

## WRNs Demonstration Partner Countries

**Republic of South Africa:**  
South African Weather Service (SAWS)  
National Disaster Management Centre (NDMC)

**El Salvador:** Ministry of Environment and Natural Resources (MARN)  
General Directorate for Civil Protection (DGPC)

**Costa Rica:**  
National Meteorological Institute (IMN)  
National Commission of Emergencies (CNE)

**Barbados:**  
Barbados Meteorological Service (BMS)  
Department of Emergency Management (DEM)  
Caribbean Disaster Emergency Management Agency (CDEMA)

**Guatemala:**  
National Institute for Seismology, Volcanology, Meteorology and Hydrology (INSIVUMEH)  
National Coordinator for Disaster Reduction (CONRED)

**Indonesia:**  
Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG)  
Indonesian National Board for Disaster Management (BNPB)



**Contact:** A. Sezin Tokar, Ph.D.  
USAID Office of U.S. Foreign  
Disaster Assistance  
stokar@usaid.gov

Dan Beardsley,  
National Weather Service,  
International Activities Office  
Dan.Beardsley@noaa.gov



## Weather Ready Nations

The Weather Ready Nations (WRNs) program focuses on strengthening capacity at National Meteorological and Hydrological Services (NMHS) and National Disaster Management Agencies (NDMAs) to aid in improved use of weather and climate information to save lives, reduce human suffering and lessen economic impacts of hydrometeorological hazards.



Moving from just what the weather *will be*

- 6 inches of rain
- 40 mph winds

To what the weather *will do*

- Homes flooded
- Roads cut off
- Damage to power lines



## What is the origin of Weather Ready Nations (WRNs)?

In 2011, the United States (U.S.) National Weather Service (NWS) embarked on a strategic vision to build a Weather-Ready Nation (WRN) that is ready, responsive and resilient to hydrometeorological extremes by providing forecasts in a way to support emergency managers, first responders, governments, businesses and public to make timely and smart decisions to save lives and property and enhance livelihoods.

Building on experiences gained from NWS and World Meteorological Organization (WMO) Guidelines on Multi-hazard Impact-based Forecast and Warning Services (WMO no1150), participating NMHSs began implementation of WRNs to advance capacity on impact based forecasting (IBF).

The IBF aims to strengthen capacity of NMHSs on impact based forecasting and warning, advance collaboration between NMHS and NDMA and users, improve delivery of forecasts and warnings for early action to early warnings.

## NDMAs and NMHSs must work together to create an impact-based forecast

NDMAs understand vulnerabilities, exposure and capacity of local communities. Majority of NDMA are responsible for warning and evacuation of communities at risk.

NMHSs are authorized to produce hazard forecasts and information, decide on the likelihood of an event, and together with disaster managers decide on an appropriate warning level according to the risk matrix.

Risk Matrix

Likelihood	High				
	Medium				
	Low				
	Very low				
		Very low	Low	Medium	High
		Impact			

## Steps towards being Weather Ready

- **NDMAs and NMHSs jointly develop hazard matrices for different hazards such as thunderstorms and floods.**
- **NMHSs compile science based weather forecasts.**
- **NDMAs provide detailed vulnerability and exposure information to develop the potential for human and economic impacts.**
- **NMHSs decide on the likelihood of an event and together with NDMA develop appropriate warning level based on the risk matrix.**
- **NDMAs and NMHSs coordinate during events to issue appropriate level of warning**
- **NMHSs and NDMA coordinate to monitor the situation and share information and reports.**