

# Kagawa's Vision for the Creation of *Satoumi*

[Index]

1. Introduction to *Satoumi*: Why Now?
2. Purpose: Objectives of the Vision
3. Current Status and Issues: Changes in the Seas of Kagawa
4. Approach to the Creation of the Ideal *Satoumi* for Kagawa
5. Directions for the Project: (1) Characteristics of *Satoumi*  
(2) Six Key Points for Carrying Out the Projects



## 1. Introduction to Satoumi: Why Now?

# The Seto Inland Sea is now entering a period of great change.

### More than 100 years ago,

when the German geographer Ferdinand von Richthofen – the man who gave the “Silk Road” its name – visited the Seto Inland Sea for the first time, he was deeply impressed.

“An infinite number of islands of all sizes... such elegant beauty over a vast area.

Could there be anywhere in the world more beautiful than this?”

He also warned, “I pray that it can remain like this forever. Its greatest enemy will be civilization and the emergence of a human desire unlike anything before.” \*

### When we began our period of rapid economic growth,

we desired “material wealth”, and many years of mass production, mass consumption, and mass disposal have resulted in rapidly worsening water pollution in the Seto Inland Sea, such that it was described in the 1970s as “the dying sea”.

The Law Concerning Special Measures for Conservation of the Environment of the Seto Inland Sea (“Setonaikai Act”) was later established, and measures such as total pollutant load control of water quality were enacted.

Although there has been some degree of improvement in the water quality, many problems remain and most of them are problems that can only be resolved by the efforts of a large number of people working together.

### And now,

beginning with the Setouchi Triennale International Art Festival, a movement is taking shape for reevaluating the Seto Inland Sea from the perspectives of tourism and culture, and the environment surrounding the Seto Inland Sea is entering a new phase.

In the next 100 years,

### What should our relationship be with the Seto Inland Sea?

With the 40th anniversary of the Setonaikai Act (2013), and the 80th anniversary of the Setonaikai National Park (2014), the time has come for us to reexamine the relationship between humanity and the sea.



*Bisan Seto in the Early 20th Century*



*Islands in the Seto Inland Sea that are visited by many people during the Setouchi Triennale*

\* “Tagebuecher aus China” written by Ferdinand Freiherr von Richthofen

# Thinking about sustainable living and society from a marine perspective

*Mountains*



*Rivers*



*Towns and Cities*



*Sea*



Much attention is now being drawn to the new concept of *Satoumi*. *Satoumi* describes an integrated understanding of the sea and land as well as an appropriate relationship with people, which keeps the sea healthy and supports a great diversity of life. This produces an abundant sea that provides many benefits, including not only marine resources, but also scenery, places for relaxation, food culture, and tourism.

Kagawa's vision for creating *Satoumi* aims to reexamine our lives and society from a marine perspective, based on this *Satoumi* concept. With the cooperation of a broad range of organizations and individuals, we are working to identify a "shared ideal" for *Satoumi* that suits the unique characteristics of Kagawa. This means **identifying the ideal vision for our *Satoumi* and providing a direction so that residents of the prefecture can discover what each of them can do as a consumer and as a member of society and take action.**

# The environmental destruction of the Seto Inland Sea began a mere 50 years ago. Much time will be necessary to make it healthy again.

Our ancestors have loved the Seto Inland Sea since ancient times, and they lived in harmony with it while enjoying its many benefits.

It was only 50 years ago that this balance began to fail.

As a result of a variety of measures under the Setonaikai Act, including total pollutant load control of water quality, there has been some degree of improvement in water quality.

However, our sea continues to face many problems including:

red tides and discoloration of *Nori* (laver: edible seaweed) caused by a disrupted balance of seawater nutrient circulation, sea litter, and a diminishing awareness of the relationship between people and the sea.

