

Approaches taken with Local Communities

“Development of a Disaster- Prevention Community”

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Kyushu Regional Bureau, MLIT
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(This documentation is expanded and modified form of a report presented by the writer at the 2009 Kyushu land and transport study meeting of the Kyushu Regional Bureau, MLIT. (July 30, 2009)

Introduction - Background and Objectives -

Saga is a flood-prone area.



↑ Localized torrential rain in September 2006 (Imari City)

↓ Localized torrential rain in July 2009 (Takeo City)



Flood control measures

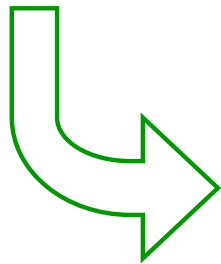
Physical infrastructure: Embankments, drainage pumping stations, flood retarding basins, etc.

Non-physical infrastructure: Flood control information, information dissemination on flooding, etc.

Introduction - Background and Objectives -

Takeo Office of River: “New Contingency Plan” in 2004

Supporting the idea that local residents can develop their community based on a risk management viewpoint
(= Development of a Disaster-Prevention Community) in everyday life



- Improving community disaster prevention capabilities
- Revitalizing the local community
- Strengthening the relationship of trust between the community and the local government

Presentation theme To introduce the situation of the “Development of a Disaster-Prevention Community” in our office, citing specific examples, **and to present the possibilities and directions for the future “Development of a Disaster-Prevention Community” based on a risk management viewpoint**

Standpoint of Today's Presentation

At the Takeo Office of River

(1) **Aiming** for the Development of a Disaster-Prevention Community

(2) **Actual examples of the** Development of a Disaster-Prevention Community

(3) **Progress in the** Development of a Disaster-Prevention Community

New Contingency Plan

Plan 1:

Using new information about disaster prevention

Plan 2:

