◆ SIP “Enhancement of Social Resiliency against Natural Disasters” supports the development of a new technology for disaster management by the local government and the implementation and spread of research products in society.

## ◆ For more information ◆

### Tsunami inundation forecast system

Research Center for Reinforcement of Resilient Function
National Research Institute for Earth Science and Disaster Resilience (NIED)
Aoi, Suzuki
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### “Nige-Tore” App for Tsunami Evacuation Drill

Research Center for Disaster Reduction Systems
Disaster Prevention Research Institute
Kyoto University
Yamori, Lee
Tel : +81-774-38-4273

◆ SIP “Enhancement of Social Resiliency against Natural Disasters” HP ◆

http://www.jst.go.jp/sip/k08.html

内閣府
Issued by : Director General for Science, Technology and Innovation
Date : March 2019
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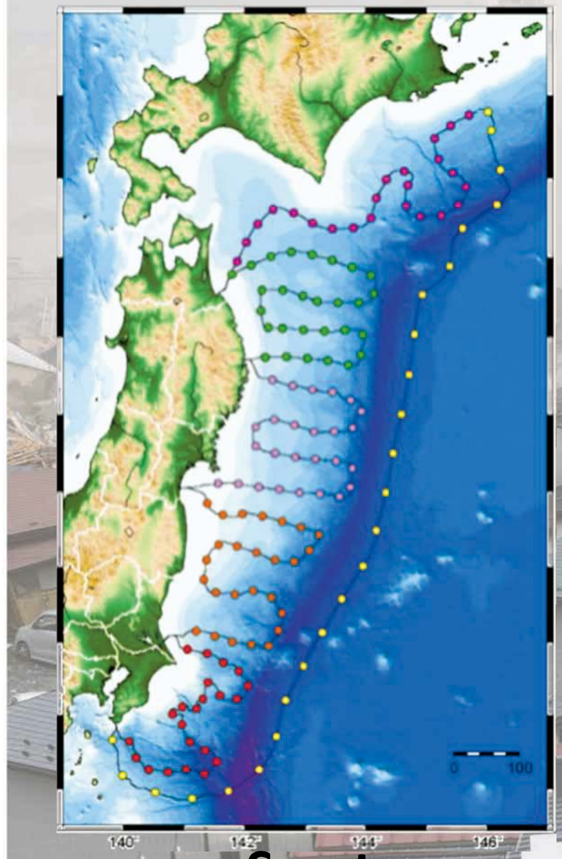
SIP Cross-ministerial Strategic Innovation Promotion Program

This work was supported by the Council for Science, Technology and Innovation (CSTI) Cross-ministerial Strategic Innovation Promotion Program (SIP), “Enhancement of Social Resiliency against Natural Disasters” (funding agency: JST).