## END OF THE TOKUGAWA SHOGUNATE TO EARLY SHOWA PERIOD

LATE 19TH CENTURY – EARLY 20TH CENTURY

- **End of the Tokugawa Shogunate to early Meiji Period**  
The name "Seto Inland Sea" was born from the writings of Siebold and von Richthofen, which introduced the region to the world.
- **1911**  
Kagawa native Kanau Konishi published the *Setonaikai Ron*, a comprehensive study of the Seto Inland Sea.
- **1934**  
**The Seto Inland Sea was designated as the first national park in Japan.**

## NARA PERIOD

8TH CENTURY

The *Manyoshu* is Japan's oldest anthology of poems, and contains a reference to the excellent seaweed in the country of Sanuki (modern day Kagawa). As the poem describes, the waters of Kagawa's sea were so crystal clear that a person could see all the way down to the gently swaying seaweed on the seafloor.

## EDO PERIOD

17TH – 19TH CENTURIES

Tsuda no Matsubara (Sanuki City), Matsugaura (Sakaide City), and Ariakehama (Kanonji City) were famous sites known for their white sands and green pines.



Description of Tsuda no Matsubara from the Edo Period

## 1965 – 1974

PERIOD OF RAPID ECONOMIC GROWTH

Destruction of the marine environment caused by pollution gives the sea the name "the dying sea". Red tides cause great damage to the fishing industry.

1973

**The Provisional Law Concerning Measures for Conservation of the Environment of the Seto Inland Sea was passed**, and in 1978 became permanent law (the Setonaikai Act).



Red tide



Damage to farmed yellow-tail caused by red tides

Pollution in the Seto Inland Sea!

## PRESENT TIME

### FIVE CRITICAL ISSUES FACING THE SEAS OF KAGAWA

#### (1) No signs of improvement in organic pollution

Although the values for total nitrogen and total phosphorous (indexes of eutrophication) have reached the environmental quality standard in recent years, the level of achievement in reducing COD (an index of organic pollution) remains low.

[Kagawa Prefecture's achievement of environmental quality standards (2011)]

- **COD (index of organic pollution): 43%**  
(Overall Seto Inland Sea: 78%, Overall Japan: 78%)
- **Total nitrogen, total phosphorous (indexes of eutrophication): 100%**  
(Overall Seto Inland Sea: 93%, Overall Japan: 85%)

#### (2) Disruption of the nutrient circulation balance

Although eutrophication has been reduced and the sizes of red tides have grown smaller, the disruption of the nutrient (nitrogen, phosphorous, etc.) circulation balance has produced discoloration of *Nori* in cases when the level of nutrients in the seawater is too low.

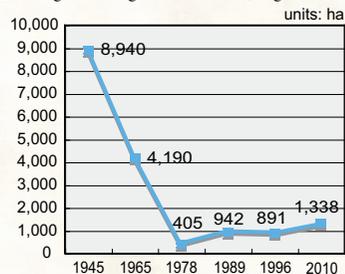


Normal Nori (left) and discolored Nori (right)

#### (3) Seaweed bed – Increasing but still too few

Seaweed bed is important for purifying the water and also as a habitat for young fish. However, many have been lost due to land recovery in coastal areas and to environment destruction. Although there has been some increase in recent years, the number still remains low.

[Changes in seagrass bed area (eelgrass bed)]



Eelgrass

#### (4) The urgent problem of sea litter

It is said that there is **more than 13,000 tons of trash littering the bottom of the Seto Inland Sea** (2006 estimate by the national government). The majority of this litter is **household solid waste. 754 tons of trash wash up on the coasts of Kagawa prefecture annually** (2003 estimate by the prefectural government).