Making towns in consideration of risk management

Viewpoint 1

Self-help

Resident's
sheltering
action

Mutual aid

Local flood
prevention
activities

Public support

Government's
information
service

新たな危機管理対策プラン New Contingency Plan



平成17年11月

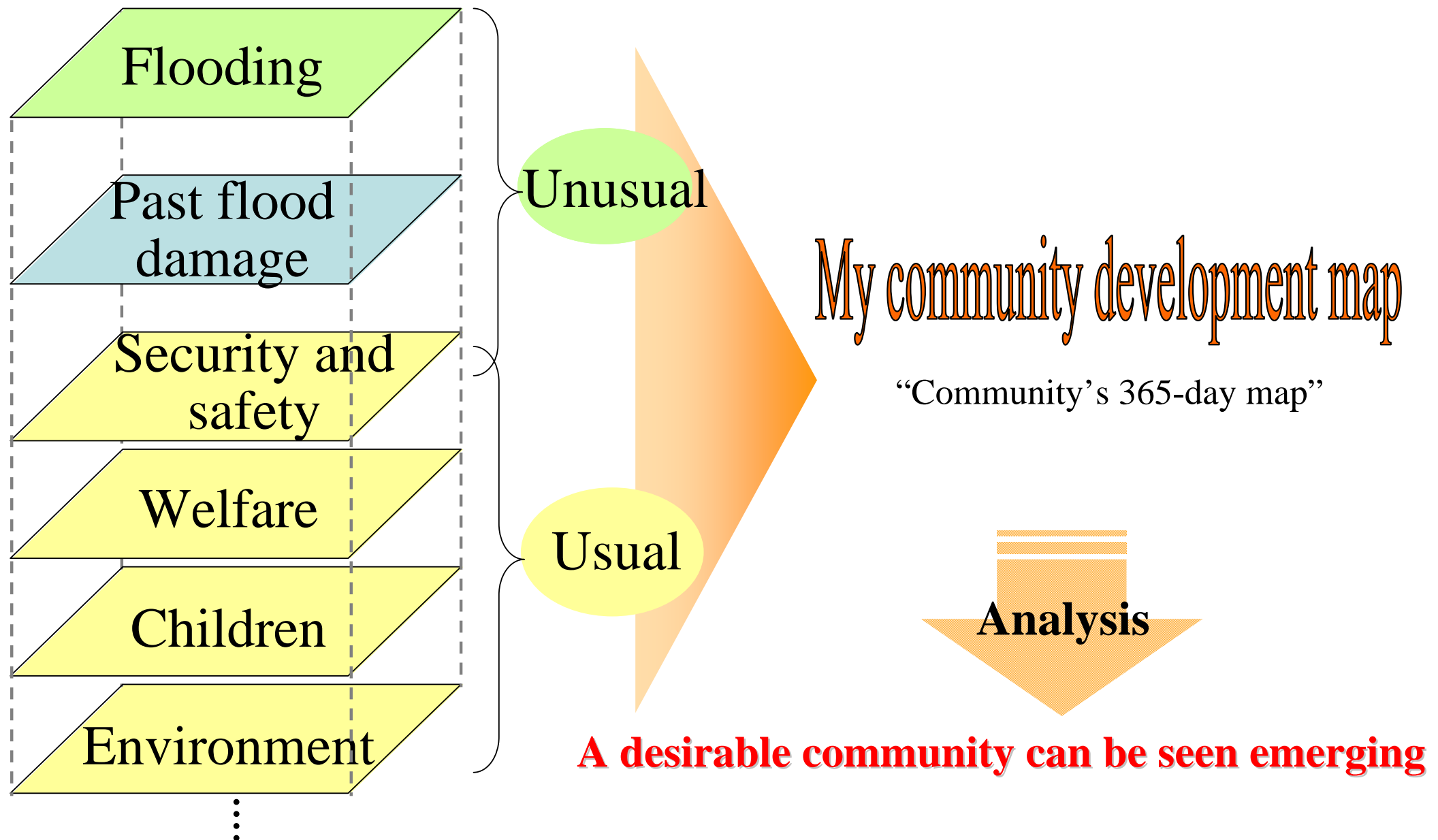
国土交通省 武雄河川事務所

November, 2005

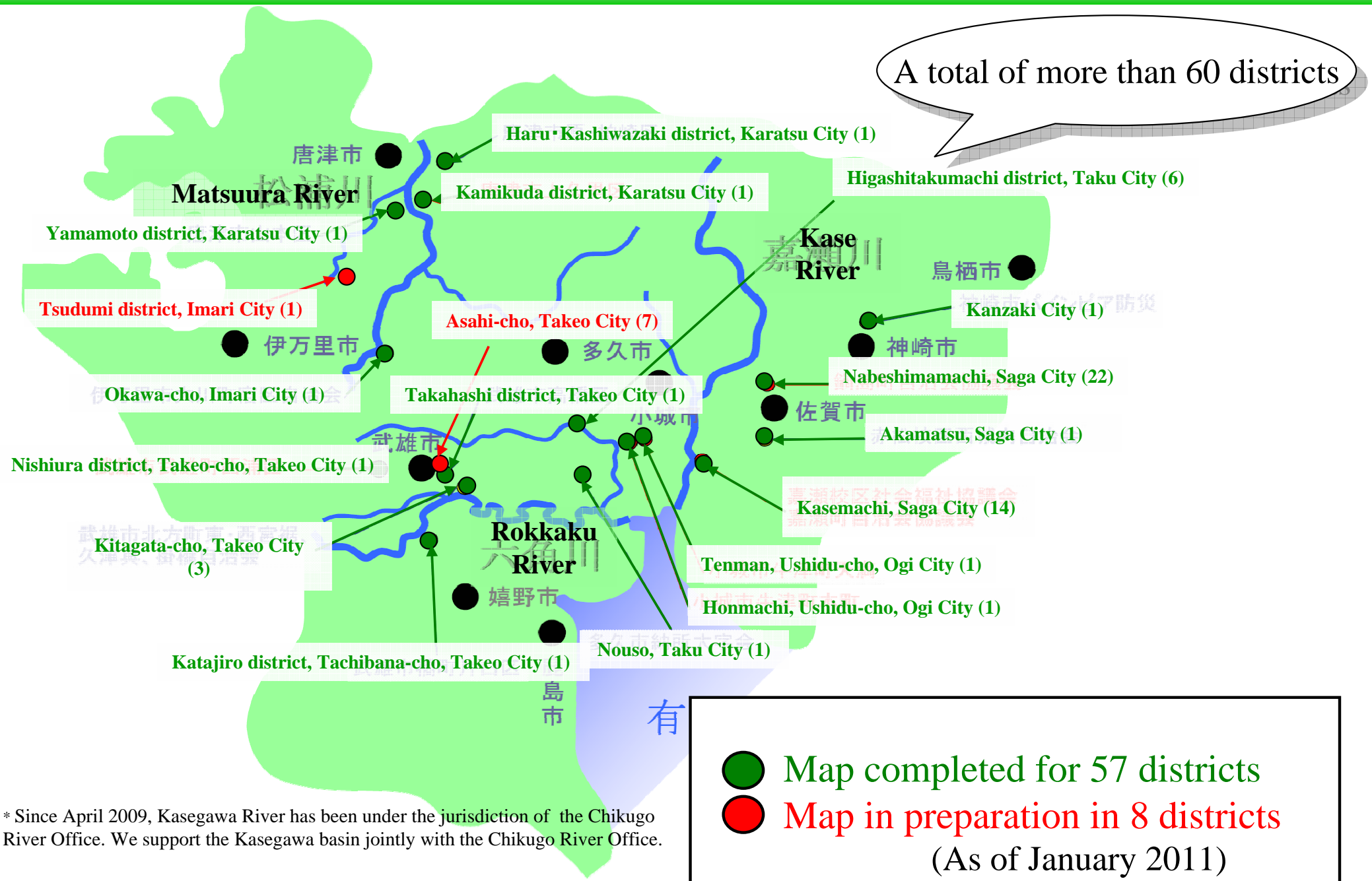
Takeo Office of River, MLIT

Plan 2 Community Development Considering Risk Management

Viewpoint 2



Implementation Area that our Office Supports (Achievements)



Standpoint of Today's Presentation

At the Takeo Office of River

(1) **Aiming** for the Development of a Disaster-Prevention Community

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(3) **Progress in the** Development of a Disaster-Prevention Community

Process of holding Study Meetings for the Development of a Disaster-Prevention Community

