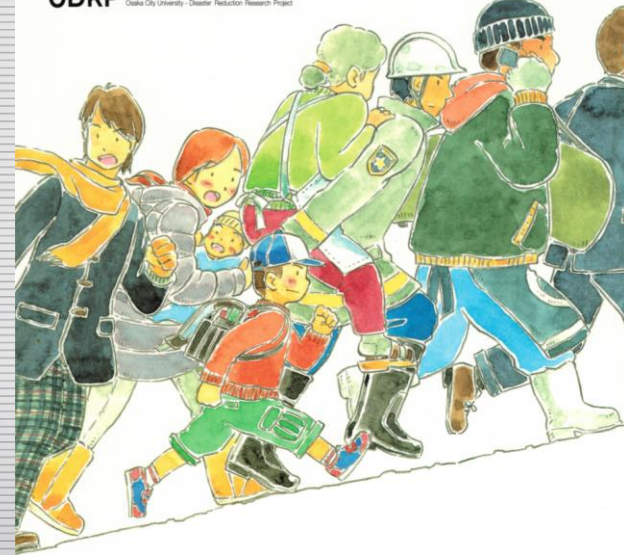


# Activity of the CERD on social implementation of knowledge for urban disaster management

ODRP 大阪市立大学 都市防災研究プロジェクト  
Osaka City University - Disaster Reduction Research Project



**Takaaki SHIGEMATSU**  
Graduate school of engineering

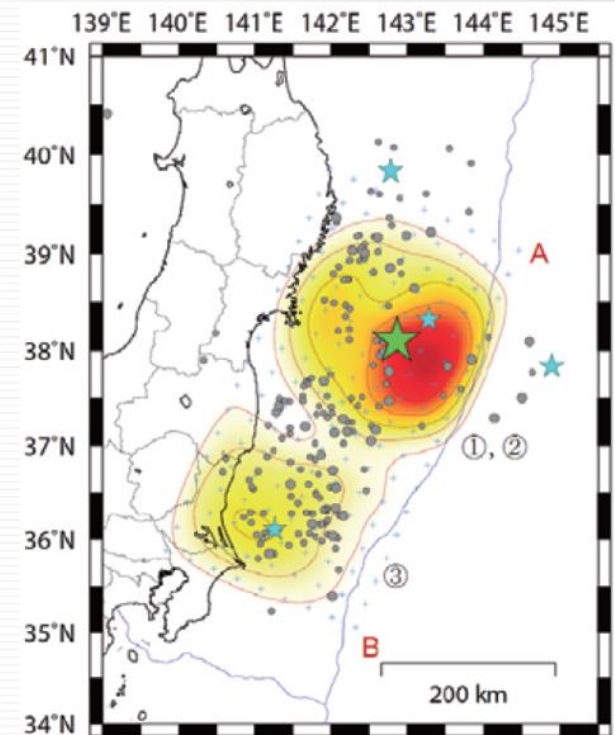
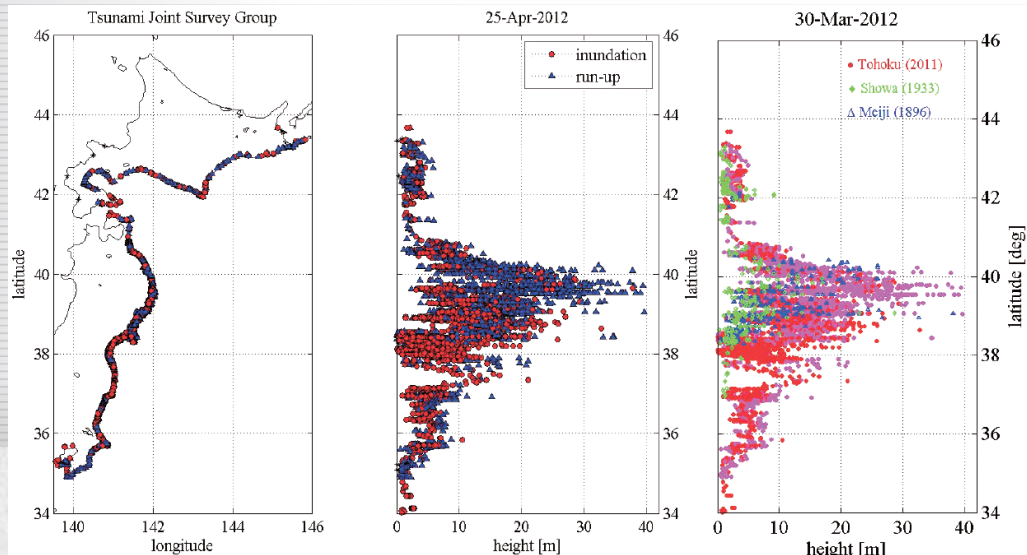