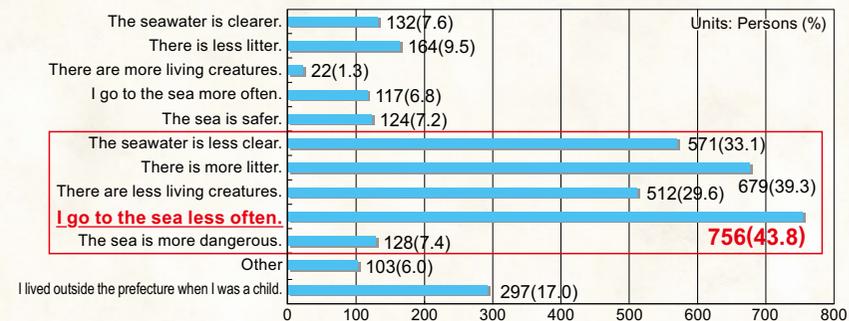


Household solid waste on the seafloor

#### (5) Diminishing awareness of the relationship between people and the sea

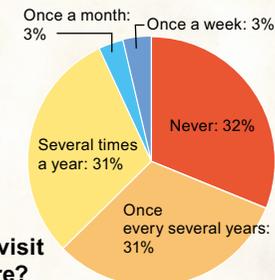
[From a questionnaire survey taken by residents of the prefecture (2013)]

**Q1: What is different about the sea in Kagawa compared with when you were a child?**



The results from this survey taken by residents of the prefecture show that the largest number of persons responded that they go to the sea less often, and this same trend was seen in all generations. In fact, only 6% of respondents go to the sea or seaside once or more per month. 30% responded that they never go to the sea. The results show a diminishing awareness of the relationship between people and the sea.

**Q2: How often do you visit the sea or seashore?**



# Creation of new values by utilizing Satoumi

< Taking Satoumi from Kagawa to the world >

## The ideal Satoumi for Kagawa

A sustainable, rich sea that accommodates both humans and nature

Coordination of "Preservation" and "Utilization"

### A sea providing plentiful communication and excitement

- Utilization of local resources
- Promoting communication through involvement with the sea
- Preserving traditional cultures related to the sea



An important part of traditional cultures



Island art



Experiencing the sea close-up while jogging or kayaking



### A beautiful sea

- A litter-free sea and seashore
- Good water quality and bottom sediment
- Harmonization of natural scenery and cultural scenery



Scenic beauty of the many islands that is renowned worldwide, and the Great Seto Bridge, constructed to harmonize with nature

Sea of beautiful sunsets

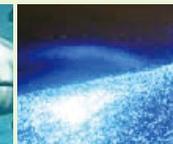
Clear, litter-free sea

### A sea of diverse living creatures

- Conserving of biodiversity
- Maintaining biological productivity
- Ensuring habitat space for living creatures



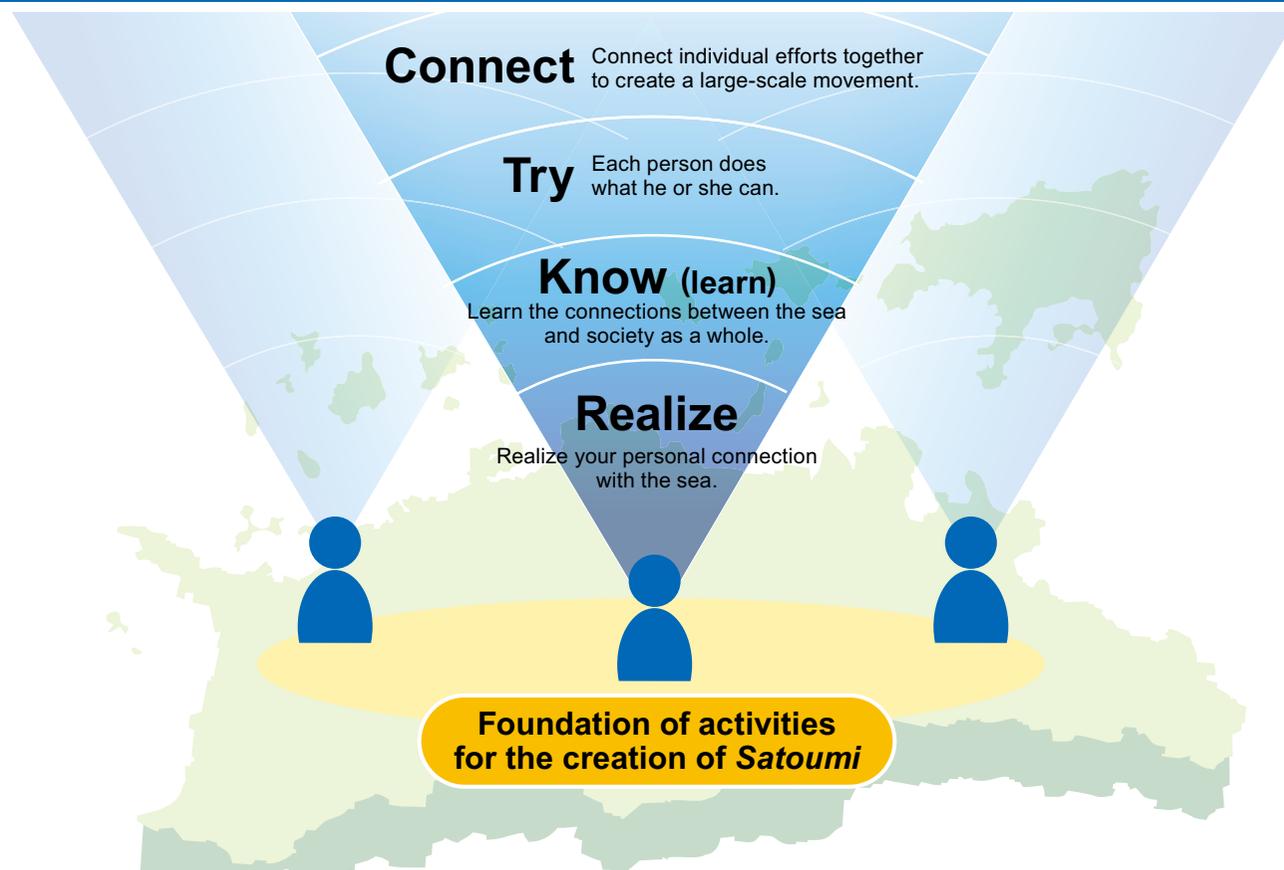
A sea for finless porpoises and sea fireflies