Decide on how to proceed
with the study meeting

Write down the trends and
problems of the community
on a map

Walk around the community

Select the issues to consider

Consider the solutions
to the issues

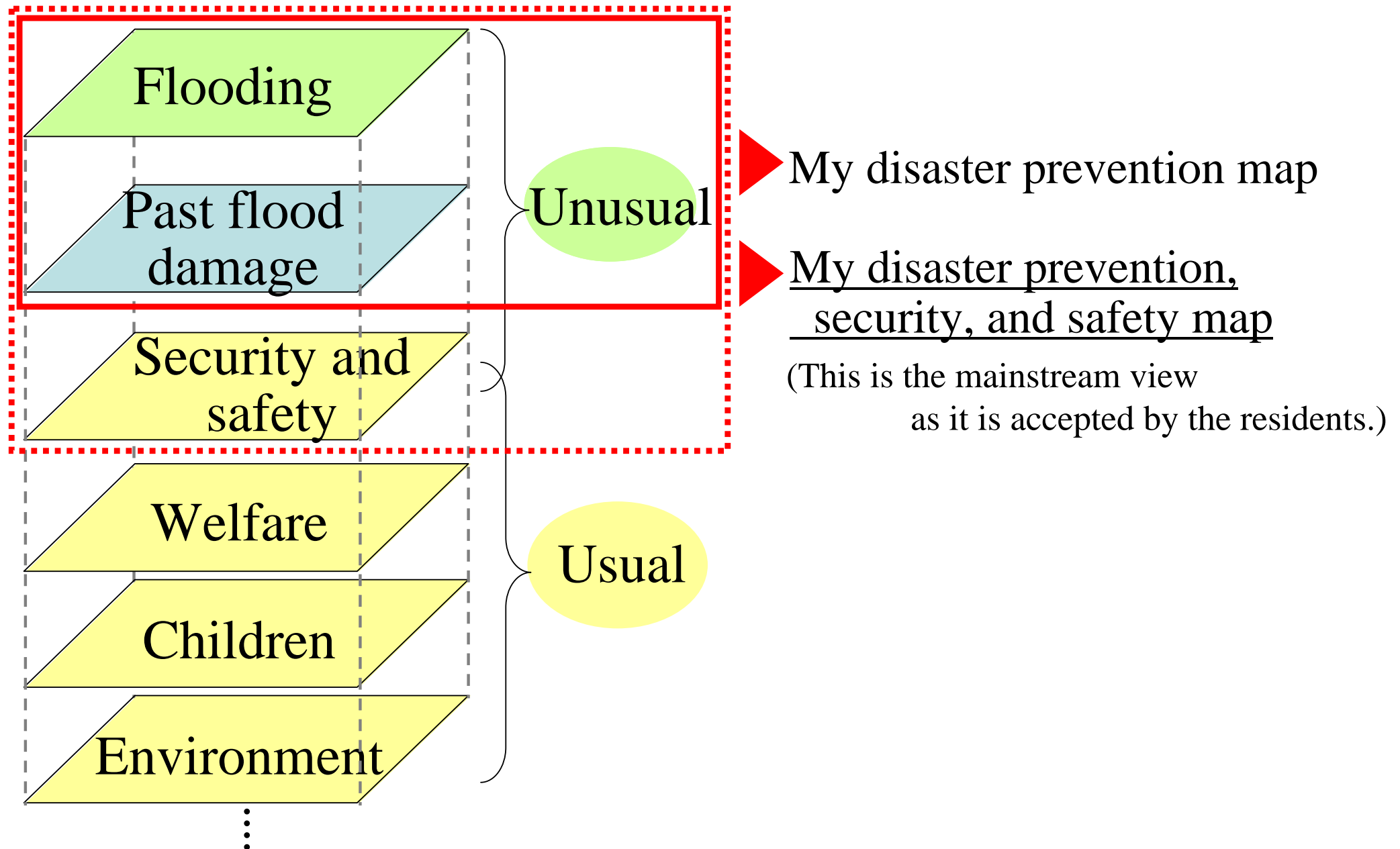
Continuation and review



The residents themselves
walk around the community and consider
things from the viewpoint
of **risk management**.

* Takeo Office of River “Guidance for the Development of a Disaster-Prevention Community” (March 2006)

Making a “My Disaster Prevention, Security, and Safety Map”



Making a “My Disaster Prevention, Security, and Safety Map”

- Actual Examples -

(On the day of the presentation, a video introducing actual examples will be shown.)

Making a “My Disaster Prevention, Security, and Safety Map”

- Actual examples -



Important points

- (1) The office only assists the residents in the preparation of a map to encourage them to take **their own initiative**.
- (2) Periodical **reviews** and **revisions** should be conducted.
- (3) Local **character** and **uniqueness** should be respected and an individualized approach is needed.