大阪市立大学  
OSAKA CITY UNIVERSITY

# Introduction

## The Great East Japan Earthquake: 2011.03.11

- mega earthquake
- mega tsunami
- widespread disaster
- nuclear power plant disaster



# Introduction

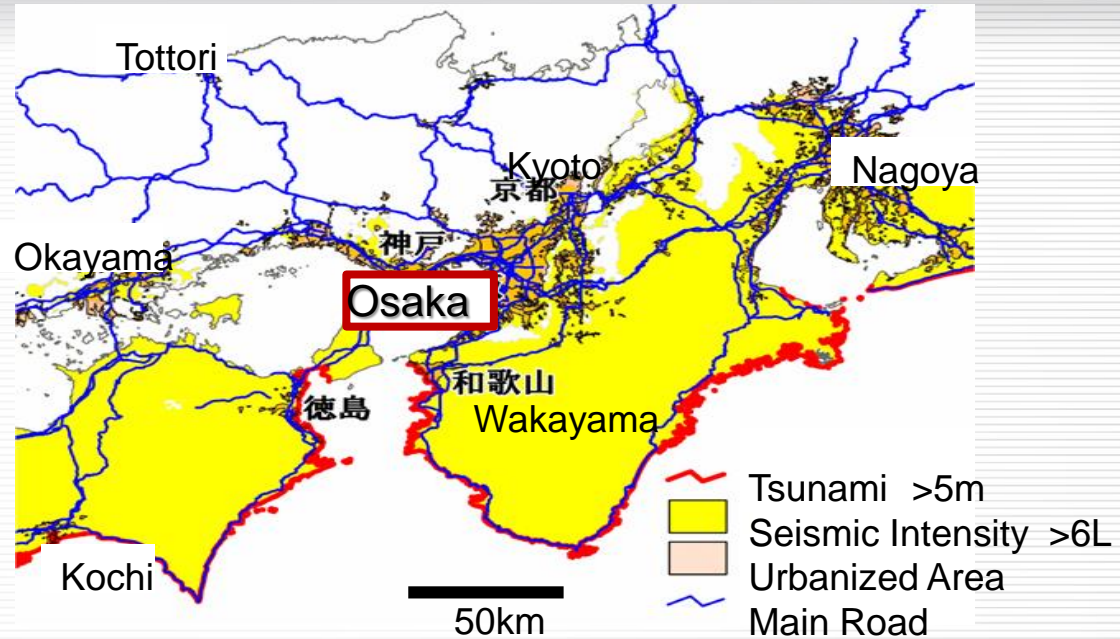
## We learned from the Great East Japan Earthquake:

- It is not possible to completely prevent occurrence of natural disaster.
- We recognized the importance and difficulty of following own lives by ourselves.

# Introduction

## Risk of disaster

### In Kansai district



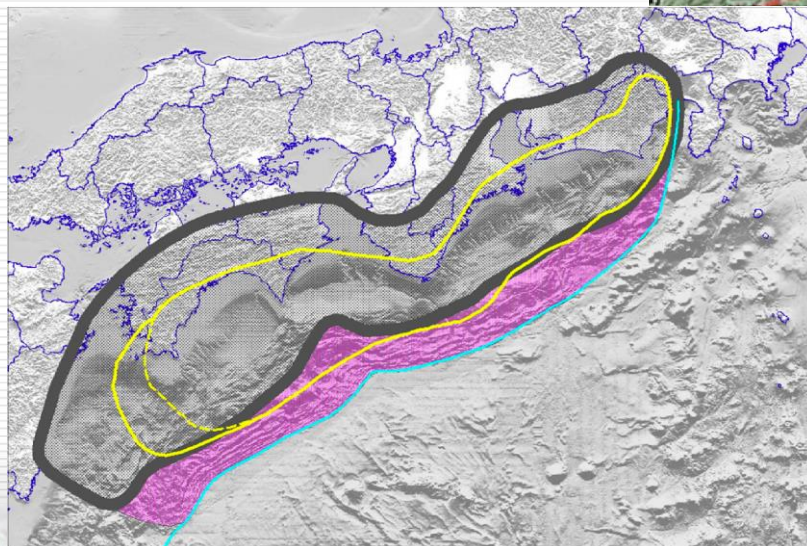
Anticipated Hazards around the Kansai District at Nankai Earthquake

# Introduction

## Risk of disaster

### In Kansai district

- many active faults
  - ✓ Nankai trough
  - ✓ Uemachi fault
  - ✓ etc.





