

Social Experiments on Extreme Weather Resilient Cities

2010-2014

実施予定期間：平成22年度～平成26年度

実施予定規模：2億円／年

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山梨大学，防衛大学校，日本大学，（財）電力中央

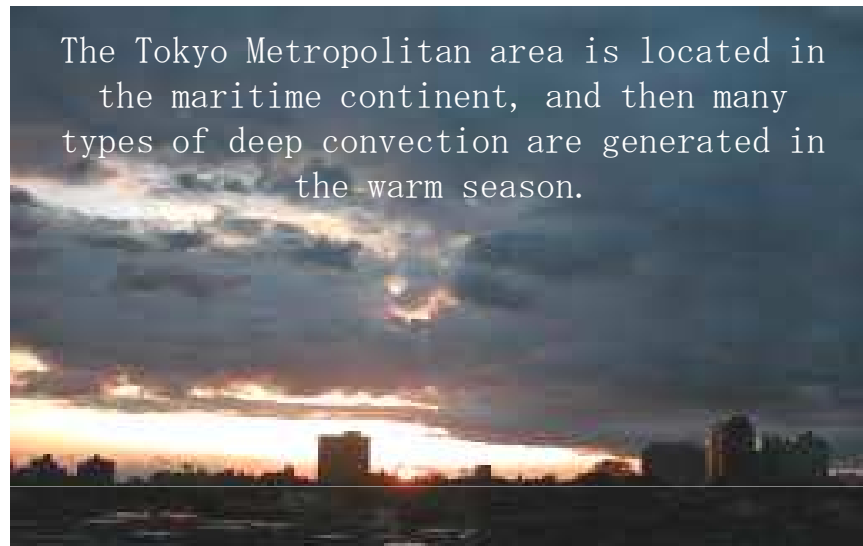
研究所

（財）東京都環境科学研究所

社会実験機関：東京都江戸川区，東京消防庁，横浜市，藤沢市，J R 東日本

Social Experiments on Resilient Cities for Extreme

Targeting Deep Convections Causing Local Heavy Rainfall and Flash Flood in Urban Areas



The Tokyo Metropolitan area is located in the maritime continent, and then many types of deep convection are generated in the warm season.

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to Overcome Difficulties of Extreme Weather

Forecast

Theme 1: Field Experiments TOMEX

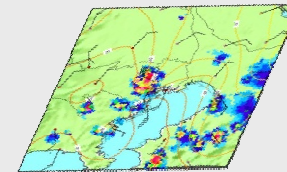
【Meteorology】

To obtain new insight on mechanisms of extreme weather

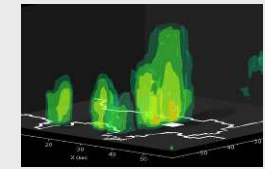
- (1) Development of new technologies
- (2) Field campaign in the Tokyo area
- (3) Statistical analysis



New observation facilities



Field campaign in the Tokyo Metropolitan area



Understanding the mechanism

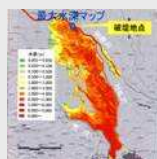
to Issue More Accurate and Adequate Warning

Theme 2: Monitoring and Very-short Forecasting System

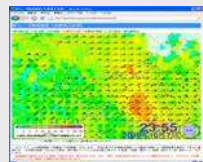
【Engineering】

Developments collaborating with end users

- (1) Extreme weather nowcasting methods
- (2) Development of test-beds of nowcasting systems
- (3) Extreme weather database



Hazard Map



Nowcasting



Monitoring/Nowcasting System

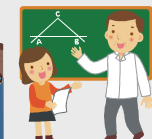
to Evaluate and to Adapt the Nowcasting Systems