Making a “My Disaster Prevention, Security, and Safety Map” - Example (1) -

Original drawing of my map

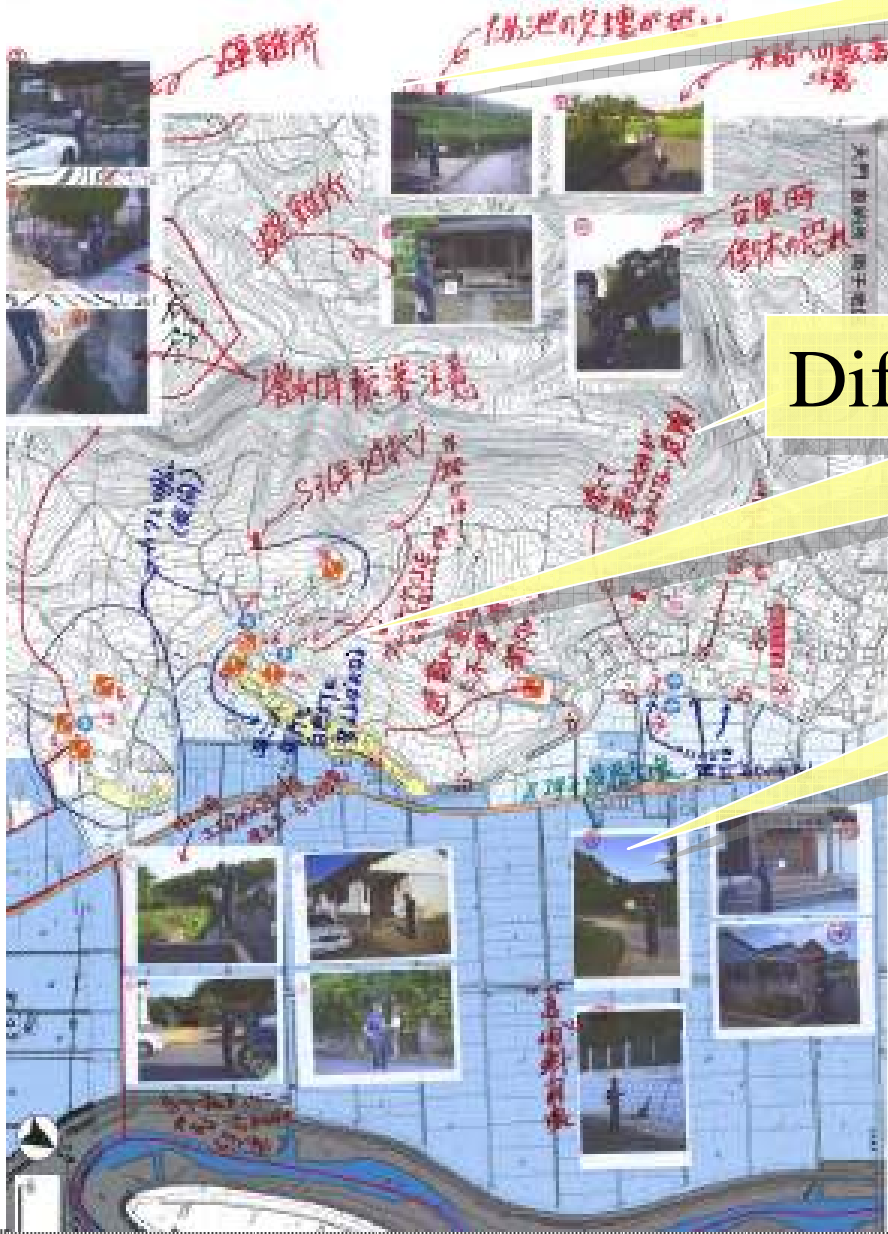
Possible breach of a reservoir

Landslide in 1961

Difficult to evacuate or commute

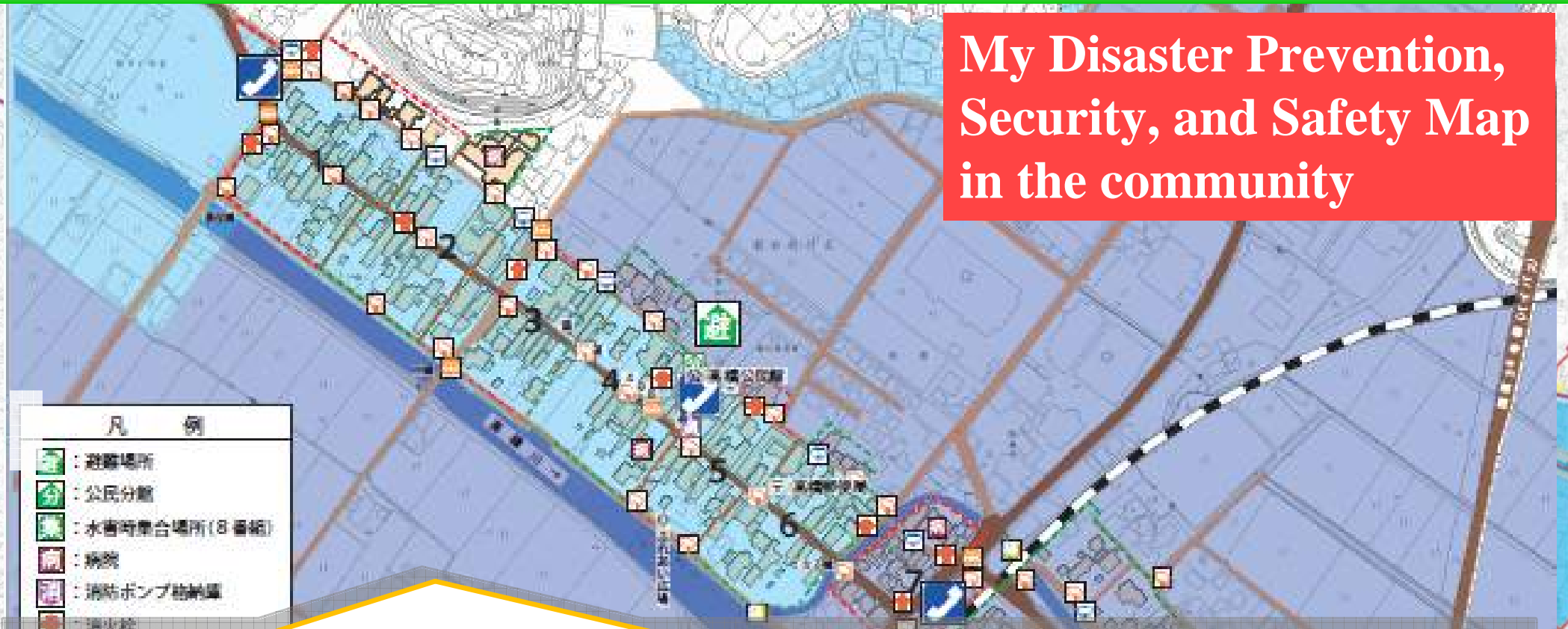
Embankment burst in 1949

★ Making a map makes it possible to confirm information that the office or municipality do not have