A rich source of fish where one can go clam-digging



All residents work together to connect mountains, rivers, towns and cities, and the sea throughout the prefecture.



The objective is a sustainable, rich sea that accommodates both humans and nature.

In Kagawa Prefecture, we approach the mountains, rivers, towns and cities, and the sea as a single area, and our residents are working to achieve “a beautiful sea”, “a sea of plentiful interaction and excitement”, and “a sea of diverse living creatures” in all parts of the prefecture.

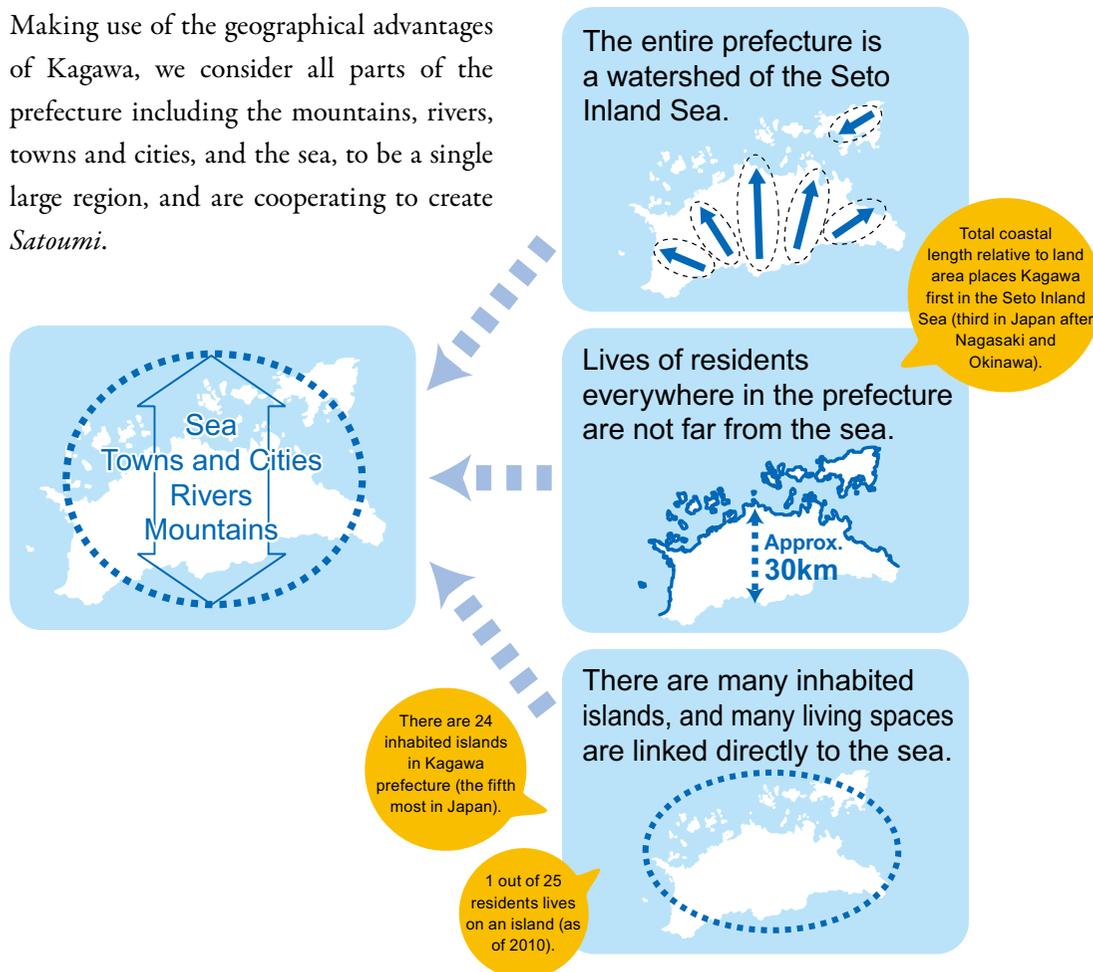
These three objectives compose our goal of creating “a sustainable, rich sea that accommodates both humans and nature”.