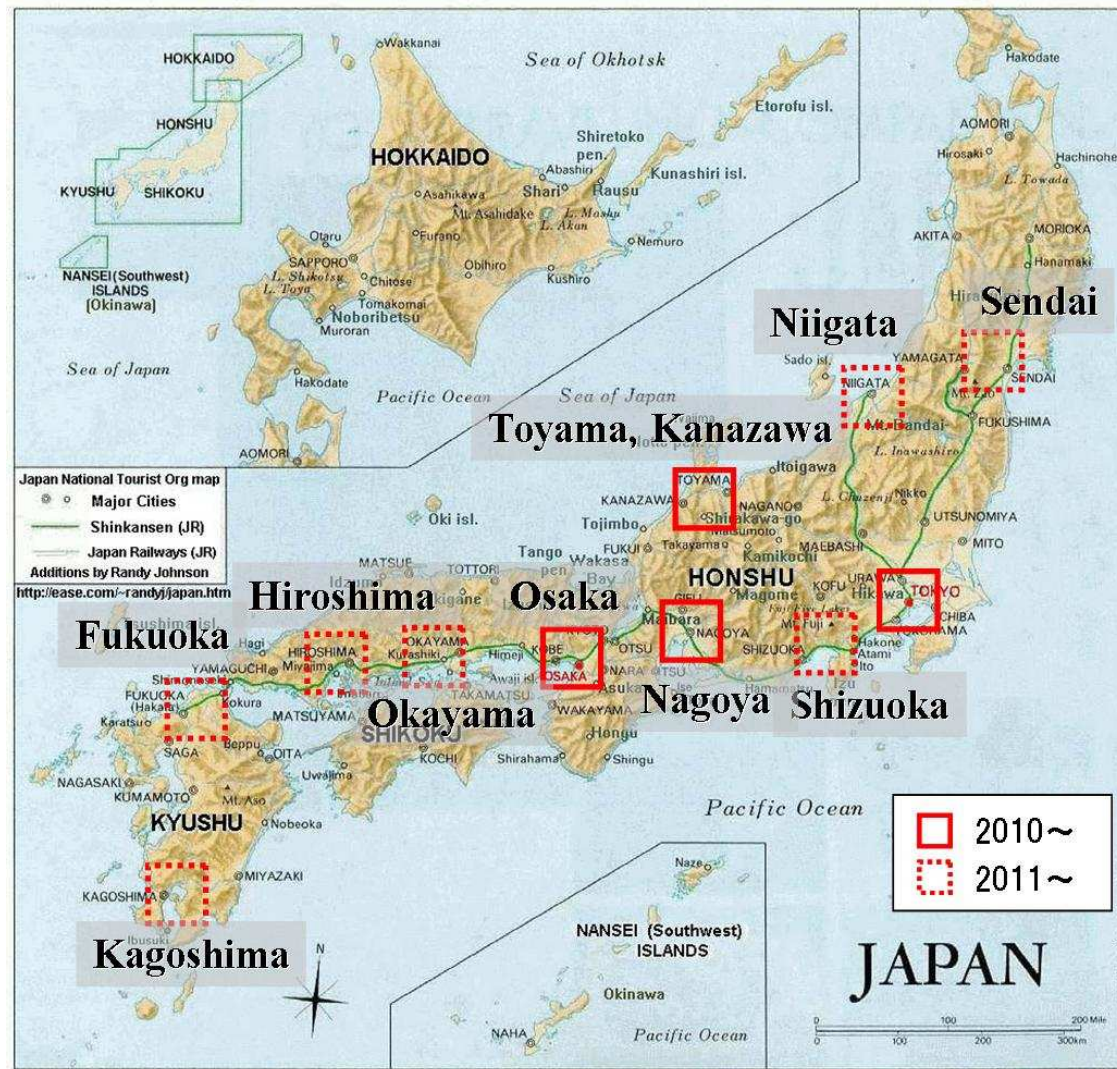
Theme 3: Social Experiments

【Sociology】

Evaluation and adaption the developed nowcasting system

- (1) Social experiments in rescue services, risk management, infrastructure and education
- (2) Recommendations for extreme weather resilient cities





Operational X-band polarimetric radar networks of the River Bureau, Ministry of Land, Infrastructure, Transport and Tourism (MLIT). Total 26 radars are set up in 3 major metropolitan areas and 7 local cities to monitor an occurrence of localized heavy rainfall and to forecast urban floods.