Making a “My Disaster Prevention, Security, and Safety Map” - Example (2) -

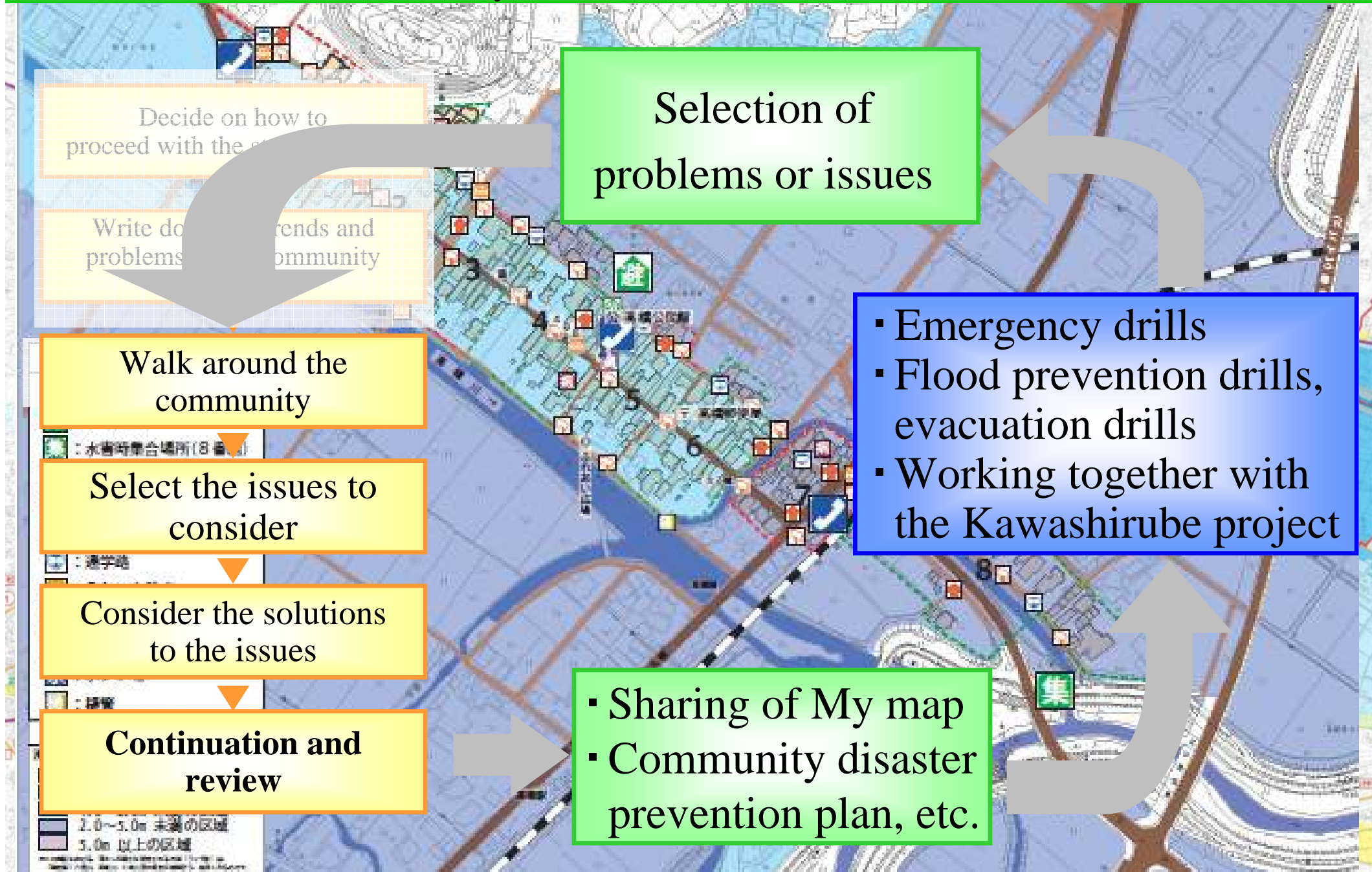
My Disaster Prevention, Security, and Safety Map in the community



Icons on disaster prevention, security, and safety

	Evacuation site		Drainage pump station		Streetlight		Bus stop
	Branch of the community center		Sluice way and sluice		School route		Hospital
	Disaster information base station		Fire cistern		Public telephone		Open ground
	Flood-control warehouse		Fire pump house		Traffic light		Dangerous intersection, etc.
	Public telephone		Fire hydrant				

Work for continuation and review at the Study Meetings for the Development of a Disaster-Prevention Community



Standpoint of Today's Presentation

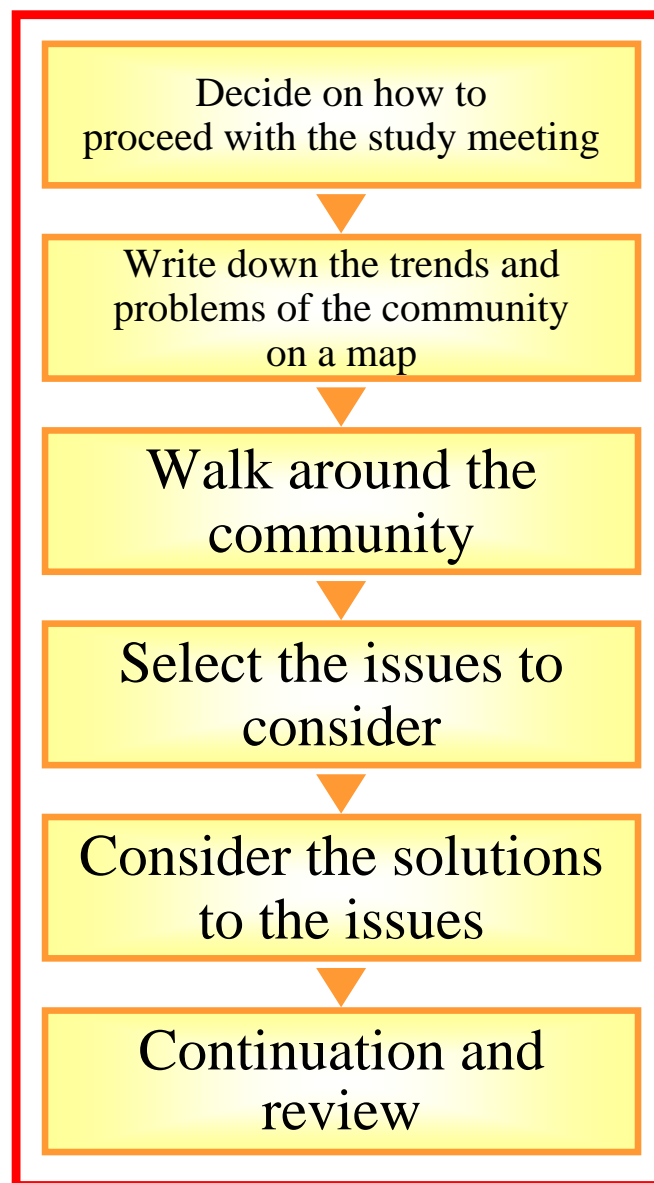
At the Takeo Office of River

(1) **Aiming** for the Development of a Disaster-Prevention Community

(2) **Actual examples of the** Development of a Disaster-Prevention Community

(3) **Progress in the** Development of a Disaster-Prevention Community

Progress in the Development of a Disaster-Prevention Community



Examples of Progress in the Development of a Disaster-Prevention Community (1)



