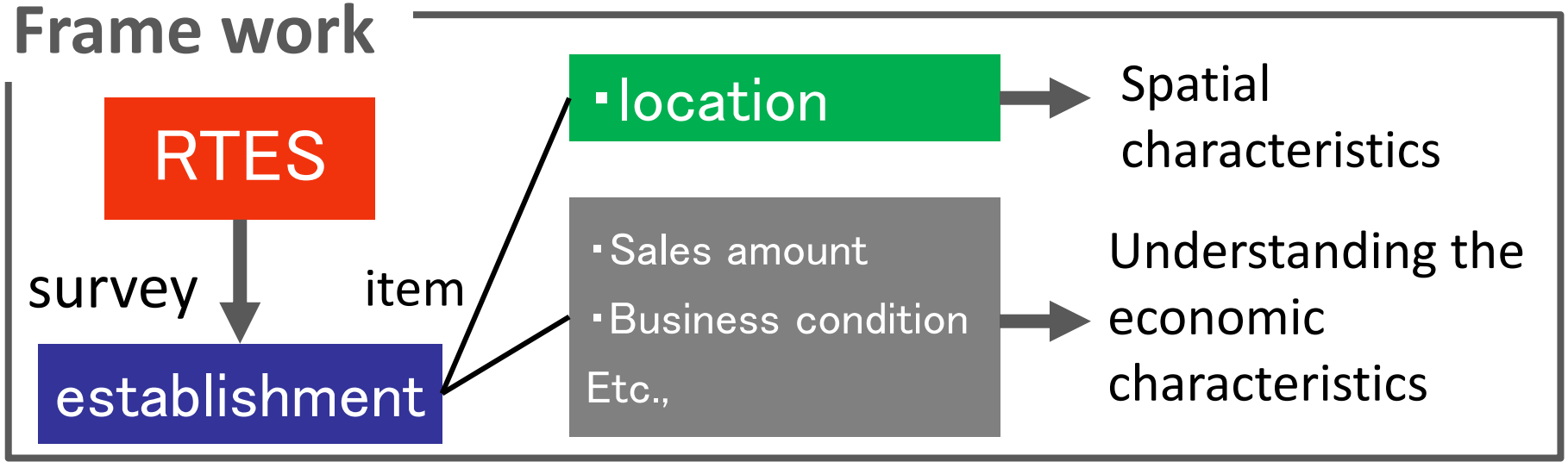
● Regional Tourism Statistics + Spatial Analysis

It is necessary to understand the spatial characteristics that what tourism establishment contribute goods and services by visualizing.

Purpose of this study

- By using RTES by JTA, we understand the economic characteristics of the whole tourism regions.
- It clarify the spatial characteristics of the establishment in tourism regions by visualizing with spatial information.

Frame work



Previous studies

- Kurihara calculated economic impacts with sales costs data of each payee regions in the establishment and questionnaire made by himself.

- Tonomura and Miyashita classified tourist city with a tourism statistics, and analyzed the changes of retail sales and day-time population in central city area.

- Miyagawa et al., estimated tourism sales amounts with information of guidebook and spatial characteristics of tourism establishment in target area of RTES.

This study

This study has a feature in the point of clarifying the spatial characteristics with not only distributing of tourism establishments, but business types, accessibility, accumulation of the establishment.

Construction

Understanding the RTES for Analysis

- Abstract of RTES; Survey period, method, items

Analysis of Economic Characteristics

- Analysis of Sales efficiency, employee, etc.,

Selecting Target Areas

- Select by 4 indicators, research tourism regions

Spatial Analysis by Phone Data

- Phone data by NTT, evaluate location

Abstract of RTES

Survey period	January – December **2011** (March in same year, East Japan Earthquake occurred)
Survey regions	Of the 11,000 former regional municipalities of 25 years before the merger in 1950, **5,861** areas where there are tourist spot
Deffinition of tourism regions	Tourist destinations that are specified in the "common standards for tourist visitors Nyukomi statistics" Tourism Agency, I meet the following criteria. ・Non-daily use in many cases, the number of customers can be grasped properly enters tourism • **1 million people** or more per year, tourist arrivals Nyukomi of 2010 is the last year survey year is more than 5,000 people in the month of either.
Method	The mailed questionnaire tourism-related establishments in the study area (Table 2), and have them return
Survey result	number of tourism offices：88,575 Number of valid responses：35,603(Percentage **49.9**%) Samples in open data：904　(pronpt report)：78

