

JMA's contribution to improving Climate Risk Management for Agriculture



Tokyo Climate Center, Japan Meteorological Agency (TCC/JMA)

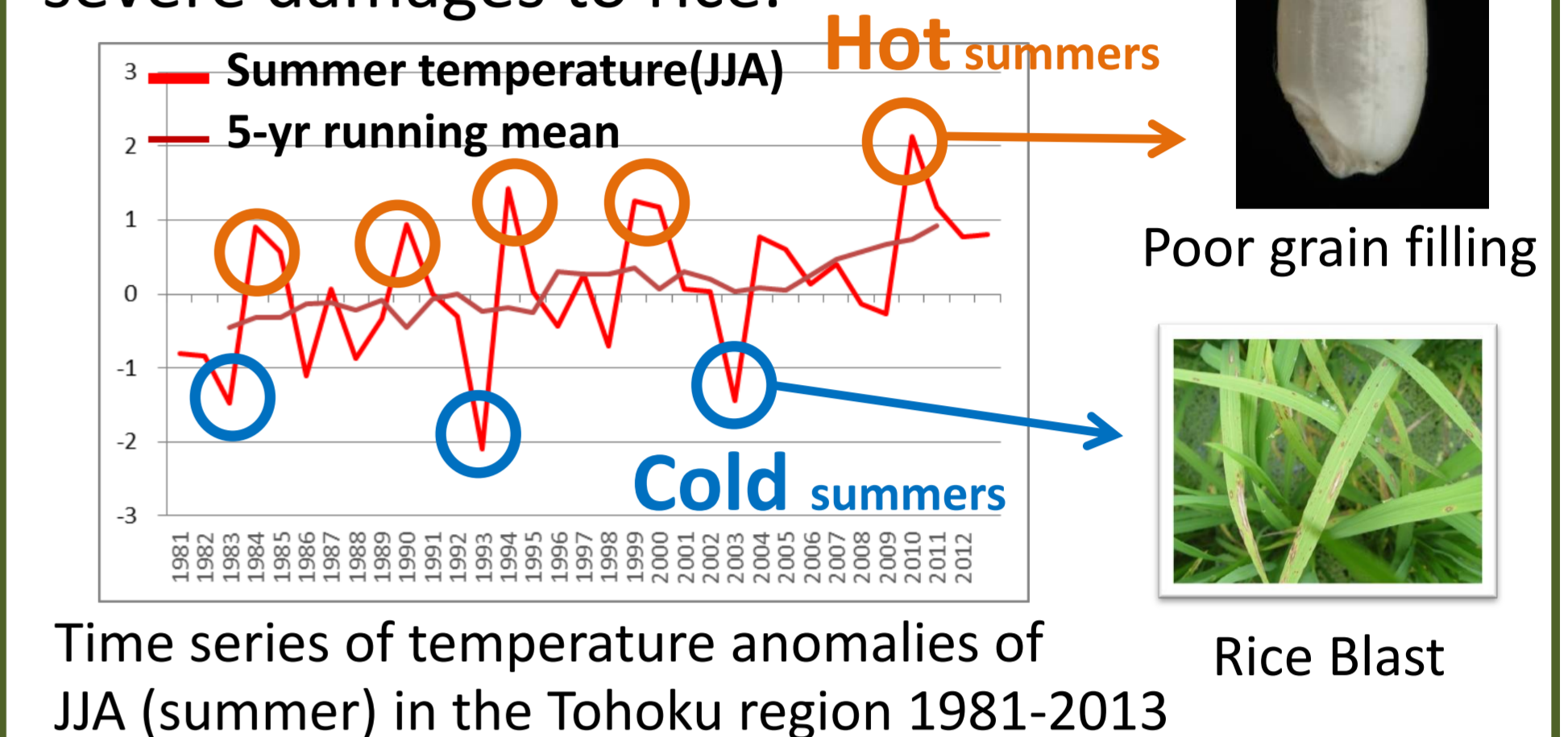
Introduction

Daily life and economic activity are greatly affected by anomalous climatic conditions. The potential for adverse effects from such conditions is referred to as climate risk, and **climate risk management (CRM)** involves understanding and taking effective measures against it. The Global Framework for Climate Services (GFCS) aims to enable better management of climate-related risks. Aiming at promoting better use of climate information in CRM in Japan, the Japan Meteorological Agency (JMA) and the National Agricultural and Food Research Organization (NARO) have started a **pilot project to develop an early warning system using Two weeks forecast**. Secondary, the JMA has engaged in dialogue with local agricultural organization **to build User Interface Platform (UIP)**.

We'll show how sub-seasonal forecast can be used to agricultural information in this poster.

