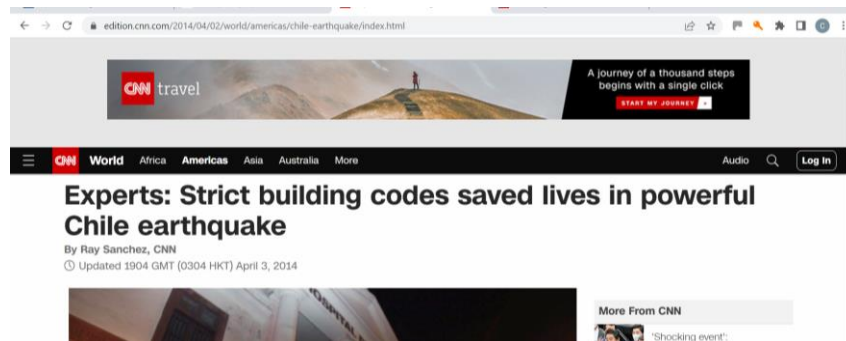

THE ROLE OF CODES AND STANDARDS

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CODES AND STANDARDS – THE SUCCESS STORY

- ❑ Current codes and standards for infrastructure are generally specific to different elements such as buildings, bridges and roads
- ❑ Codes and standards have contributed to the resilience of communities by ensuring minimum levels of safety and health for them
- ❑ Seismic design codes for buildings for example, have been highly successful in reducing loss of life from building collapse in areas that have enforced their use



CHALLENGES IN THE USE OF CODES AND STANDARDS

- ❑ The development of codes and standards **involves significant human and financial resources** as it requires a deep understanding of potential hazards, extensive research and technical knowledge
- ❑ Countries sometimes **adopt and adapt** from the better resourced ones
- ❑ Recommended building codes can often be found but **codes for other non-building elements** of infrastructure may **not always be available**
- ❑ In some countries, **codes are not backed by regulation**
- ❑ A particular problem is created by **infrastructure** that is **in existence** before the adoption of codes, as **retrofitting** can be **costly and difficult to enforce**

CRITICAL INFRASTRUCTURE SYSTEMS

- ❑ Improving resilience will require ensuring the **continued functionality of critical infrastructure systems**
- ❑ These are **often interdependent** (e.g. water systems may rely on electricity to operate and electricity systems may require functioning communication systems and vice versa)
- ❑ Resilience may be improved by **establishing performance requirements** but these requirements may vary depending on the country
- ❑ For internationally consistent standards, **a framework approach** is recommended
- ❑ Codes must address **continued functionality** in buildings

CONCLUSION AND RECOMMENDATIONS

- ❑ Codes and standards have been used to address the safety and performance requirements of individual components of infrastructure
- ❑ Countries must be encouraged to adopt specific standards for building and non-building infrastructure which are appropriate for their environment and enforced by regulation
- ❑ New standards are recommended to define the performance requirements for critical infrastructure systems and framework approach is proposed
- ❑ The continued functionality of essential buildings must be ensured in codes in addition to life safety provisions,