Analysis of Economic characteristics

4 indicators, Analysis tourism regions

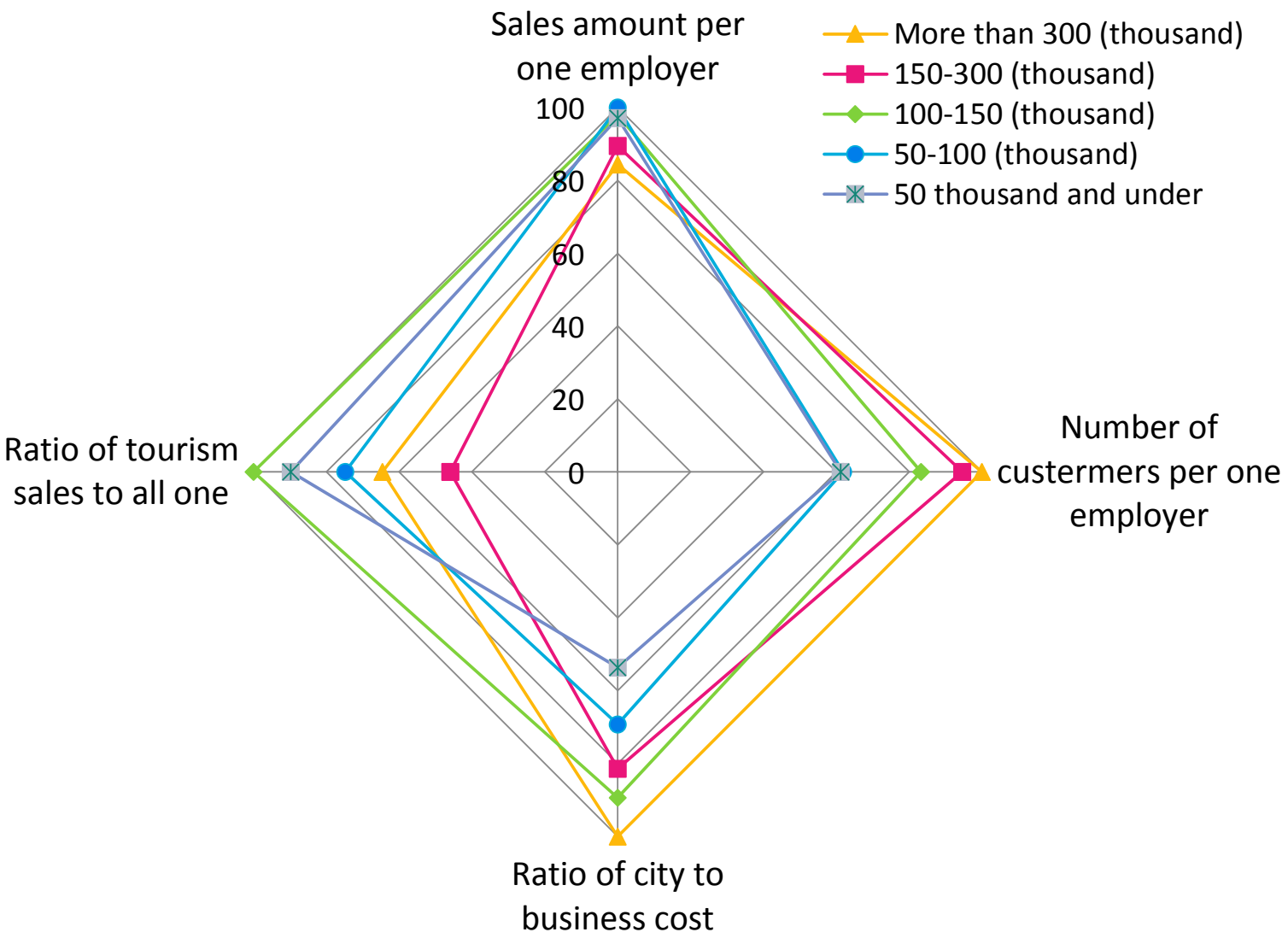
① Sales efficiency : Sales amount of per employee in food-lodging industry

② User density : the number of users per one establishment which is industry of food and retail sales.

③ Regional contribution : the city percentage of operating expenses payee

④ Tourism dependence : the ratio of tourism sales amount in all sales. For the setting of indicators, was referring to the precedents of the Tourism Agency

Analysis of Economic characteristics



Selection of Target Area

● Rules for selecting target area

A: Ratio of tourism sales in all sales is no less than 30 %.

B: It is small areas; the ratio of the latest administrative boundaries is no more than 50 %.

C: Target area is no more than 40 km^2. ※ Expected island region

Prefecture	Name in 2010	Sightseeing spot	Ratio of tousim sales to all sales	Area (㎢2)
Ibaraki	Ōarai	Ōarai Shrine, Outlet shopping	39%	6.05
Tiba	Minamiboso	Sea, Roadside Sta.	48%	12.6
Kanagawa	Yugawara	Hot spring town	56%	19.3
Niigata	Nagaoka	Cape、National park	58%	38.4
Niigata	Yuzawa town	Ski sports、Hot spring town	70%	16.3
Ishikawa	Kaga	Hot spring town	36%	12.9
Shizuoka	Gotenba city	Outlet shopping	31%	28.0
Mie	Toba city	Sea, Hotel resort	61%	11.7
Shimane	Izumo	Izumo shrine	32%	6.04

Abstract of Phone Data

●The private company, it is called NTT, has managed the all fixed – line phone data in Japan.

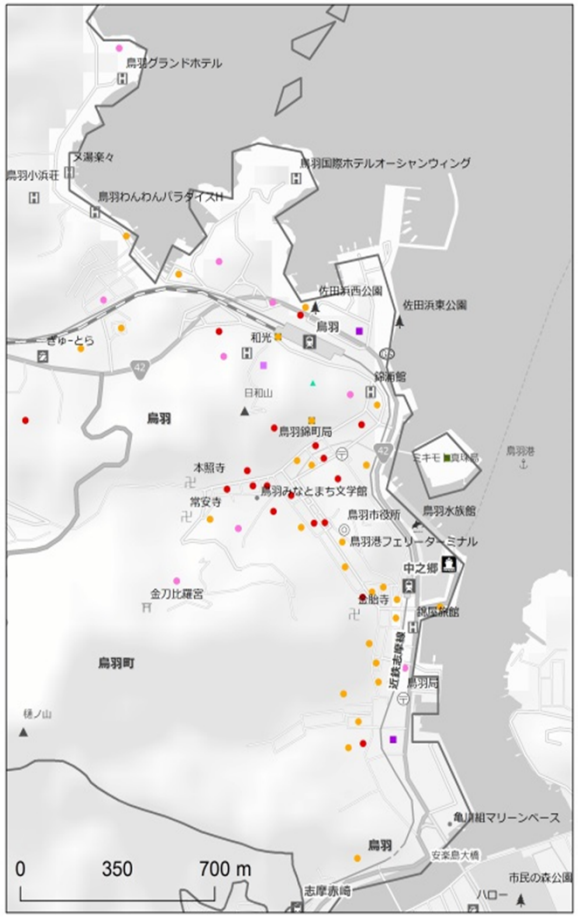
● General establishments has various fixed – line phone number.

●There are many information on the internet, it is called “ i town page”.