# Introduction

# ODRP

大阪市立大学 都市防災研究プロジェクト

Osaka City University - Disaster Reduction Research Project

## Disaster Reduction Research Project in April 2011.

- Research of scientific and social knowledge for what GEJE caused
- Prediction of what will happen in Kansai district in a future mega-disaster



# Introduction

**OCU set up Disaster Reduction Research Project in April 2011.**



**The Center of Education and Research for Disaster (CERD) launched on March 1, 2015.**

- **Introduction of activities of the CERD**





# Assault of Osaka City University

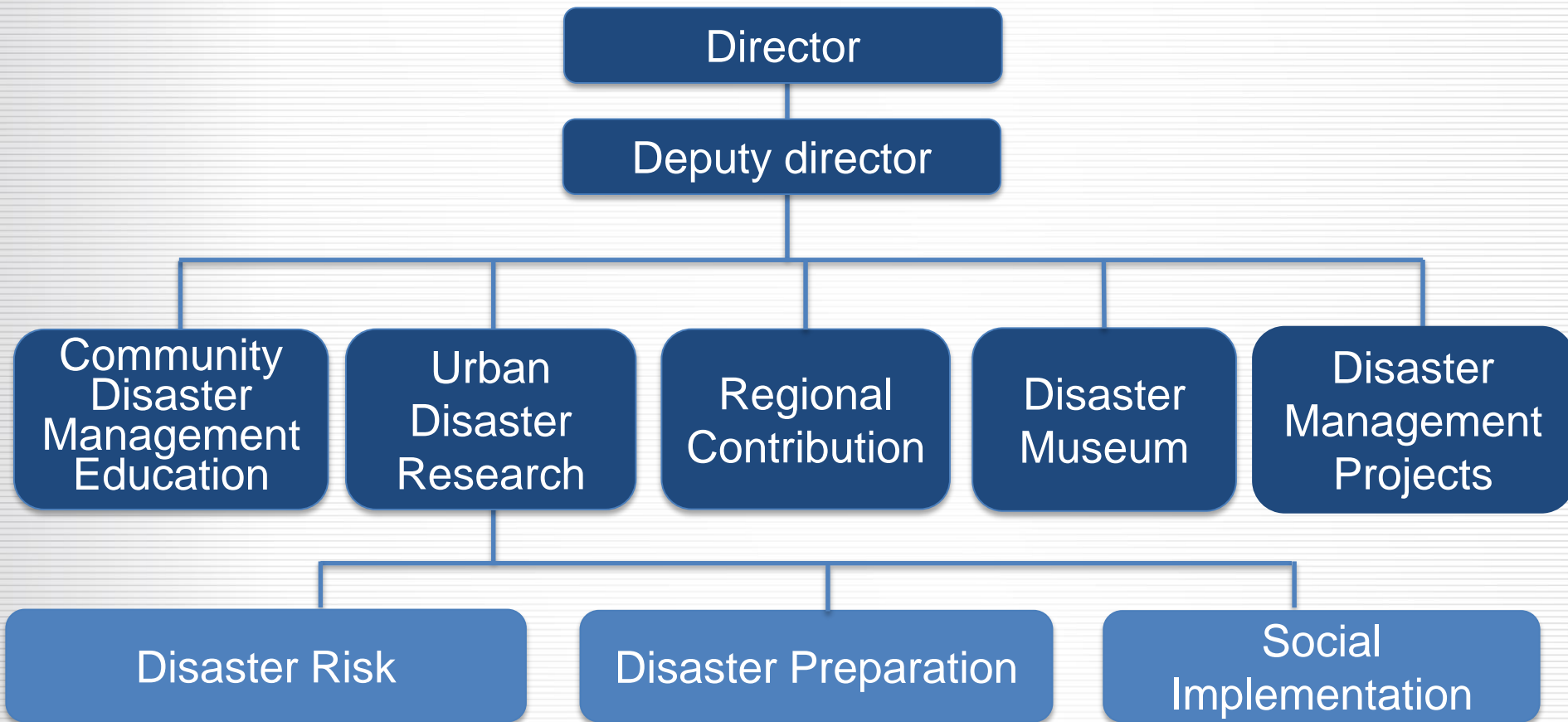
Based on the lesson of the GEJE

- The goal of the CERD will accomplish  
“ **0 disaster death**”.
- Preparation for complex, high-consequence disaster
- Promotion of social implementation of knowledge of disasters and the way of disaster prevention and reduction.
  - From Osaka to all over Japan through network of the public universities