In this way, we will develop a new society and a new lifestyle that is in harmony with nature. Then, the success of this new society and lifestyle will be broadcasted from Kagawa to the entire Seto Inland Sea area, and from there to other parts of Japan, and ultimately, to the world.

# Residents are working together to connect mountains, rivers, towns and cities, and the sea in all parts of the prefecture.

## 1. All parts of the prefecture

Making use of the geographical advantages of Kagawa, we consider all parts of the prefecture including the mountains, rivers, towns and cities, and the sea, to be a single large region, and are cooperating to create *Satoumi*.



## 2. Residents working together

The residents of Kagawa prefecture understand that *Satoumi* is an asset that is shared by all of us. We are working so that all residents have more opportunities to enjoy the benefits of the rich sea. We are taking action with an awareness of our roles as members of the *Satoumi* and of the resulting responsibilities that we bear.



Since ancient times, the natural environment, which surrounds all of us, has been preserved at a certain level through the work of the agriculture, forestry, and fishery industries. However, due to factors including changes in our society and environment, this preservation will be the collective responsibility of our whole society in the future.

### 3. To Connect

Through *Satoumi*, we are reconstructing our relationship with the sea from the two perspectives of *people* and *nature*.



### Connections with *Nature*

Nutrients\* and organic substances contained in water from mountains, agricultural fields, plants, and households are transported by rivers to the sea, and return to us through the food chain. We are working to create a healthier sea by considering these connections with nature (the material cycling).

\* "Nutrients" refers to the nitrogen, phosphorous, and other substances necessary for plant life.

### Connections with *People*

We are cooperating in projects focused on the mountains, rivers, towns and cities, and the sea, and are evaluating the results comprehensively for the area as a whole.

# Focusing on creating the infrastructure for supporting sustainable projects

## (1) Strategizing the promotion of *Satoumi*

Centered on the Kagawa *Satoumi* Committee, we are working with a diverse range of organizations and individuals to promote participation in these projects, and to link individual projects together for comprehensive coordination and evaluation to construct a system for creating *Satoumi* in Kagawa.