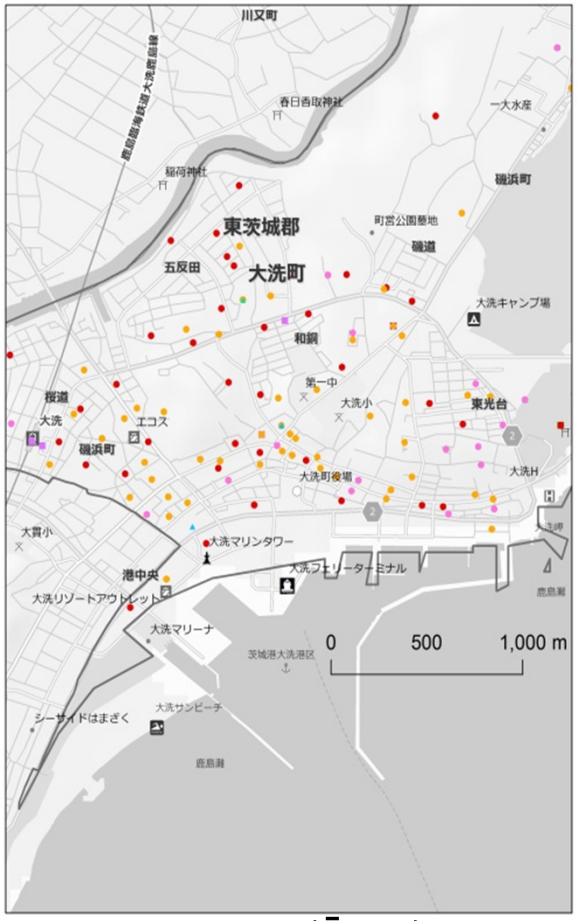
This study used information of “ i town page” in April 2014

Establishments in Target areas

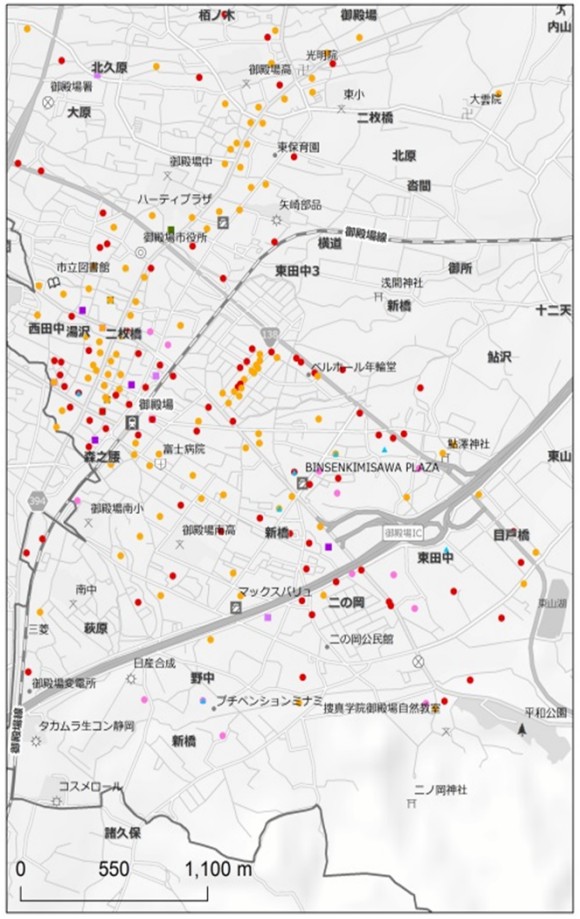
- Recreation and other entertainment services
- Cultural services
- Travel agency, tour operator and tourist guide services
- Passenger transport services
- Transport equipment rental services
- Retail sales
- Accommodation services
- Food and beverage serving services



Toba(Toba city)



Isohama(Ōarai)

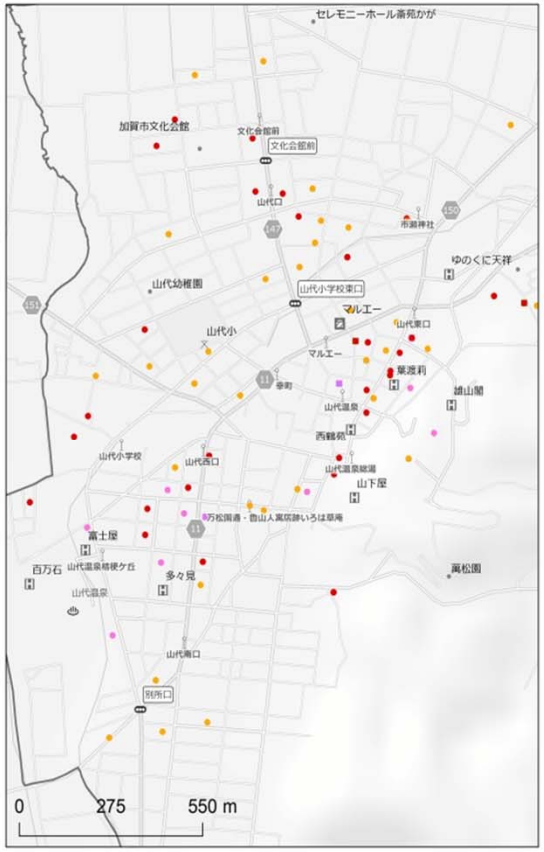


Gotenba(Gotenba city)

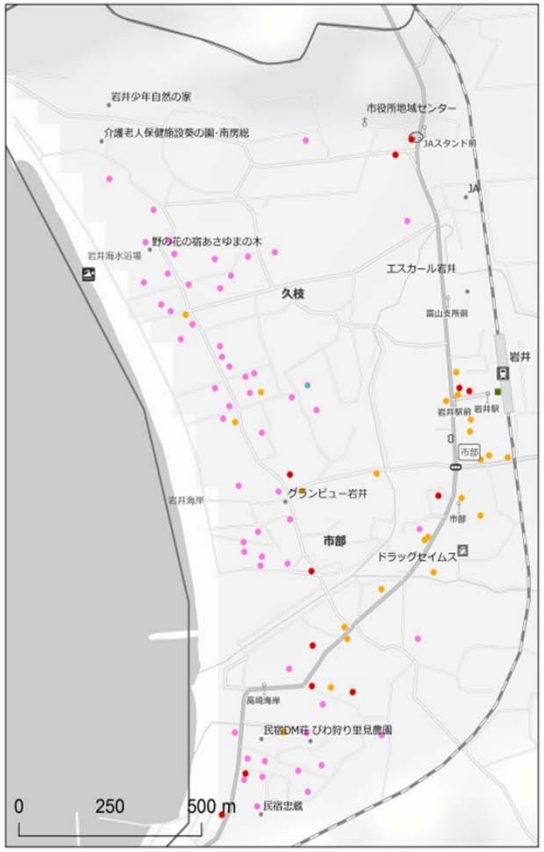
Establishments in Target areas

- Recreation and other entertainment services
- Cultural services
- Travel agency, tour operator and tourist guide services
- Passenger transport services
- Transport equipment rental services
- Retail sales
- Accommodation services
- Food and beverage serving services