Implementation of emergency and evacuation drills, based on the My map

- A voluntary disaster prevention organization is established by the community.
- Cooperation with the related organizations (Examples) national government, prefecture, city, autonomous districts

(@Katajiro district, Nouse district, etc.)

Examples of Progress in the Development of a Disaster-Prevention Community (2)



To solve the problems analyzed in the process of making a map...

- Opinion exchange meetings on the Development of a Disaster-Prevention Community
(@Katajiro, Ushidu districts, etc.)
 - The community takes the lead in scheduling the meeting and calls on the concerned organizations to participate
 - Municipalities (construction, agriculture and forestry), associations (irrigation, farming)
 - Prefecture (civil engineering office (rivers, roads), agricultural office)
 - ⇒ ■ **Each concerned organization confirms the measures they can carry out and the points where they can improve**
 - **Takeo Office of River works as the coordinator**

Examples of Progress in the Development of a Disaster-Prevention Community (3)

Supporting awareness-raising among the residents through the improvement of disaster-prevention education



Example of implementation: “Guidance to find meaning in life” at Honjo community center in Saga City (June 2009)

- ◇ What would you do at the time of a disaster?
- ◇ What do you think is required for disaster prevention in the community?

Examples of Progress in the Development of a Disaster-Prevention Community (3)

Example of implementation: Saga City Kase elementary school (May 2009)

◇ Learning from experience: What happens when it rains? — Experiment on the concentration of rainfall

◇ Learning from practice: Is my house all right? — Children's disaster prevention map

◇ Learning from lectures: What happened in the old days? — Learning from the stories of people who experienced flood damage

Confirming the water level of the flood damage in the schoolyard



Experiment using a water tank



Further progress!

Based on the students activities, the school and community cooperate with each other

- Making a children's map and family disaster prevention map (Takeo City Tachibana elementary school)

- Support for going to and from school in bad weather (Saga City Kase elementary school)

Examples of Progress in the Development of a Disaster-Prevention Community (3)

Linkage with “Kawashirube project”

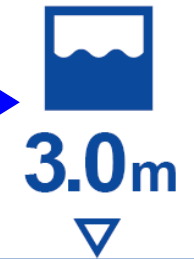
Hazard map for the whole community

Setting up disaster prevention information signs to improve awareness among the residents

Signboards

- Showing the predicted flood water depth
- Showing the evacuation site and the predicted flood water depth

Picture of the signs set up



想定浸水深
Flood Water Depth
(Projected)
この地域は六角川がはん濫すると
3.0m浸水する可能性があります

Flood Evacuation Shelter

朝日公民館
あさひこみんかん
Asahi Community Center

Reviewing disaster prevention information by the residents



Leading to
safe and smooth evacuation
at the time of a disaster

Achievement of the Development of a Disaster-Prevention Community

● Questionnaire at the Disaster Prevention and Reduction Forum shows that

The number of residents who have higher awareness of disaster prevention and have seen the flood hazard map in the community has been increasing year by year!

● FBS, Saga newspaper, Saga children newspaper, etc. show that

The “Development of a Disaster-Prevention Community” has been taken up by the media, including newspapers and TV, and has drawn increasing attention!

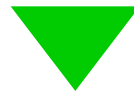
- ▶ Leading to residents' willingness to implement activities
- ▶ Leading to activities in new districts



Conclusion

The “Development of a Disaster-Prevention Community” contributes to

- Improvement of the community’s disaster prevention capabilities
- Activation of the local community
- Strengthening of the relationship of trust between the community and the local government



- Desirable community development
to meet usual and unusual situations can be observed.
- Linkage with community development and
supporting the community’s independence is expected.

Thank you for your attention.

The following is a supplementary documentation.

Need for the Development of a Disaster-Prevention Community

In the days when flood control was not developed

Major disasters occurred frequently.

⇔ Residents experienced a lot of suffering

- They knew the terror of flood damage.
- They were used to responding to the damage.