## (2) Sharing ideas and applying them to projects

With the cooperation of many different businesses, we have formulated and are widely promoting a vision that represents a shared idea for projects aimed at creating a *Satoumi* that is right for Kagawa. We are applying this vision to the “Kagawa Prefectural Plan for Environmental Conservation of the Seto Inland Sea” which is a comprehensive mid- and long-term plan related to environmental conservation of the Seto Inland Sea. At the same time, we are applying this vision to the plans and projects that are carried out by each implementing body.

## (3) Developing awareness

By using a variety of media and forums to provide information and experience opportunities, we are working to raise the level of interest in *Satoumi* and develop a *Satoumi* awareness among prefectural residents. In particular, we are expanding activities for increasing formative experiences at the sea and seaside for the children who will be responsible for creating *Satoumi* in the future.

## (4) Developing human resources

- We are developing the human resources who will take the lead in creating our *Satoumi*. Because awareness related to the sea varies largely among different

generations and depending on other factors such as the frequency of contact with the sea, we are creating virtual models based on questionnaire surveys and other materials, and providing training programs that are tailored to the needs of the participants.

Example: For persons in their 10s and 20s who have a firm background in environmental education, we are developing leaders by expanding on-site sea-related experiences.

For working persons in their 20s and 30s, we are promoting cooperation through information provided by social media.

- We are working to create persons who will carry on the islands’ living traditions and cultures so that we can continue to maintain the islands, which are a cultural and social resource of the Seto Inland Sea in a sustainable form.

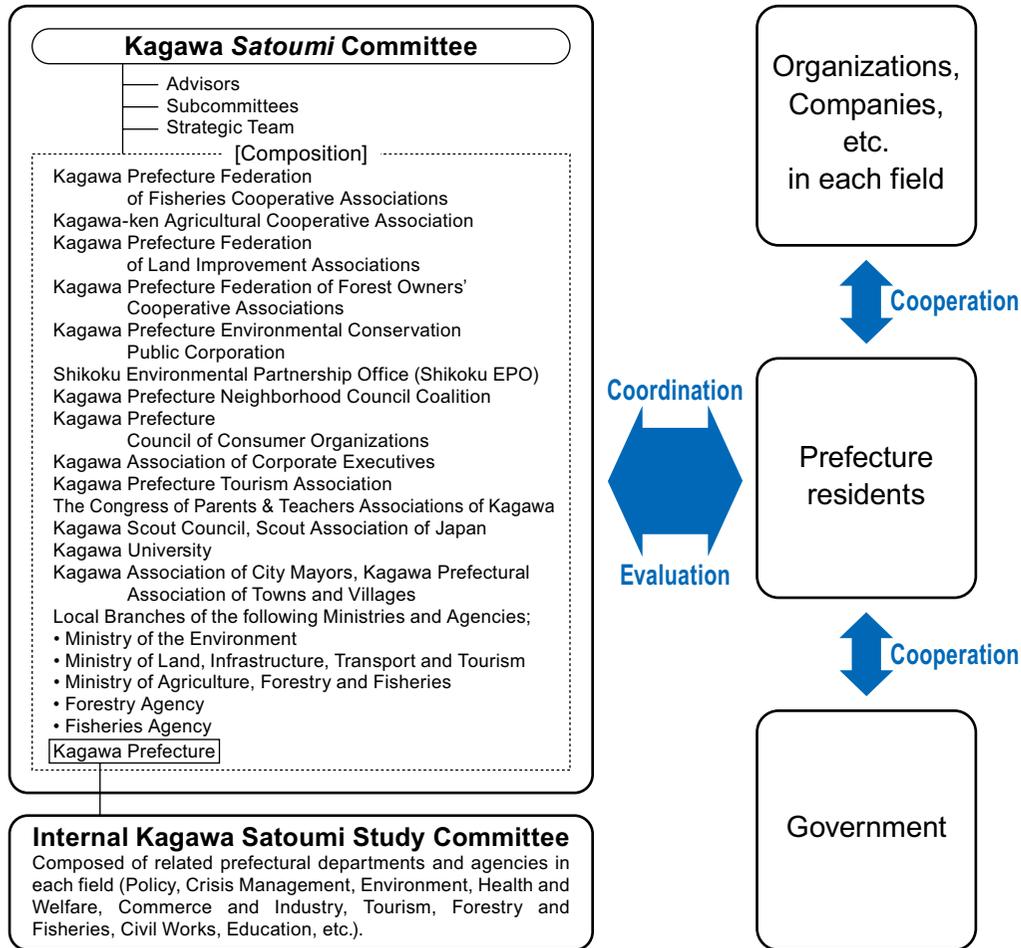
## (5) Creating networks

We are constructing networks that transcend the existing framework of regions and fields to facilitate communication and cooperation by a diverse range of people centered on the “*Satoumi*” keyword.