Teradoma(Nagaoka)



Yamashiro(Kaga)



Iwai(Minamiboso)

Establishments in Target areas

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- Retail sales
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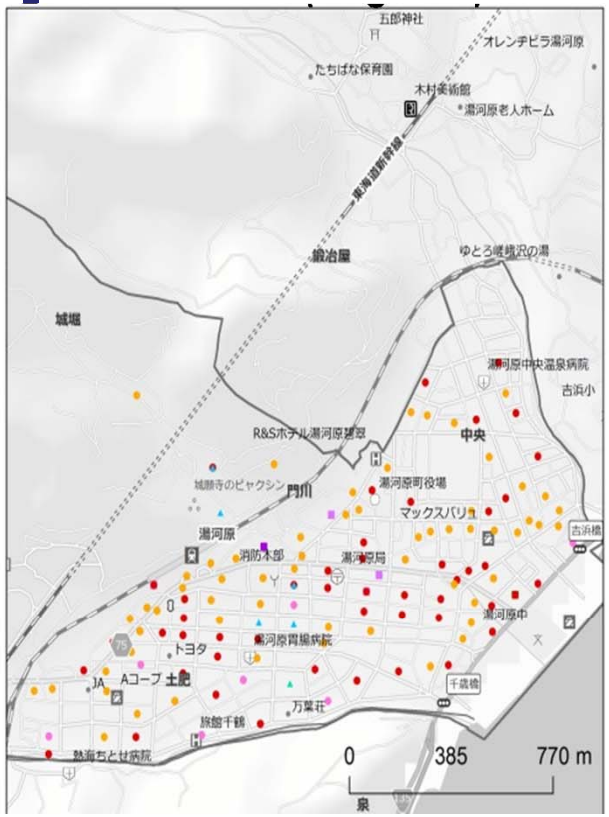
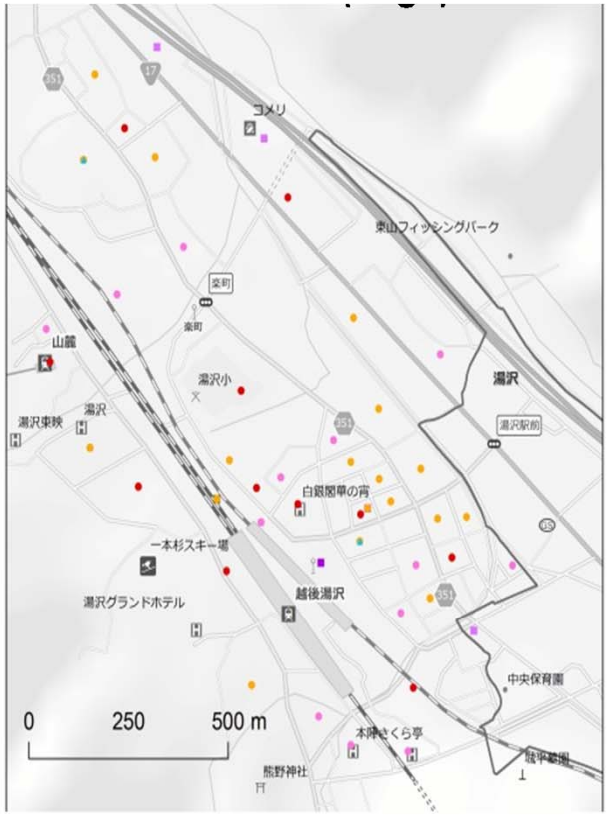
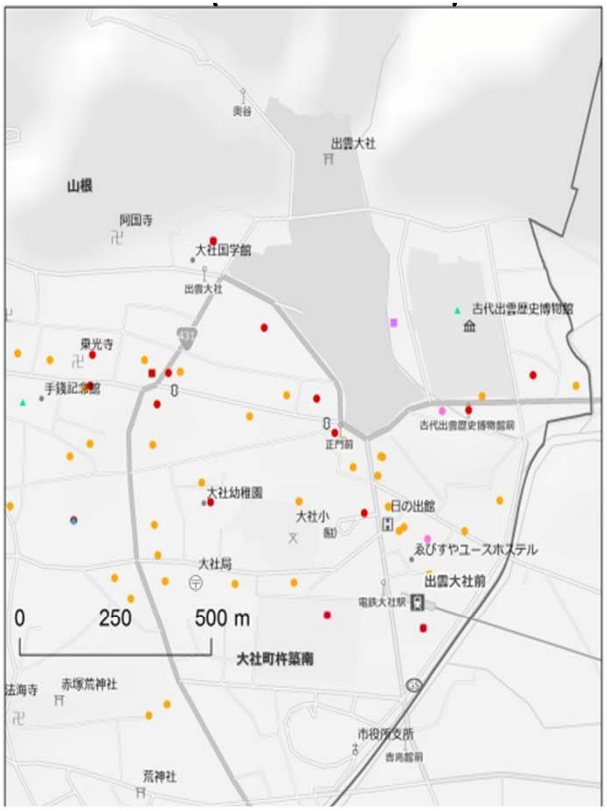
- Food and beverage serving services



Yugawwara(Yugawara)



Yuzawa(Yuzawa town)