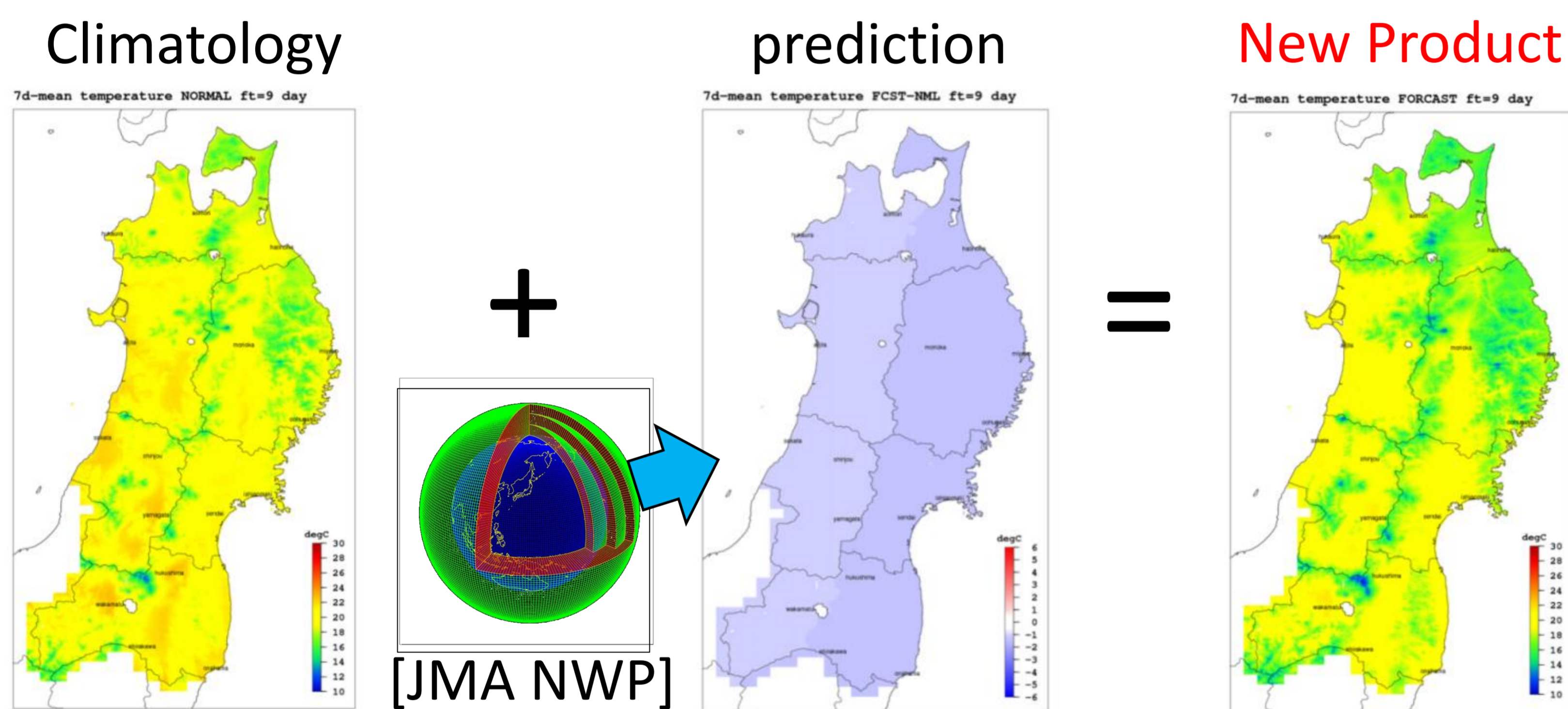
Background

- Rice is an essential crop in Japan.
- Cold/hot summer conditions cause severe damages to rice.



Development of Rice Early Warning System using Two weeks forecast

Making seven-day mean temperature (T7d) prediction at a **1-km resolution** up to **two