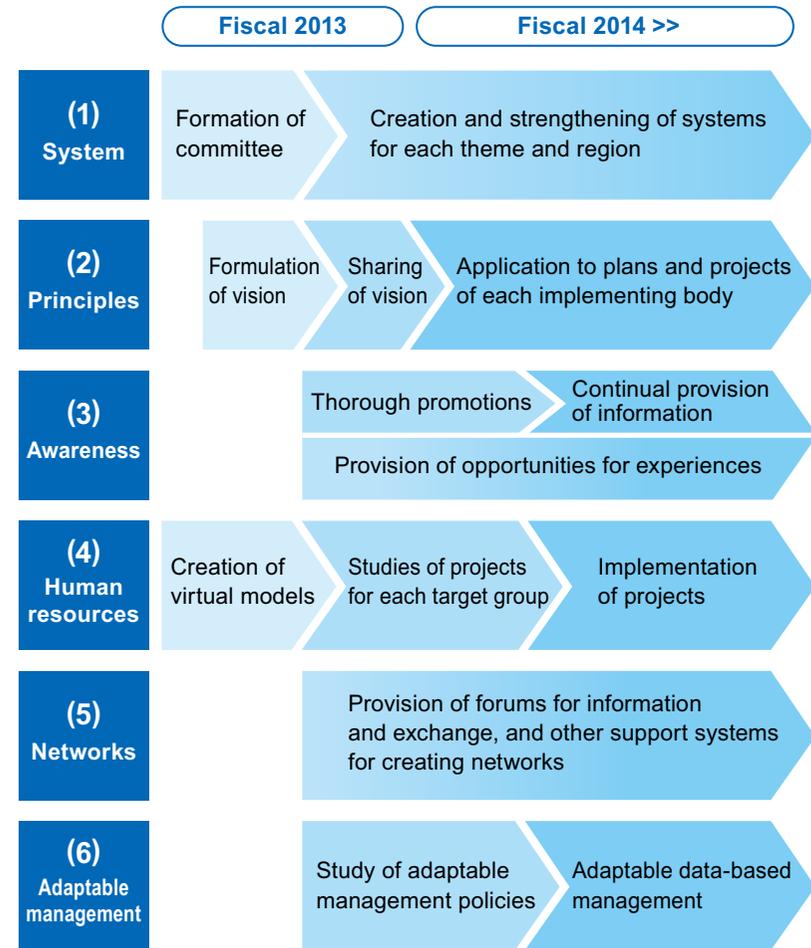
## (6) Adaptable data-based management

We carry out the necessary reviews and changes to these projects through continuous data-based verification and evaluation. We are also introducing easily implementable monitoring methods, and publicizing investigation results and evaluation details so that a broad range of residents in the prefecture can participate.

## [ Project system ]



## [ Six-point project scheme ]



In Kagawa Prefecture, we have already launched many projects aimed at creating *Satoumi*, beginning with the first sea litter prevention project in Japan that incorporates both the sea and land together. Other examples include projects for regenerating undeveloped woodlands (*Satoyama*), utilizing bamboo forest resources, and measures to improve domestic wastewater.

In the future, we will continue to work toward our vision to create a *Satoumi*, which is unique to Kagawa and connects all of Kagawa's mountains, rivers, towns and cities, and the sea.

The participation of every resident in the prefecture is essential for creating *Satoumi*.

We hope that you will begin to take action in areas that are close to you as a member of our *Satoumi*.

**Kagawa's Vision for the Creation of *Satoumi***

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