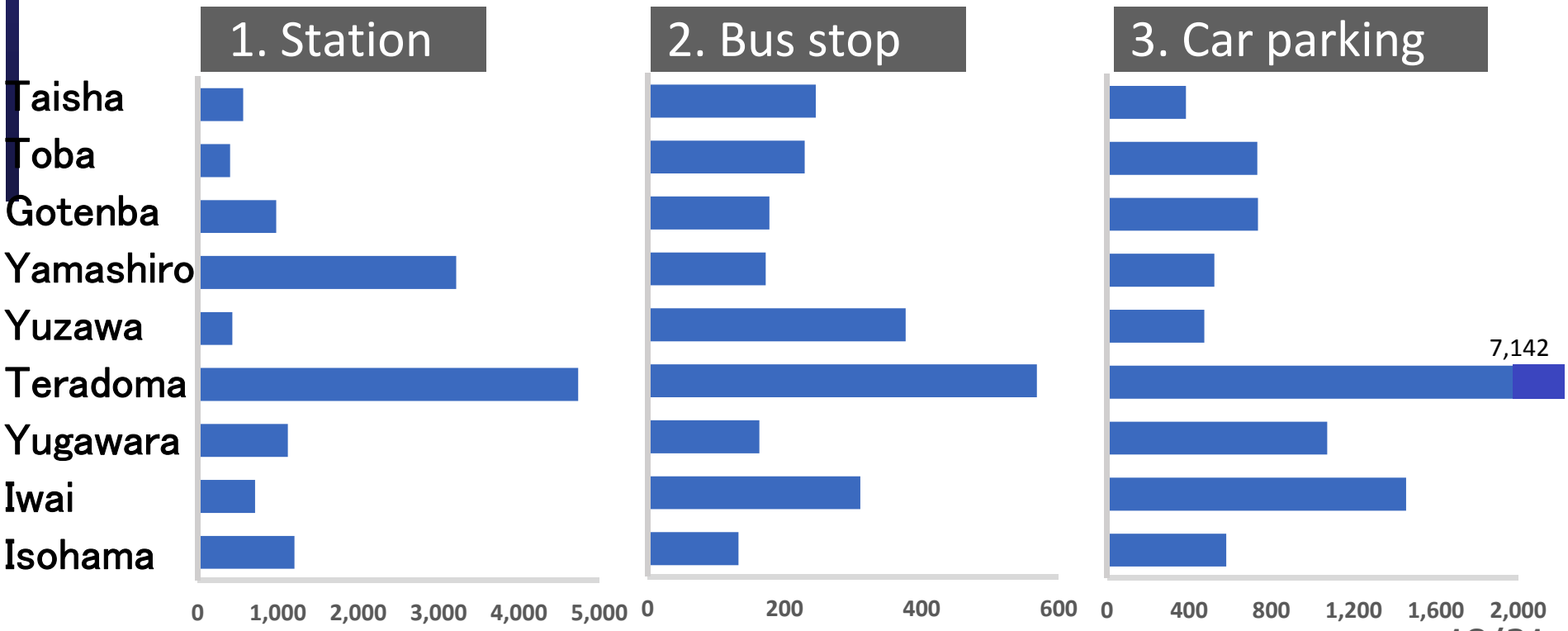


Taisha(Izumo)

Summary of Spatial Analysis

●We measured the distance from a station, a bus stop, the parking lot from each establishment, and calculated the average distance in every target area