weeks ahead** and verifying its skill with hindcast data.

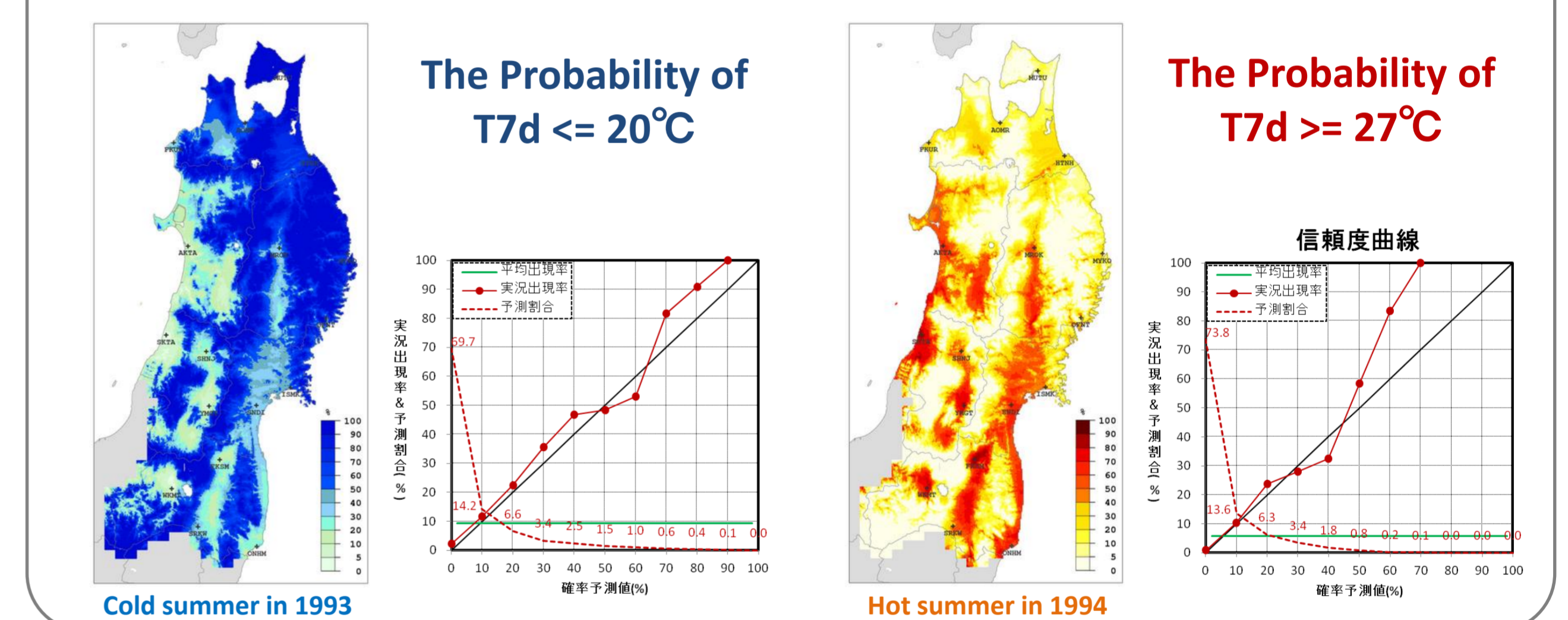


- Alarming temperature and risk on rice crop

Period	Alarming T7d	Risk	Taking action
Around July	20°C or below	Sterility	Water management
Around August	27°C or above	Poor grain filling	Growth management