# Outline of CERD activity



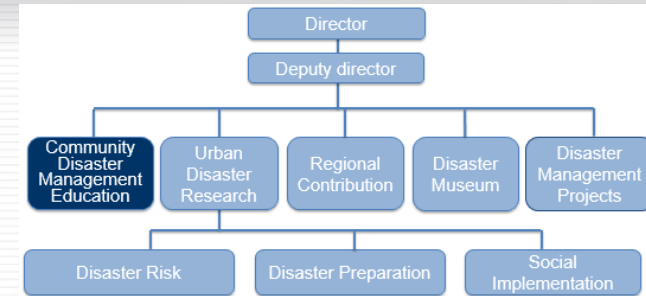
# Organization of the CERD



# Activity of the CERD

## Disaster Management Education

- Offer of educational program
  - COC field practice seminar for OCU students
  - COC Agora seminar for OCU students



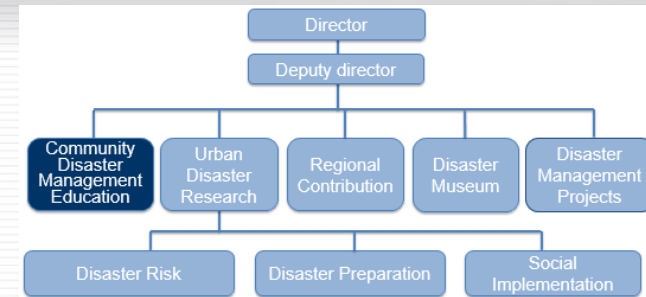
COC: "Center of Community" program supported by the Ministry of Education, Culture, Sports, Science and Technology



# Activity of the CERD

## Disaster Management Education

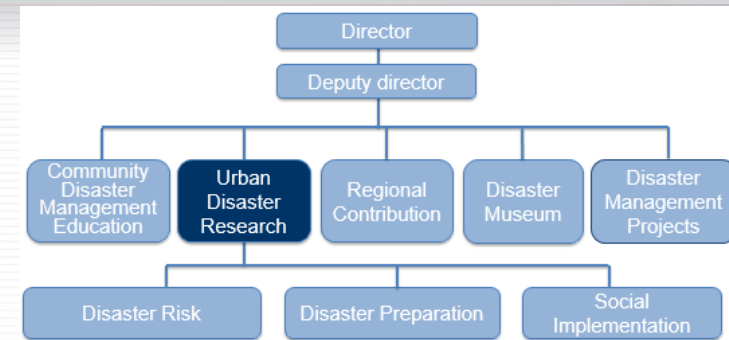
- Offer of educational program
  - Community based Disaster Management Course for members of the community
  - Community and Disaster Management General Education Program for OCU students and members of the community
    - ✓ Theoretical and practical training by a cross-sectoral organization composed of the members of the CERD



# Activity of the CERD

## Urban Disaster Research

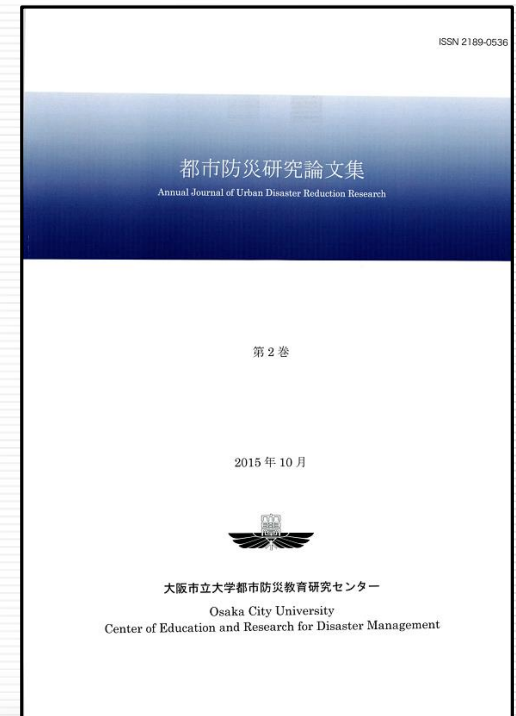
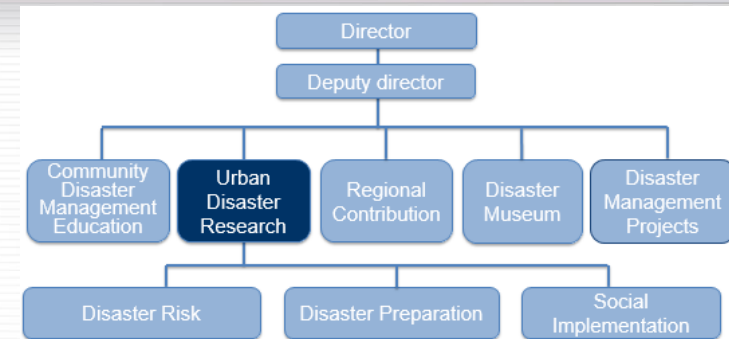
- **Effort of obtaining knowledge**
  - **Disasters**
  - **Technologies for disaster prevention and reduction**
  - **Social environment of community**
    - ✓ **Communication between researchers**
    - ✓ **Communication between researchers and residents**
    - ✓ **Communication between residents**