Accessibility, Average distance from each establishments to nearest

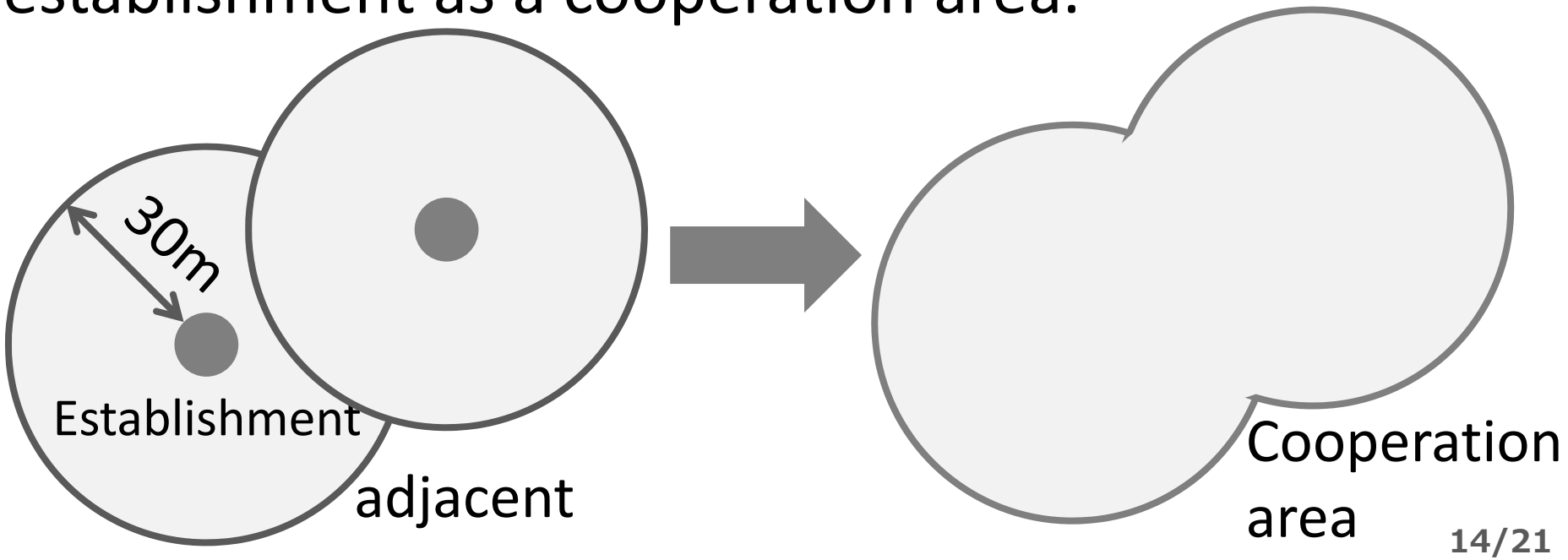


Spatial analysis of location; accumulation

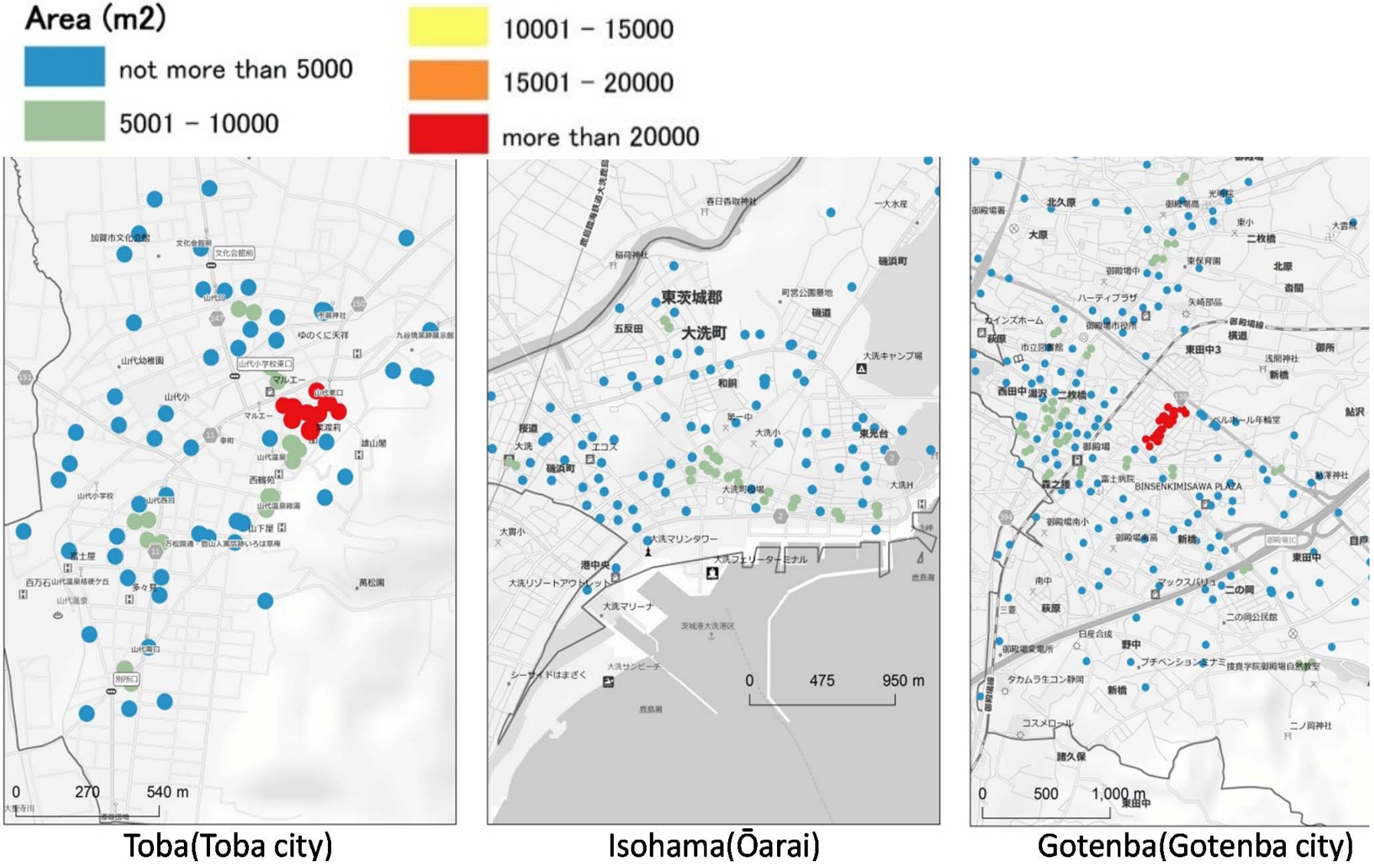
・Generate a concentric 30m from each establishment

・If the store is adjacent, create a new areas.

・This study define the continuity of the tourism establishment as a cooperation area.

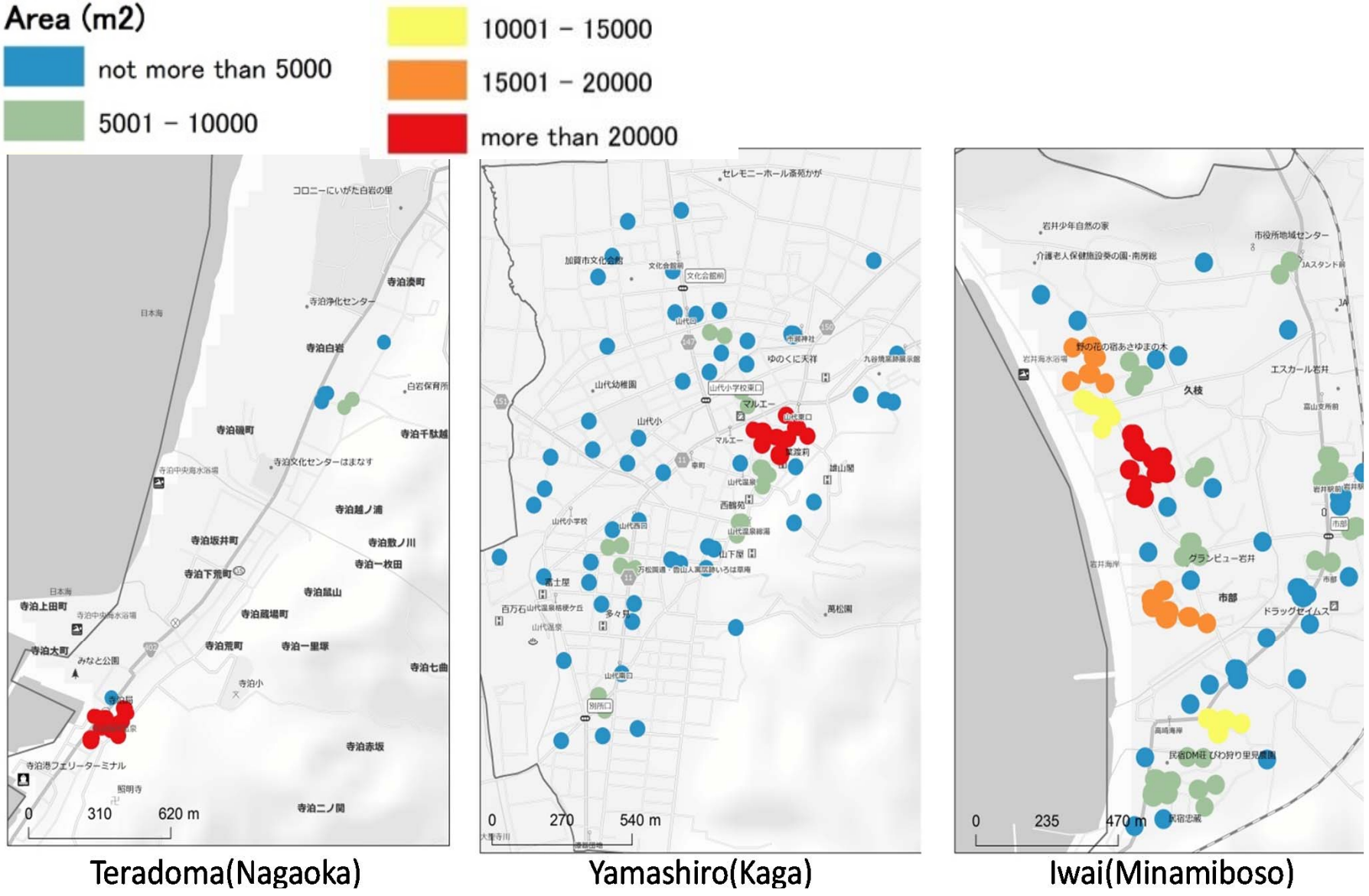


Cooperation area in Target area.



