



Climate and Disaster Resilience in SIDS Practical Solutions

Dealing with Geo-hazard and cyclone early
warning and preparedness -Tonga

Session 5: Early warning and preparedness
23 May 2017, Moon Palace Resort, Cancun, Mexico

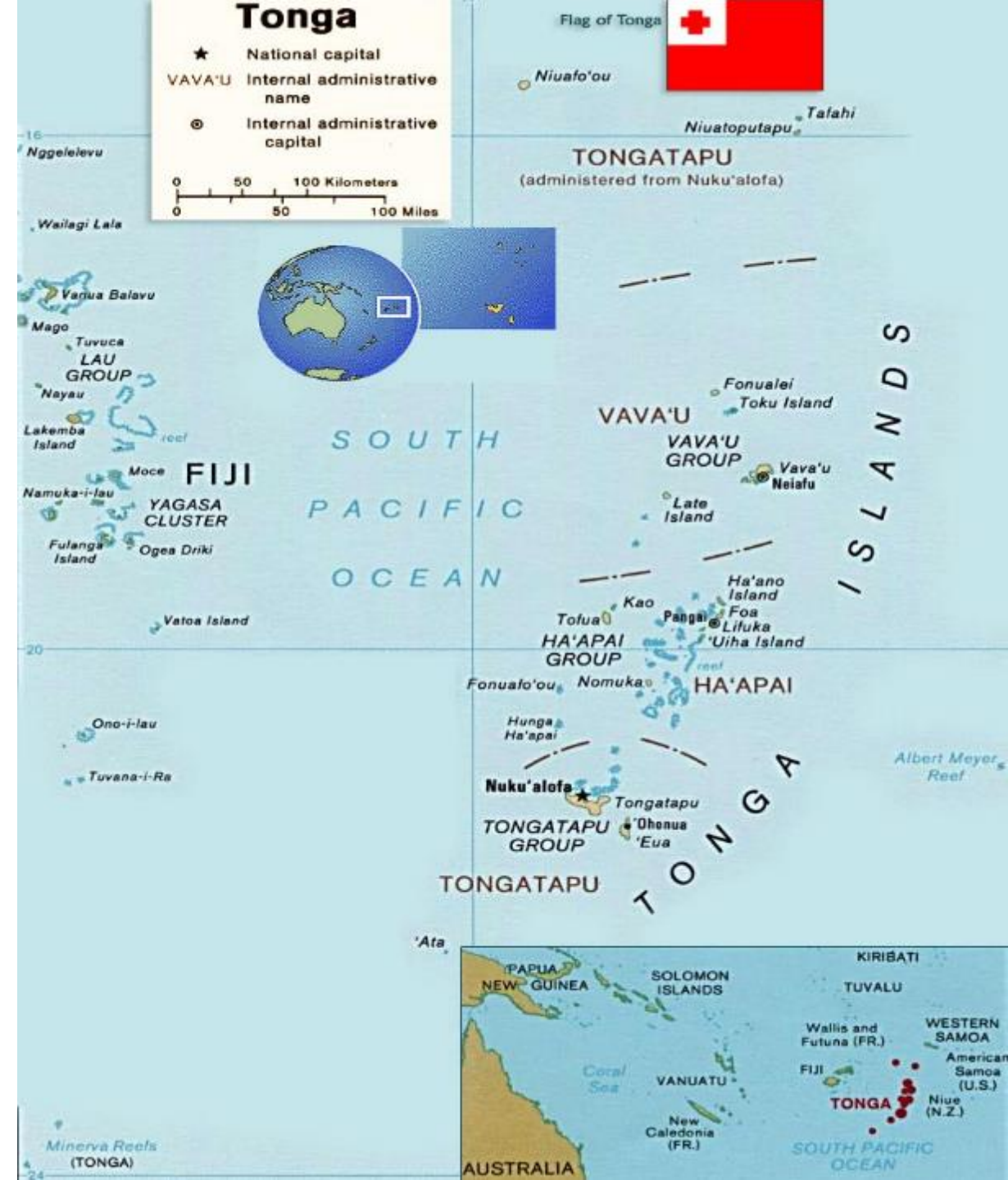
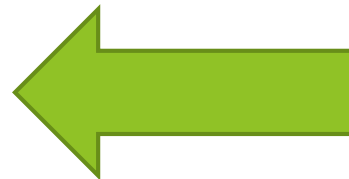


Tonga Context

170 Islands
40 inhabited
850km N to S

Main economy
1. Remittances
2. Agriculture
3. Tourism
4. Fisheries

6 Met stations on
main islands



Tonga's Geo-hazard and Severe Weather Problems

► Cyclones:

- USD\$15M each year to recover from cyclones.
- 4/5 strongest cyclones has occurred in the last 20yrs.

