### Disclaimer

This report was compiled by an ADRC visiting researcher (VR) from ADRC member countries.

The views expressed in the report do not necessarily reflect the views of the ADRC. The boundaries and names shown and the designations used on the maps in the report also do not imply official endorsement or acceptance by the ADRC.



# General Evaluation on the Seismicity of Turkey and Japan

19 November 2019 ADRC– Kobe/ JAPAN

# CONTENT



REPUBLIC OF TURKEY MINISTRY OF INTERIOR Disaster and Emergency Management Presidency

### Good Examples on DRR in Japan

**Overview on Seismicity of Turkey and Japan** 







## Overview on Seismicity of Turkey

>158 major earthquakes with M  $\ge$  4 (1900 and 2019) such as; the 1999 Kocaeli (M<sub>w</sub>7.4); 1999 Düzce-Bolu (M<sub>w</sub>7.2); and 2011 Van (M<sub>w</sub>7.2).







AFÀD

6

(2) The 1943 Tosya–Ladik Earthquake (Mw7.5) on the NAFZ, a maximum felt intensity of between IX–X (Violent to Extreme), 2,824 deaths, and %75 of houses destroyed / damaged in the Ladik-Vezirkopru.



### **Overview on Seismicity of Turkey**





(1) The 1944 Bolu–Gerede Earthquake (*Ms7.2*), on the NAFZ, a maximum felt intensity of IX–X (Violent–Extreme), 2,790 people are killed and 50,000 houses destroyed or heavily damaged.



(2) The 1970 Kütahya-Gediz Earthquake (Ms7.2), 1,086 people died, Many people were burned alive as fires broke out from overturned stoves.

AFAD

<u><) (></u>

MINISTRY OF INTERIOR / DISASTER AND EMERGENCY MANAGEMENT PRESIDENCY

# (1) The 1999 limit Farthquete (Awy 26) killing

(1) The 1999 Izmit Earthquake (*Mw7.6*), killing around 17,000 people and left more than 250,000 people homeless. The nearby city of Kocaeli was severely damaged.

(2) The 2011 Van Earthquakes (*Mw7.2 and M5.7*) on 23 Oct. and 9 Nov., more than 600 people killed.

AFAD

8







AFAD

11

### **Conclusion an Recommendations**

History of strong motion observation reaches a half of a century in Turkey and The observation density has been extremely getting higher.

> Characteristics of recent strong motion instruments and observation work in Japan can be summarized as follows:

- > Calculation and display of seismic intensity scale and/or spectral intensity,
- > Prompt transmittance and announcement of seismic information,
- > Prompt transmittance and announcement of seismic information,
- > Rapid publication of digital acceleration data.

In the light of this information; it is suggested that TR-NSMN should be developed as in the case of Japan.

More reinforcement of the strong motion observation targeted at building structures is earnestly expected.

MINISTRY OF INTERIOR / DISASTER AND EMERGENCY MANAGEMENT PRESIDENCY