# Activity of the CERD

## Urban Disaster Research

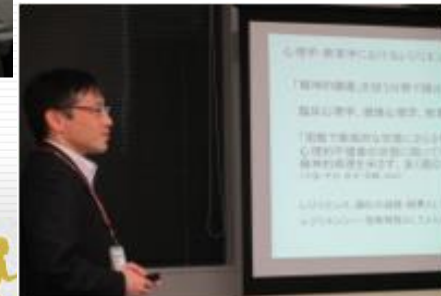
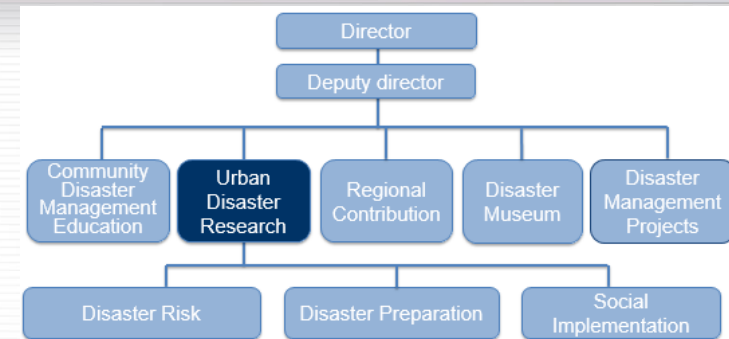
- **Communication platforms for researchers**
  - **Annual symposium on Urban Disaster Reduction Research**
    - **Knowledge sharing**
    - **Exposure of problems**
      - Science
      - Engineering
      - Social science
      - Life science
      - Medical services
      - Nursing
      - etc.



# Activity of the CERD

## Urban Disaster Research

- **Communication platforms for researchers and residents**
- **Science café**
  - ✓ **Real-time disaster information sending**
  - ✓ **Emergency transportation and GIS**
  - ✓ **Digital learning materials**
  - ✓ **Fragility and resilience**

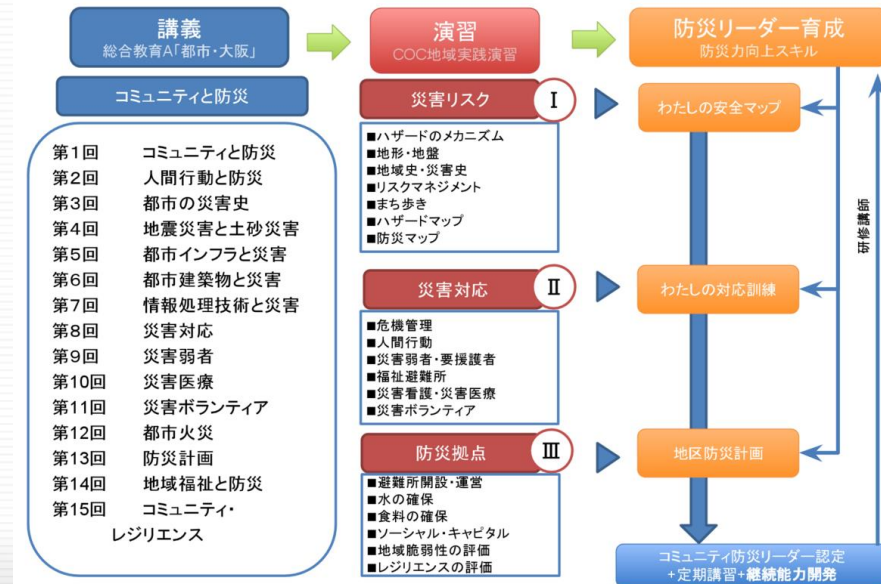
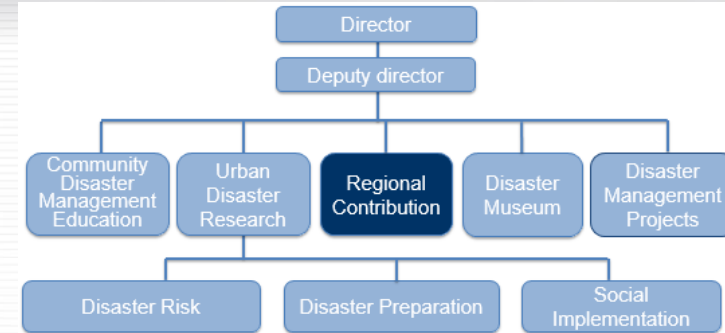