4

# Real -time tsunami inundation high precision (10 m mesh) forecast system

## To save more lives in a tsunami disaster, the tsunami inundation forecast is established for the first time.



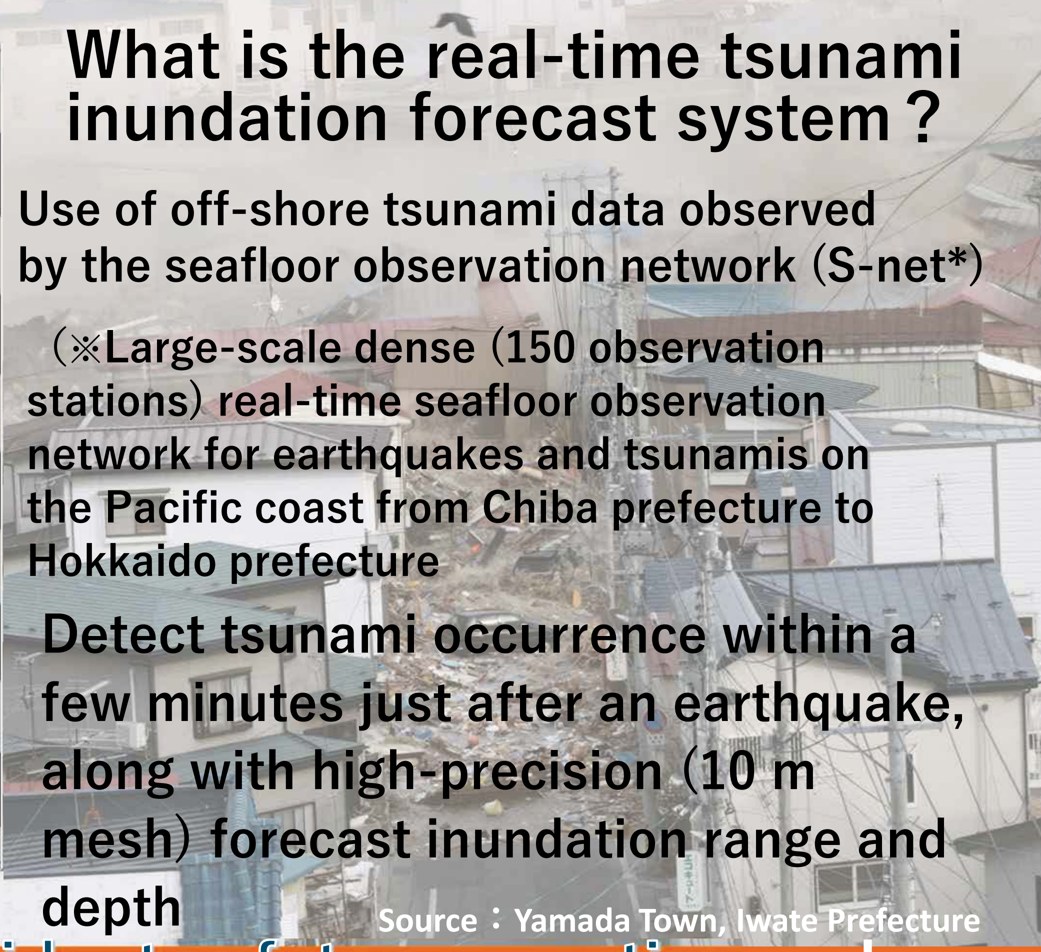
S-net

## What is the real-time tsunami inundation forecast system？

Use of off-shore tsunami data observed by the seafloor observation network (S-net*)

（※Large-scale dense (150 observation stations) real-time seafloor observation network for earthquakes and tsunamis on the Pacific coast from Chiba prefecture to Hokkaido prefecture

Detect tsunami occurrence within a few minutes just after an earthquake, along with high-precision (10 m mesh) forecast inundation range and depth



Source：Yamada Town, Iwate Prefecture

**Contribute to resident safety evacuation and resident rapid relief activity based on high-precision（10 m mesh）tsunami inundation forecast information within a few minutes just after an earthquake**

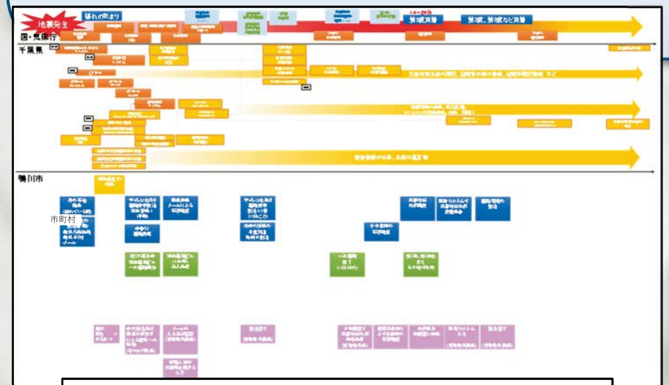
# To save more lives

# From forecast of inundation depth with high precision to the linked tsunami evacuation drill

## ◆Tabletop exercise in Chiba prefecture

◆ Construction of a tsunami forecast system that uses off-shore tsunami data observed by S-net

◆ Establishment of utilization methods for real-time forecast information for effective response by local governments