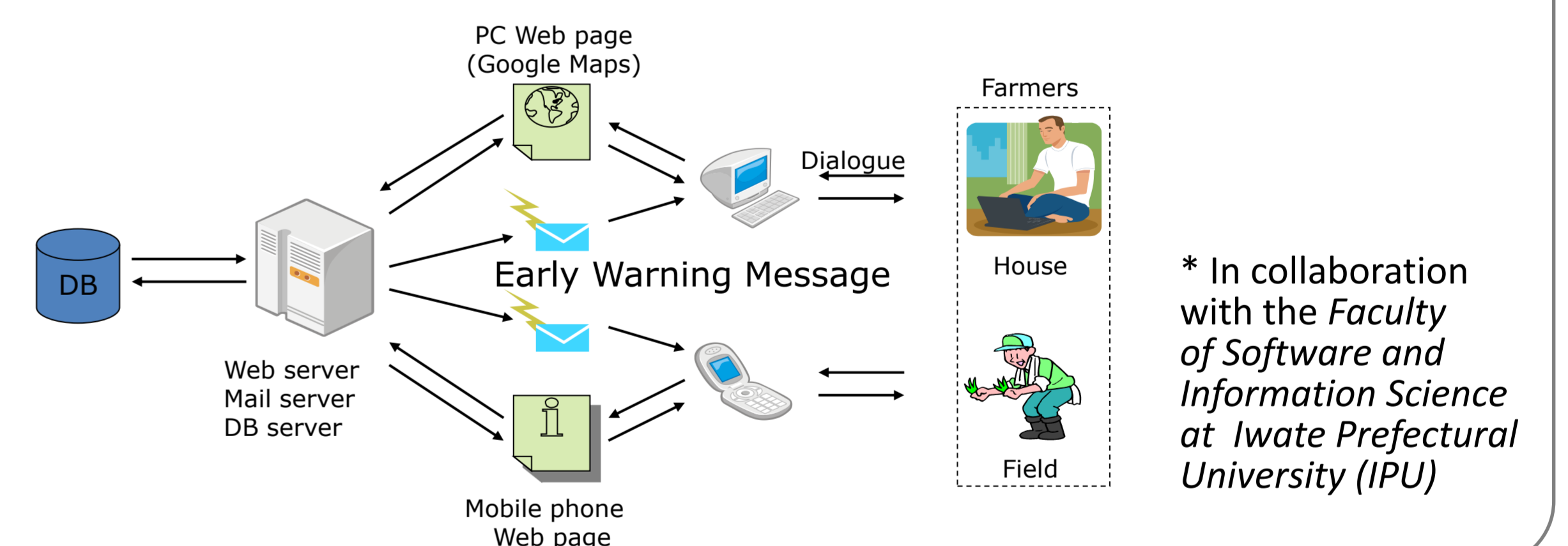
(T7d: seven-day mean temperature)

Verification



Experimental Provision

New products are made available at the website*. Users can view **customized information** for their registered points.



* In collaboration with the Faculty of Software and Information Science at Iwate Prefectural University (IPU)

Building of User Interface Platform

The JMA has continuously engaged in dialogue with local agricultural organization to promote a use of climate information in **agricultural decision-making**. The local government's agricultural staff **usually have close contact with farmers** in their territory, so spreading climate information to them leads to building of UIP. Actually, one of them has performed investigation using One-month forecast data for **prediction of suitable rice harvesting time**. Moreover, he will **provide agricultural advisories to farmers based on the results** this year.