# Activity of the CERD

## Regional Contribution

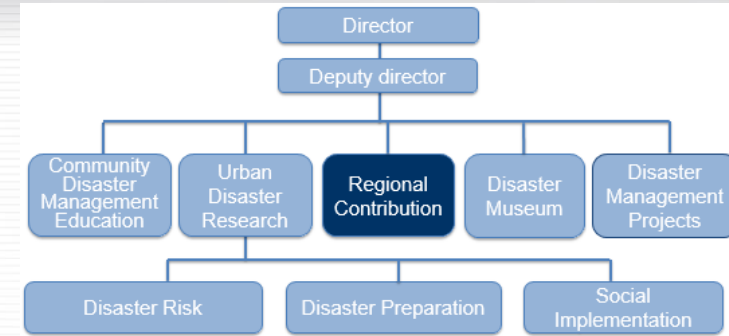
- Delivery lectures to elementary schools and junior high schools on saving lives
- Qualification course for disaster prevention expert from April 2016



# Activity of the CERD

## Regional Contribution

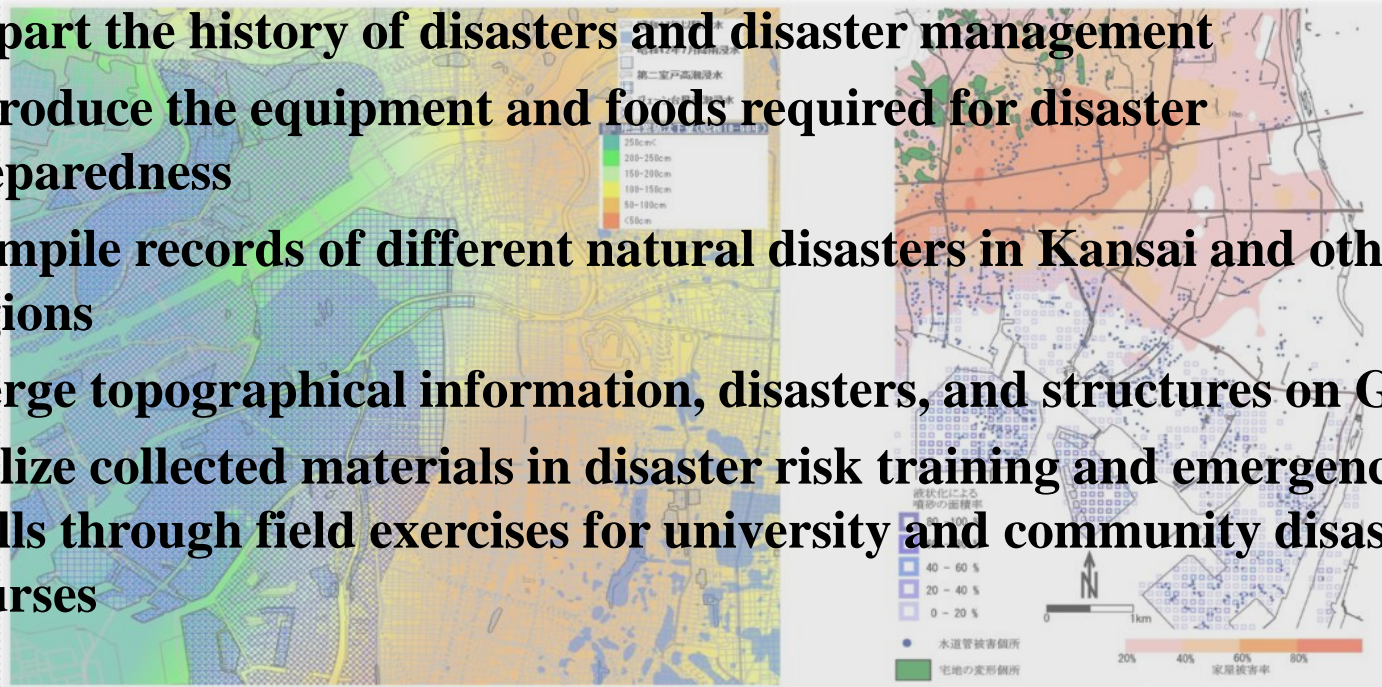
- Sumiyoshi Act Company
  - Community theatrical group