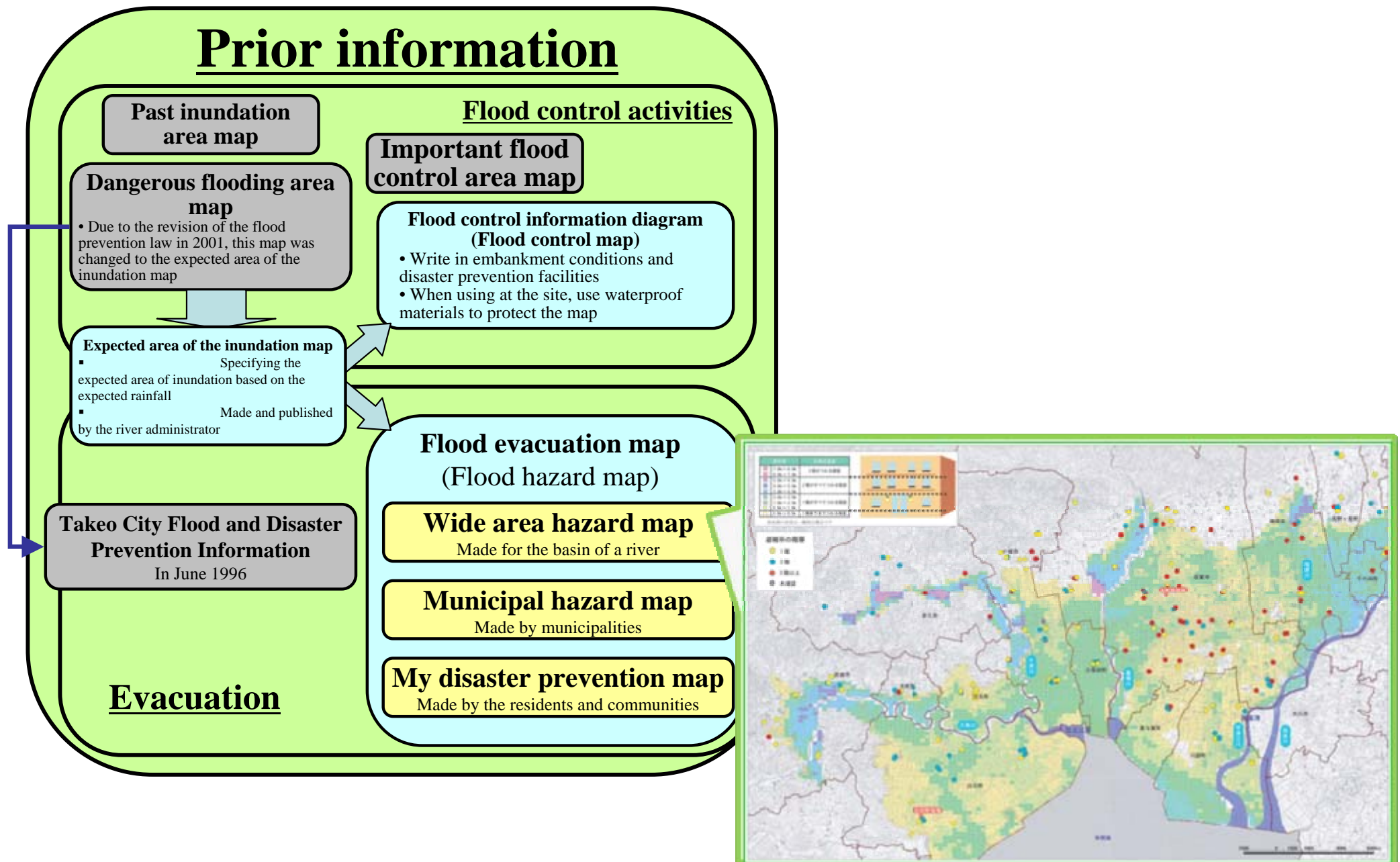
In recent years flood control has been developed...

- Reduction of major disasters
 - Localized torrential rainfall, etc.
- ⇔ Reduction in the number of people who experience flood damage
= Awareness of disaster prevention has diminished.



It is important to conduct the Development of Disaster-Prevention Communities continuously to consider future measures, based on the experience of flood damage.

Plan 1 Use of New Information (New Contingency Plan)



Plan 1 Use of New Information (New Contingency Plan)