Timeline for disaster response

Tsunami forecast system in Chiba prefecture

## ◆ Tsunami evacuation drill for Kamogawa city

Utilizing tsunami inundation forecast information as follows

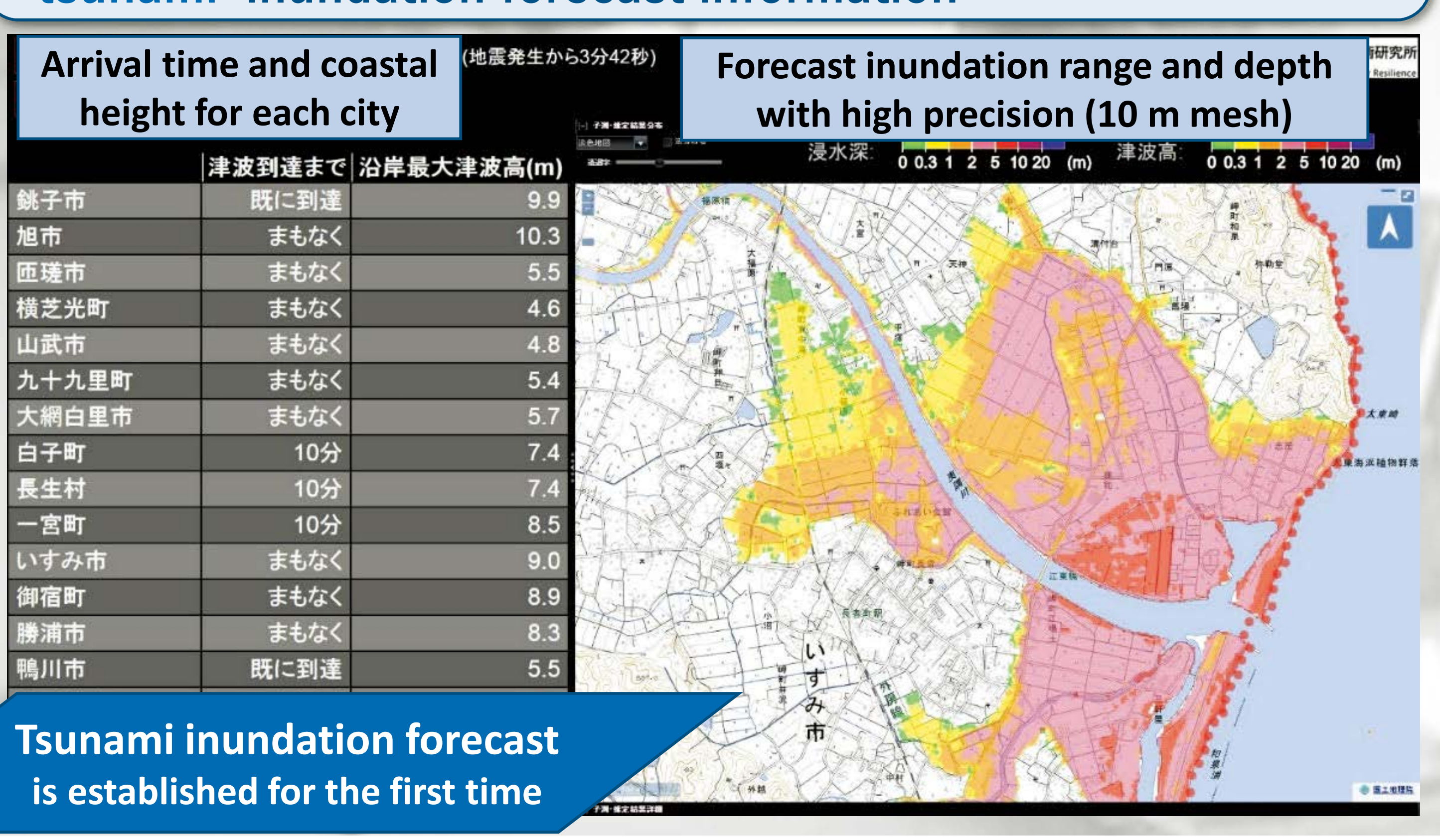
◆Understanding the predicted inundation

◆Securing the safety of firefighting activities

◆Reporting to disaster response agencies

Demonstration experiment in Chiba prefecture

## ◆ Supporting residents subjective and appropriate evacuation behavior with high-precision (10 m mesh) tsunami inundation forecast information



**Arrival time and coastal height for each city**

(地震発生から3分42秒)

| | 津波到達まで | 沿岸最大津波高(m) |
|---|---|---|
| 銚子市 | 既に到達 | 9.9 |
| 旭市 | まもなく | 10.3 |
| 匝瑳市 | まもなく | 5.5 |
| 横芝光町 | まもなく | 4.6 |
| 山武市 | まもなく | 4.8 |
| 九十九里町 | まもなく | 5.4 |
| 大網白里市 | まもなく | 5.7 |
| 白子町 | 10分 | 7.4 |
| 長生村 | 10分 | 7.4 |
| 一宮町 | 10分 | 8.5 |
| いすみ市 | まもなく | 9.0 |
| 御宿町 | まもなく | 8.9 |
| 勝浦市 | まもなく | 8.3 |
| 鴨川市 | 既に到達 | 5.5 |