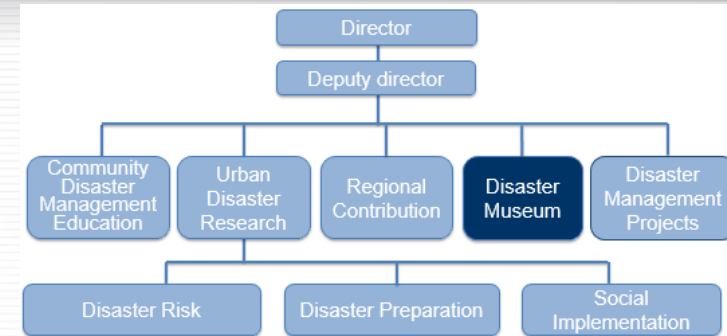
# Activity of the CERD

## Disaster Museum

- Plan to provide self-explanatory exhibits
  - ✓ Impart the history of disasters and disaster management
  - ✓ Introduce the equipment and foods required for disaster preparedness
  - ✓ Compile records of different natural disasters in Kansai and other regions
  - ✓ Merge topographical information, disasters, and structures on GIS
  - ✓ Utilize collected materials in disaster risk training and emergency drills through field exercises for university and community disaster courses



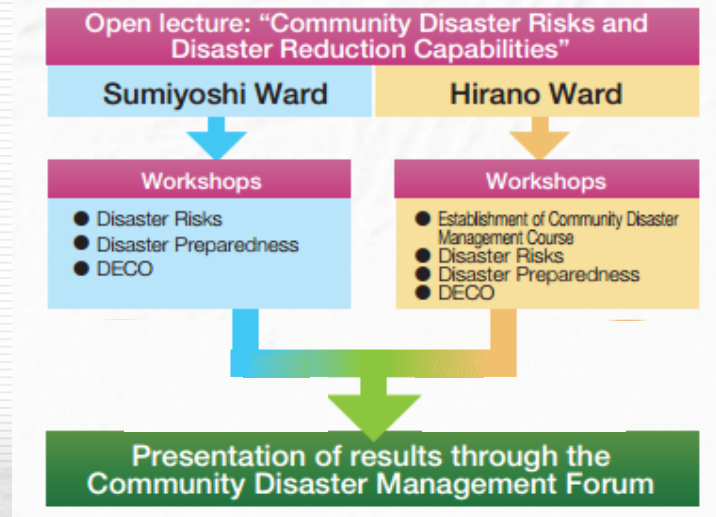
過去の災害履歴として水害・地盤沈下・地震の被害分布の例



# Strategy of the CERD

## Osaka-based activities

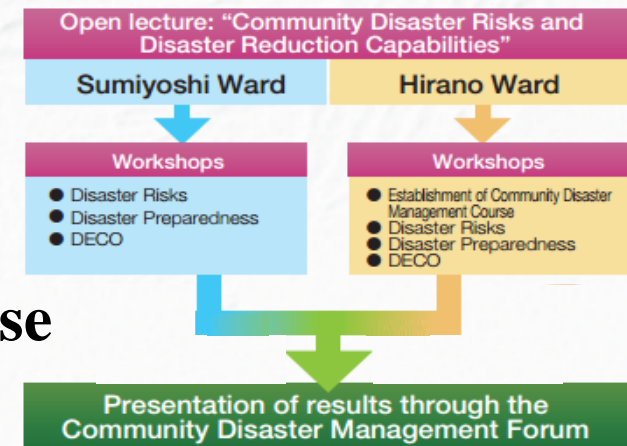
- **Formation of a Community Disaster Management Network**
  - ✓ function as a disaster management education system focus on community self-help and mutual assistance
  - ✓ Offer a Community Disaster Management Course with an active learning style focusing on Hirano Ward and Sumiyoshi Ward



# Strategy of the CERD

## Osaka-based activities

- Community Disaster Management Course
  - Open lecture
    - ✓ Introduction to the disaster risks as revealed through geographical and social data
    - ✓ Explanation how the community must deal with these risks to minimize disasters.