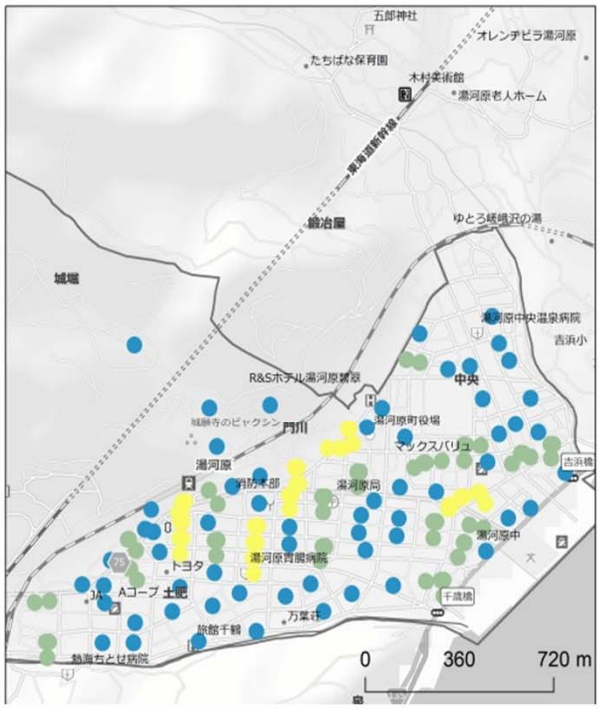
Toba(Toba city)　Isohama(Ōarai)　Gotenba(Gotenba city)

Cooperation area in Target area.

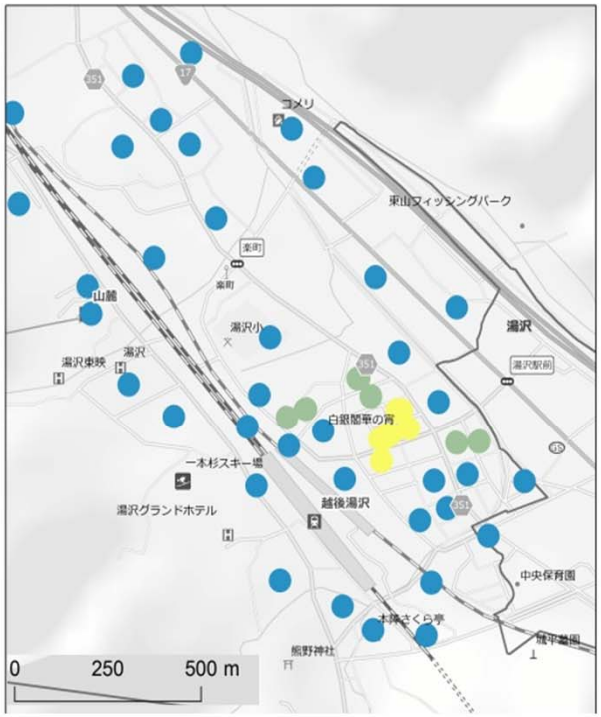


Teradoma(Nagaoka) Yamashiro(Kaga) Iwai(Minamiboso)

Cooperation area in Target area.



Yugawwara(Yugawara)



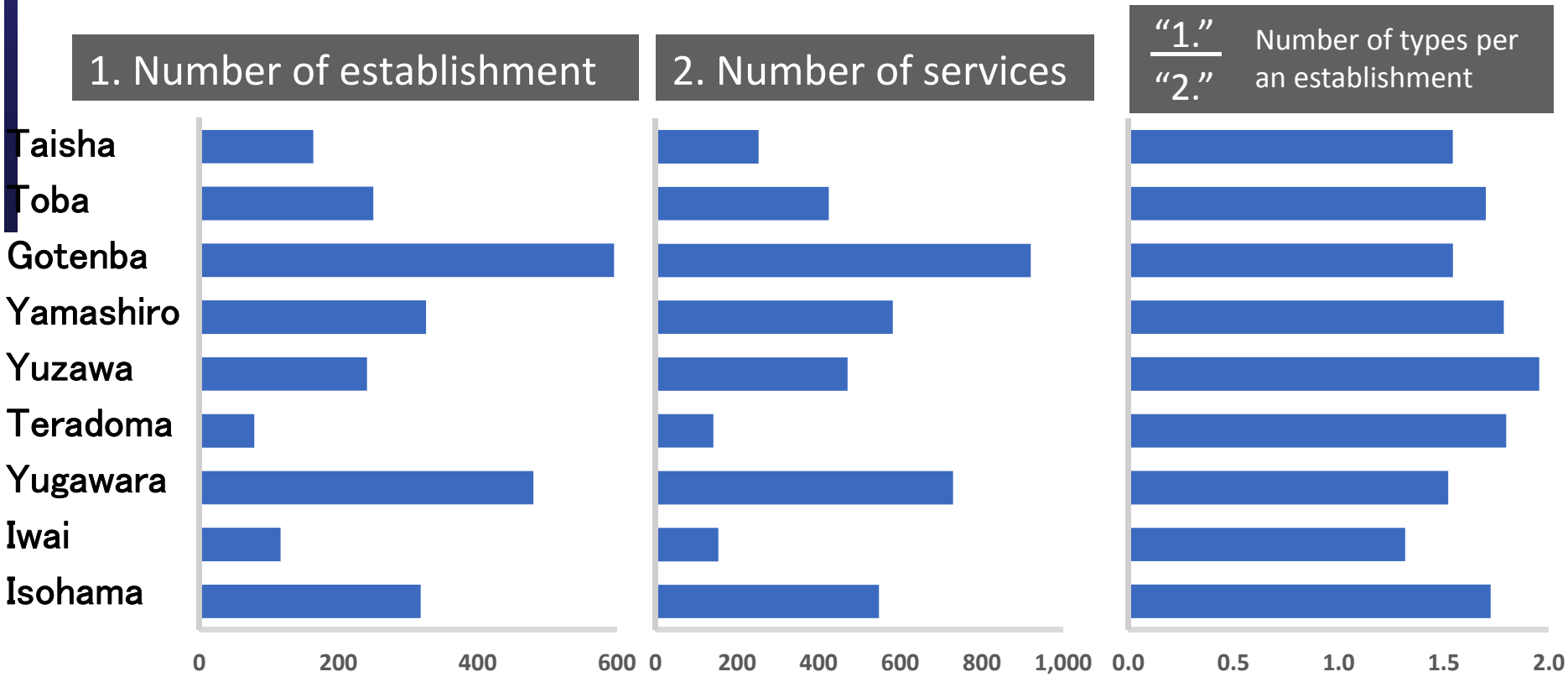
Yuzawa(Yuzawa town)

