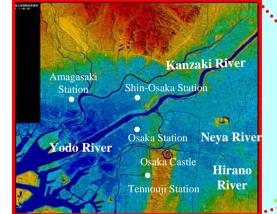
## Japan is vulnerable to climate change

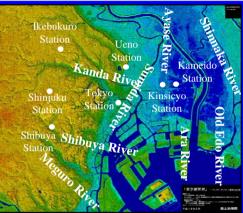
1. Present conditions and issues

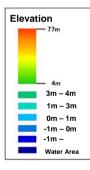
#### **Kinki Region**



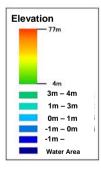


#### Kanto Region





About 50% of population and about 75% of property on about 10% of land lower than water levels in rivers during flooding



## **Recent Flood disasters in Japan**

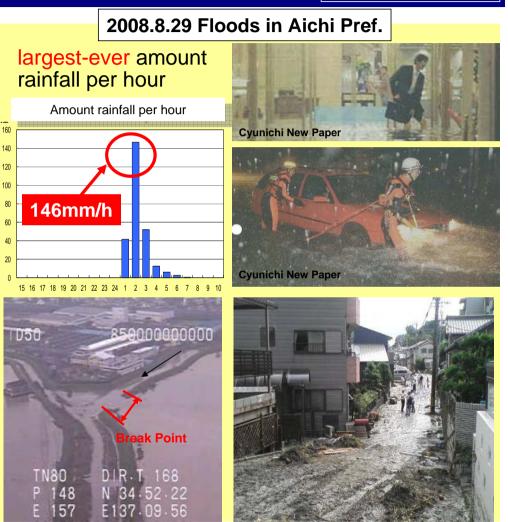
1. Present conditions and issues

### 2008.7.28 Floods in Hyogo Pref.

# Rapid water level rise of **134cm** in **10 minutes**







## **Recent Rainfall Trend**

Annual total of hourly rainfall instances (from approx. 1,300 AMeDAS locations across Japan)

#### 1. Number of instances of 50 mm or more rain in an hour 500 (instances/year) 400 300 200 1996~2005 1986~1995 1976~1985 88 instan 100 Average 234 verage 2 verage instan instanc 0 1976 '77 '78 '79 '80 '81 '82 '83 '84 '85 '86 '87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 **'**05 2. Number of instances of 100 mm or more rain in an hour 10 1976~1985 1986~1995 1996~2005 (instances/year) instance Average – Average instances instance 5 $\left( \right)$ 1976 '77 '78 '79 '80 '81 '82 '83 '84 '85 '86 '87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05