Real-time information

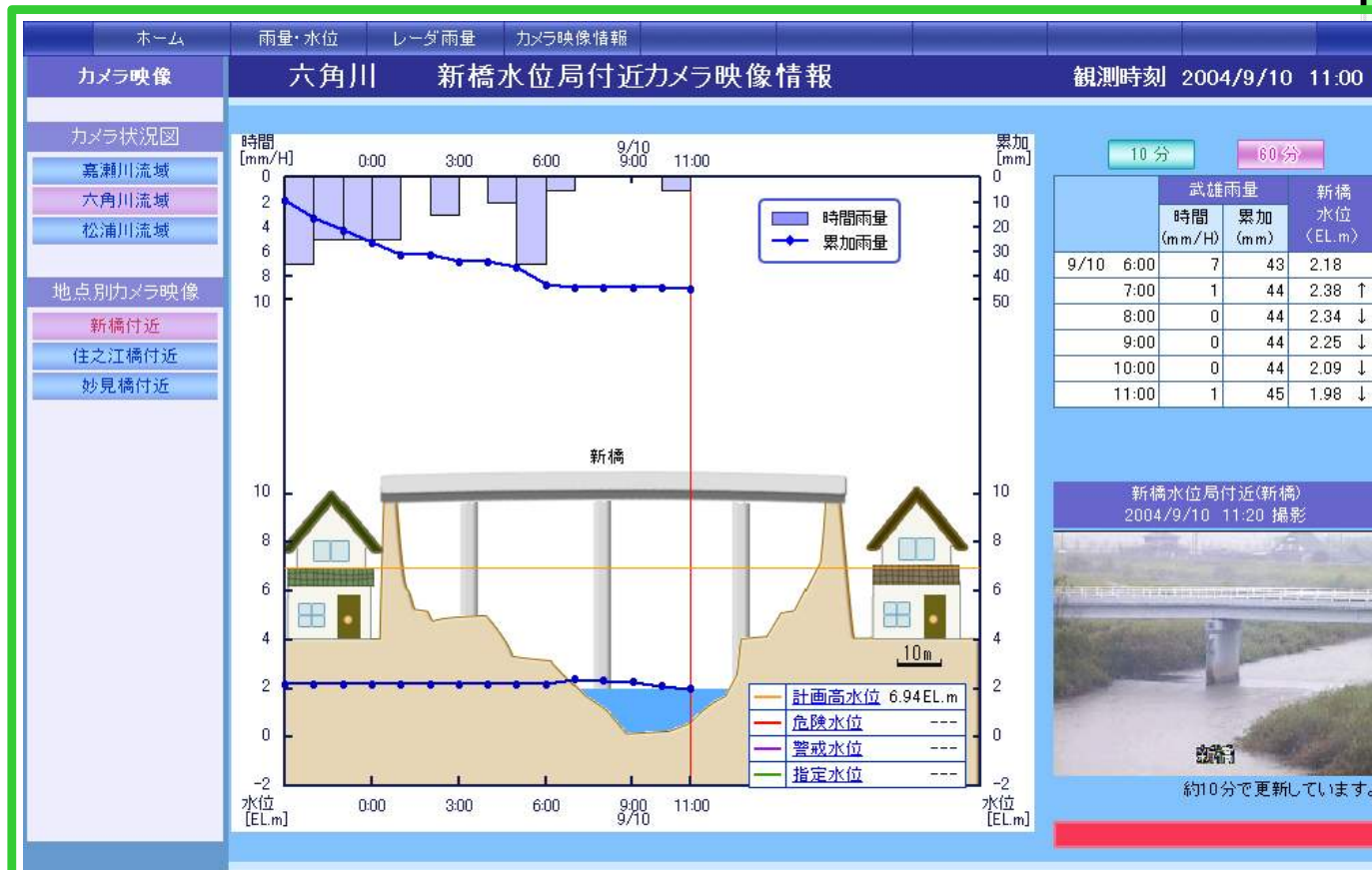
Response equipment

Provision of images from space
surveillance cameras
(Takeo CATY, Taku CATV, NHK)

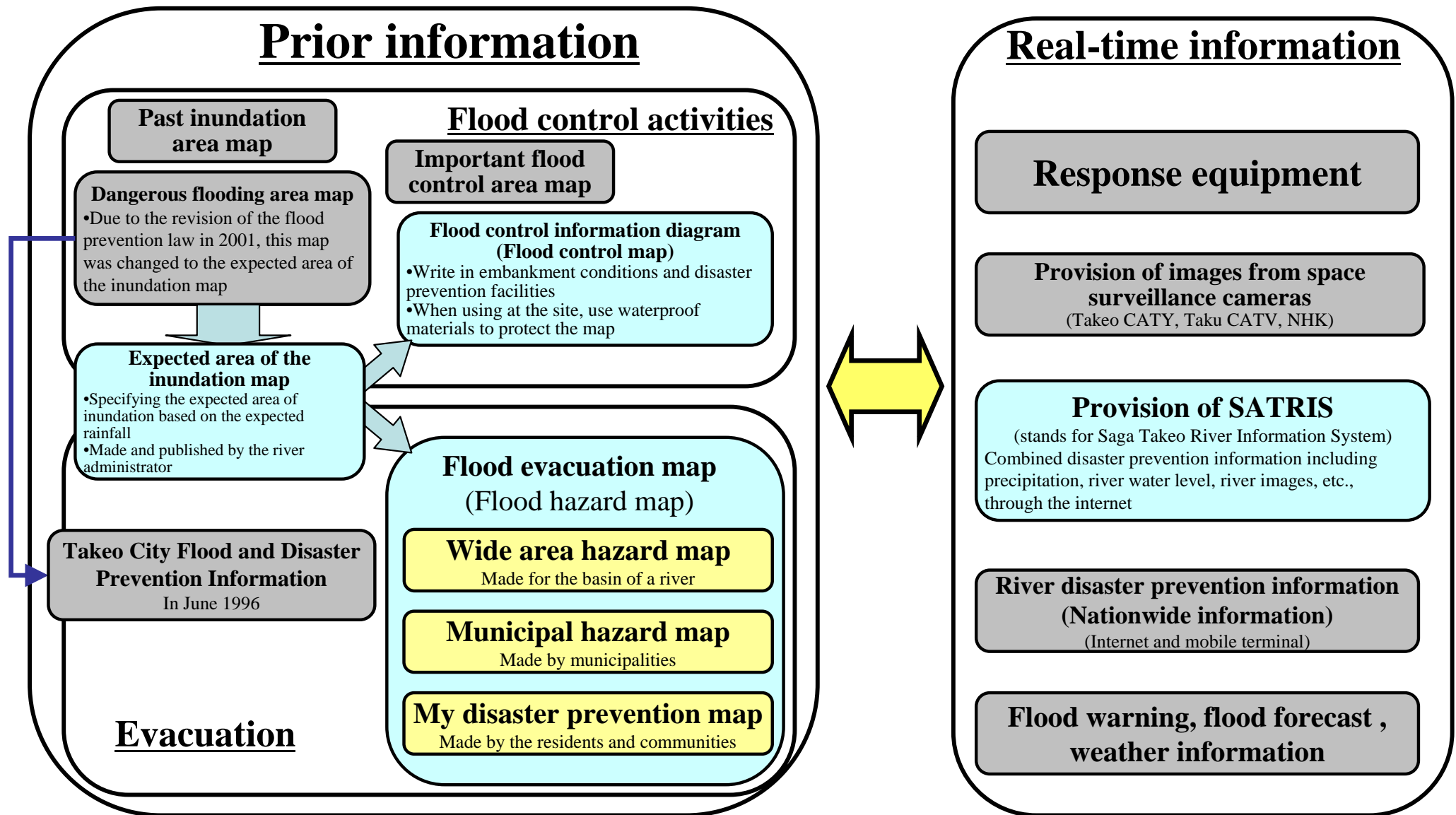
Provision of SATRIS
(stands for Saga Takeo River Information System)
Combined disaster prevention information including
precipitation, river water level, river images, etc.,
through the internet

River disaster prevention information
(Nationwide information)
(Internet and mobile terminal)

Flood warning, flood forecast ,
weather information



Plan 1 Use of New Information (New Contingency Plan)



Providing indicators for the evacuation of the community by combining information

Disaster Prevention Information through the Internet

Provision of real-time information through SATRIS (Saga Takeo River Information System)

<http://www.qsr.mlit.go.jp/takeo/bousai/>