► Flooding:

- Worst flooding occurred 11 June 2016. 315mm in 24hrs

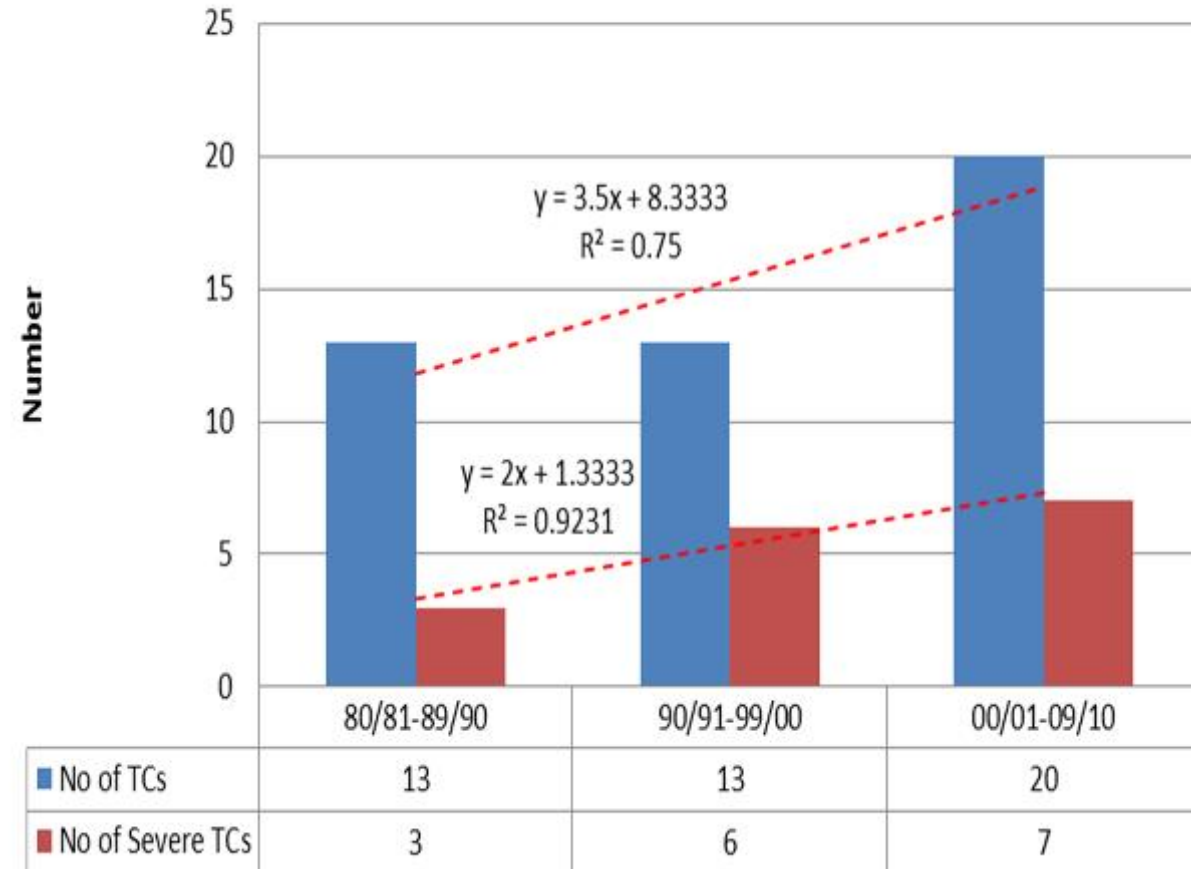
► Tsunami:

- 9 lives lost in the great Tonga/Samoa tsunami of 2009 (Tsunami occurs 1 every 50yrs)