**Forecast inundation range and depth with high precision (10 m mesh)**

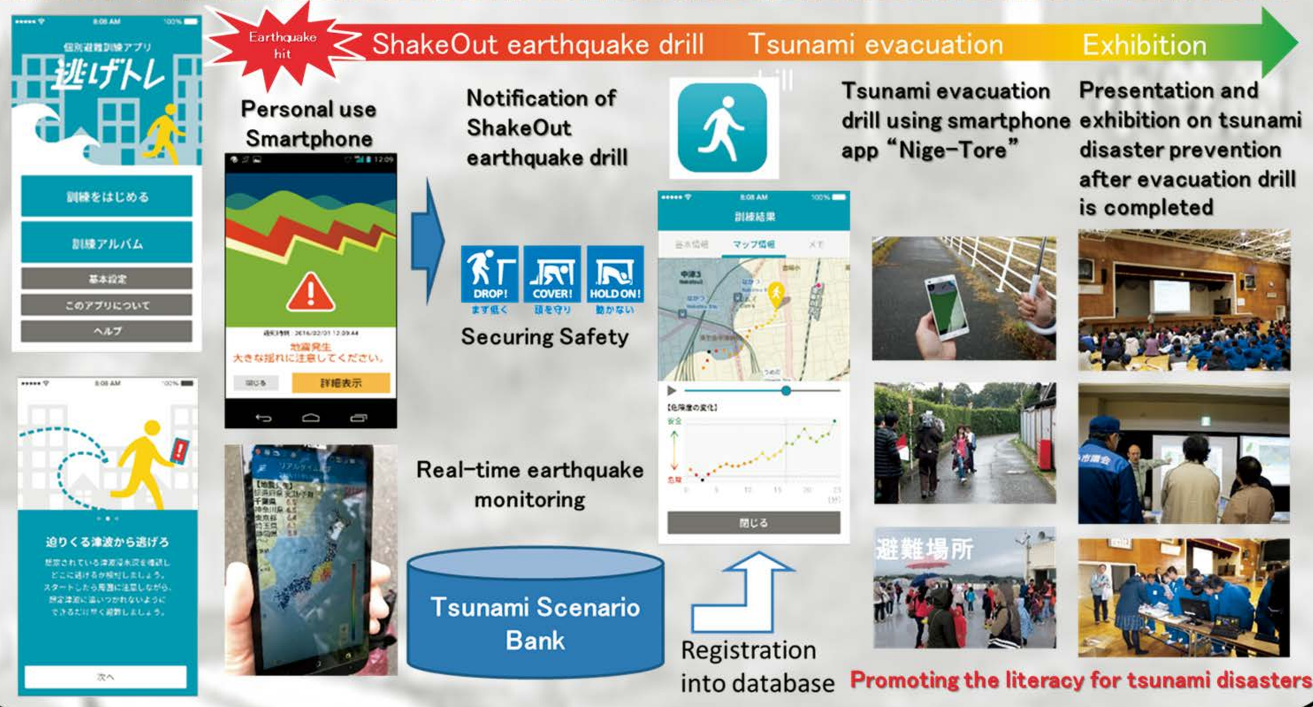
浸水深: 0 0.3 1 2 5 10 20 (m)
津波高: 0 0.3 1 2 5 10 20 (m)
いすみ市

**Tsunami inundation forecast is established for the first time**

## ◆ “Nige-Tore” App for Tsunami Evacuation Drill

About Smartphone App “Nige-Tore”

“Nige-Tore” served as an effective interface tool which successfully visualized dynamic interaction between human action, i.e., evacuation behavior, and natural phenomenon, i.e., tsunami movement. Anyone who possesses a smartphone can conduct a tsunami evacuation drill anytime, anywhere, and with anyone!



Earthquake hit
ShakeOut earthquake drill
Tsunami evacuation
Exhibition
Personal use Smartphone
Notification of ShakeOut earthquake drill
DROP!
COVER!
HOLD ON!
Securing Safety
Tsunami evacuation drill using smartphone app “Nige-Tore”
Presentation and exhibition on tsunami disaster prevention after evacuation drill is completed
Real-time earthquake monitoring
Tsunami Scenario Bank
Registration into database
逃げトレ
訓練をはじめる
訓練アルバム
基本設定
このアプリについて
ヘルプ
迫りくる津波から逃げろ
次へ
訓練結果
閉じる
避難場所

Promoting the literacy for tsunami disasters