Taisha(Izumo)

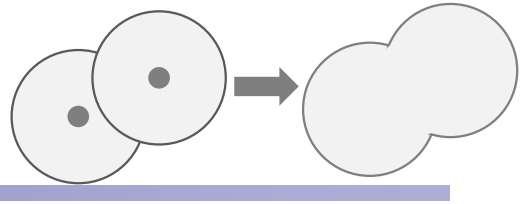
Summary of Spatial Analysis

- we measured total number of establishment, services(each establishments provide)

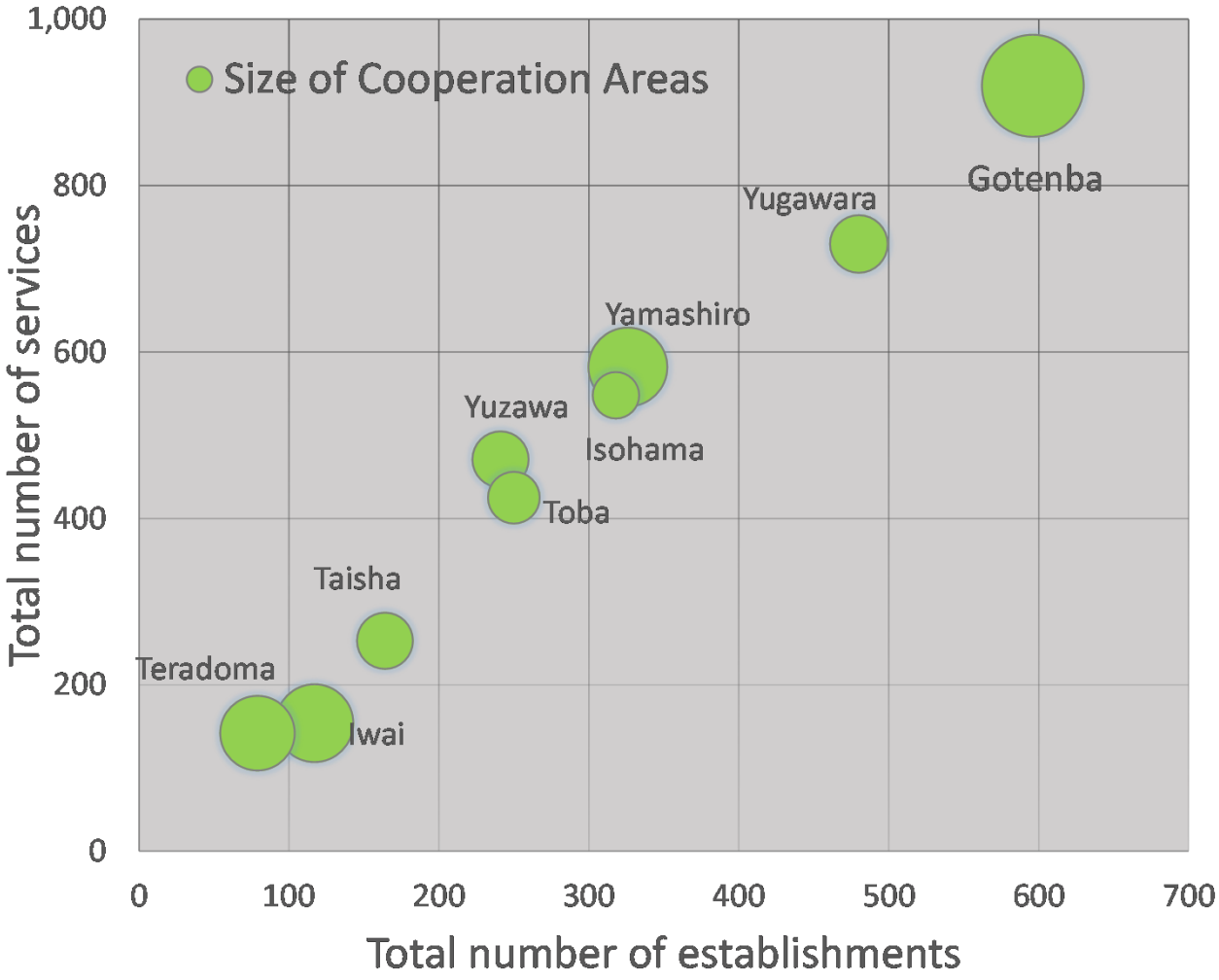
Scale of Establishments and services variety



Summary of Spatial Analysis



● We made a bubble graph Total with number of services, establishments, and Cooperation areas.



Conclusion

・The higher Sales efficiency is, the smaller cities are. But the user density in big cities is higher than small cities.

・It selected 9 areas from RTES area, clarify location properties of the establishment and analyzed it using phone data.

・As well as the simple distribution of the establishment, we calculated a continuity of the site location and the average distance from a station, a bus stop, the parking.

・According to the analysis of this study, it is necessary to select the regions which the ratio of tourism sales is high.