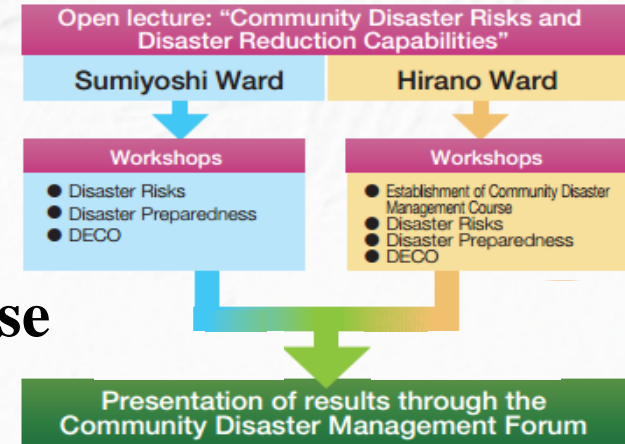
# Strategy of the CERD

## Osaka-based activities

- Community Disaster Management Course

- Workshops

- ✓ Waling tours of the town to increase recognition of aspect not readily visible on maps



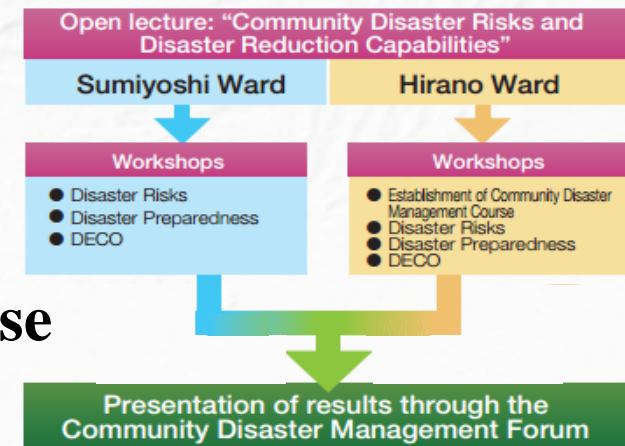
# Strategy of the CERD

## Osaka-based activities

### • Community Disaster Management Course

#### • Workshops

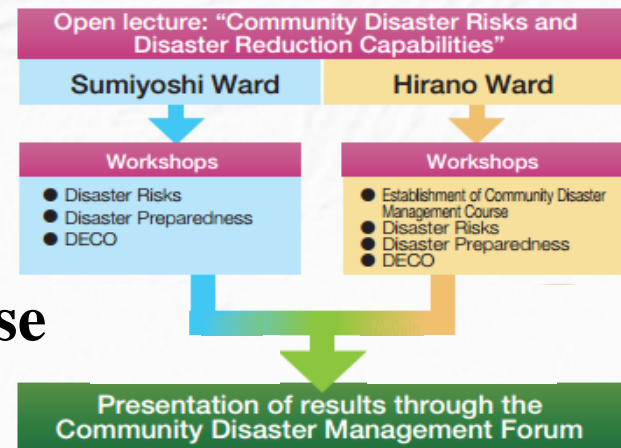
- ✓ Measuring the physical fitness required for an actual evacuation
- ✓ Experiencing and learning how to use wheelchairs and carts to assist those requiring support during an evacuation
- ✓ Offering Disaster Evacuation Coaching (DECO), a practical disaster drill that incorporates the use of electronic tablets and applies the knowledge and expertise participants learned from the workshop



# Strategy of the CERD

## Osaka-based activities

- **Community Disaster Management Course**
  - **Open lecture**
  - **Workshops**
  - **Community Management Forum**
    - ✓ **Report the achievements and information shared through open lecture and workshops**
    - ✓ **encourage an exchange of opinion regarding future challenges**





# Strategy of the CERD

## Nationwide development

- **Formation of a Community Disaster Management Network through collaboration among Disaster Research Center of public universities**
  - ✓ **Sponsored by the Japan Science and Technology Agency**
  - ✓ **Intend to implement various disaster management initiatives in cooperation with Osaka Prefecture University, the University of Hyogo, and Iwate Prefectural University**
  - ✓ **Start to make a workbook used in disaster management practices in different areas**

- **Activity of the CERD has just begun.**
- **The inspection of the activity achievement for  
“0 disaster death”  
will be carried out every disaster.**
- **The activity will be never over .**
- **The question is: how long we will/can continue the activity...**

Thank you for your kind attention.