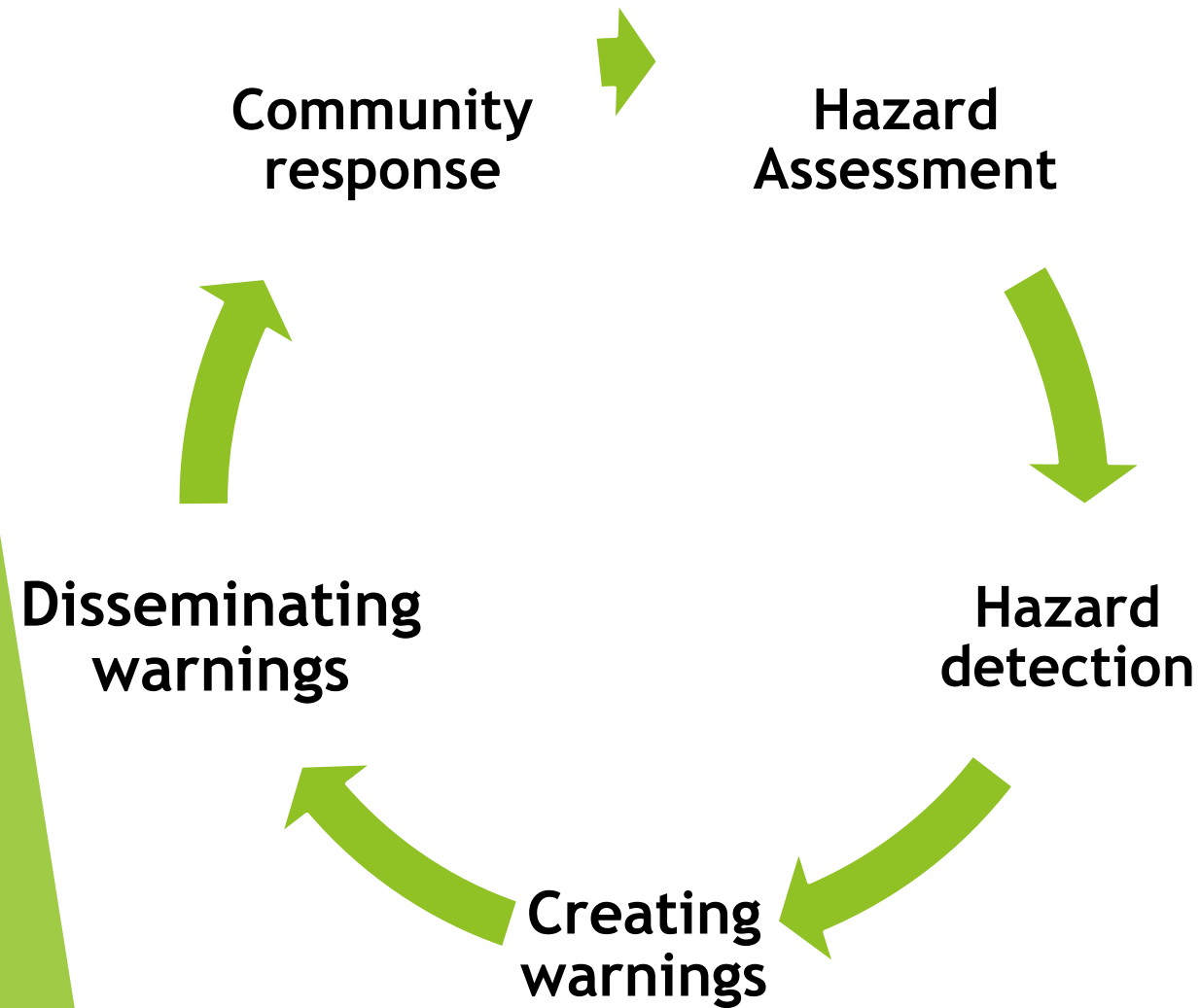
► Severe Weather combined with poor communications:

- 5 lives are lost at sea each year

No of Tropical Cyclones that have affected Tonga by decade



Main Components of a Multi-Hazards Early Warning System



Issuing Warnings on...



What Early Warning and Preparedness Initiatives Have Already Been Implemented?

- ▶ Policy/ Legislations
 - ▶ Emergency Management Act 2007
 - ▶ National Disaster Fund established and Legislated 2008
 - ▶ JNAP was developed in 2010 for joint CCA and DRR efforts
 - ▶ Meteorology Act 2017
- ▶ Hard infrastructure
 - ▶ 5 Seismic stations established in 2003 (jointly with Fiji)
 - ▶ Fully renovate Forecasting Centre in December 2016
- ▶ Institutions
 - ▶ National Forecasting Centre established in Sept 2007
 - ▶ Climate Centre was established in 2008
 - ▶ MEIDECC was established in 2014
 - ▶ UN Cluster System trailed in 2014 and adopted in 2015
 - ▶ AGROMET Working Group established in 2015



METEOROLOGY ACT 2017

Act 1 of 2017

Ongoing Efforts

- ▶ Hard infrastructure
 - ▶ Improve office infrastructure (NEMO/MET)
 - ▶ Improve monitoring networks oceans/weather/climate
- ▶ Institutions
 - ▶ Improve multi-sector coordination on EWS
- ▶ Policy
 - ▶ Framework for climate services & Climate Early warning
 - ▶ Review of Legislation surrounding preparedness
 - ▶ Developing regulations to strengthen MHEWS
- ▶ Service delivery/ capacity development
 - ▶ Improve EW products/services (Impact Forecasting)
 - ▶ Improve communications/dissemination
 - ▶ Improve capacity and institution strengthening
 - ▶ Increase education and awareness in communities



Remaining Challenges

- ▶ Communications remain a problem
- ▶ Access to timely funding
- ▶ Too many projects
(access to funding vs being able to deliver service)
- ▶ Last mile (reaching the end users)

