Kato Takaaki Lab. (ICUS)
[Establishing Social Safety System]

International Research Center for Urban Safety

http://kato-sss.iis.u-tokyo.ac.jp/

Safety Social System

Department of Urban Engineering

Considering Social Safety System

Our researches cover the optimization of urban system as hardware and social system as software which supports citizens' lives from the viewpoint of urban safety. We set our research themes on all phases of disaster measures such as disaster urban mitigation, response for disaster, and post-disaster urban rehabilitation and reconstruction. They have been studied in both practical and theoretical approaches.
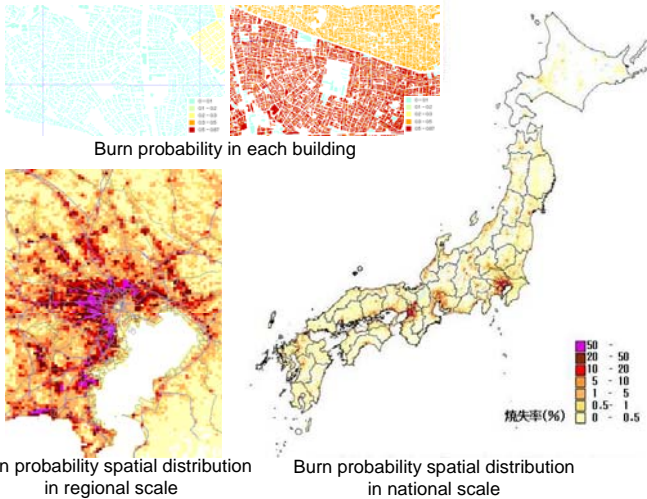
Our final goal is to achieve safety and amenity city. We will establish "Social Safety System" as an integrated academic field through our research activities.

A. Evaluating vulnerability in urban areas
Natural disaster vulnerability assessment in urban areas
■ A study on earthquake fire risk assessment method
Calculating earthquake fire risk in building, regional and national scale

Burn probability in each building

Burn probability spatial distribution in regional scale

Burn probability spatial distribution in national scale
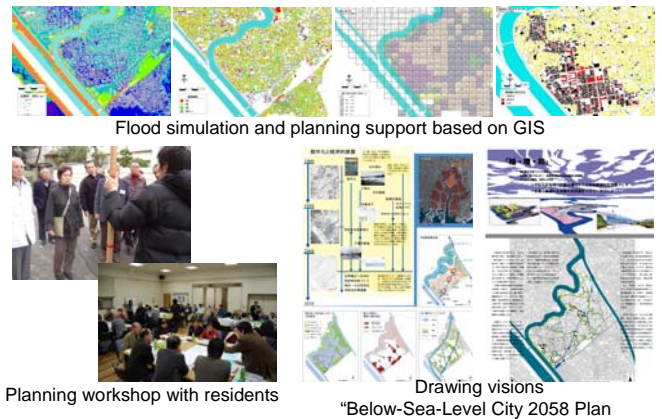
B. Considering countermeasures with community
Adaptation measures in cities for climate change
Methodology for disaster prevention machidukuri
Theory for disaster prevention urban planning
■ Working with citizens in "Below-sea-level City"
Establishing risk communication method based on objective information
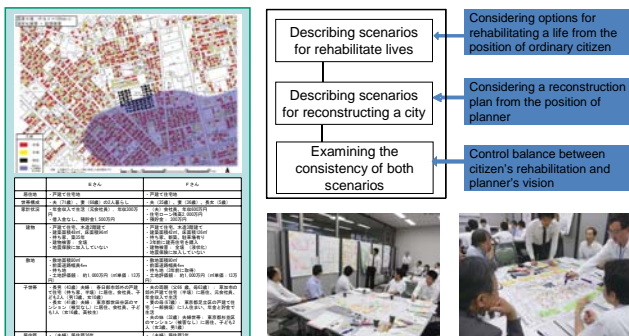Attempting area management by "New Public Sector"

Flood simulation and planning support based on GIS

Planning workshop with residents

Drawing visions "Below-Sea-Level City 2058 Plan"

C. Preparing for disasters from the position of planner
A study on rehabilitation and reconstruction of cities
■ Establishing a training method for imaging recovery
■ Describing recovery model and optimizing recovery

Describing scenarios for rehabilitate lives — Considering options for rehabilitating a life from the position of ordinary citizen

Describing scenarios for reconstructing a city — Considering a reconstruction plan from the position of planner

Examining the consistency of both scenarios — Control balance between citizen's rehabilitation and planner's vision
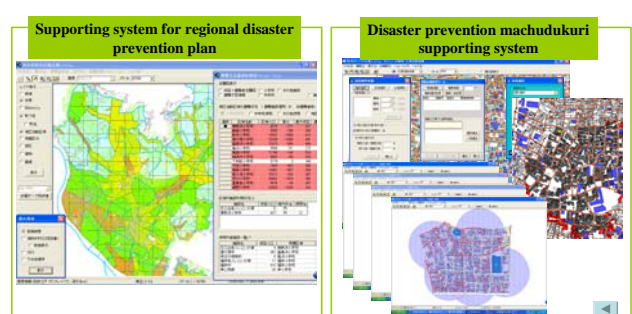
D. Technically supporting to achieve safety society
Turning into practical use and upgrading the techniques
■ A study on planning supporting system
■ Practical use of disaster prevention mash-up system

Supporting system for regional disaster prevention plan

Disaster prevention machudukuri supporting system

Creating an environment for planning and considering countermeasure based on evaluation