IMPACT-BASED Decision Support Services (IDSS) and the U.S. National Weather Service (NWS)

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STRENGTHENING IMPACT-BASED Forecasting for Improving the Capacity of Typhoon-Related Disaster Risk Reduction
What Is “Impact-Based Decision Support Services?”

IDSS is the provision of relevant information and interpretative services to enable Core Partners’ decisions when weather, water or climate has a direct impact on the protection of lives and livelihoods.
Importance of IDSS within the NWS

NWS Mission Statement

Provide weather, water and climate data, forecasts, warnings, and impact-based decision support services for the protection of life and property and enhancement of the national economy.

The NWS Mission Statement was updated in October 2021 for the addition of “impact-based decision support services.”
Dr. Louis Uccellini, Director, U.S. National Weather Service

On recognizing IDSS in the NWS Mission Statement:

“IDSS is now as much a part of our mission as forecasts and warnings, and reflects the realization that IDSS is actually an essential element for realizing the second half of the existing mission statement related to the protection of life and property.”

“By updating our mission, we acknowledge that to keep Americans safe and to enhance the economy, we must look beyond the forecast to transform the way people receive, understand, and act on information.”
Why IDSS? A Vision for a Weather-Ready Nation

**Mission for Today**

- Provide weather, water, and seasonal data, forecasts, warnings and Impact-Based Decision Support Services for the protection of life and property and the enhancement of the national economy

**Vision for Tomorrow**

- A **Weather-Ready Nation** where society is prepared for and responds to weather and water events; where communities are “Ready, Responsive and Resilient”

What We Communicate

What People Want
IDSS Strategy within the NWS

Continuum of Impact-based Messaging Services

Tiers of Products and Services

- **Public IDSS Messaging**: The starting point of IDSS
- **Baseline IDSS**: Services common to all core partners
- **Targeted IDSS**: Services focused on a specific or group of core partners
- **Integrated IDSS**: Dedicated support to core partner(s)
IDSS Strategy within the NWS

IDSS Operating Cycle

4 Phases of the Operating Cycle

- Relationship Building
  - Coordination with core partners on needs
- Readiness
  - NWS Office planning activities to meet partner needs and ensuring staff readiness (training and exercises)
- Delivery
  - Activities for the tactical delivery of IDSS based on planning and partner needs
- Assessment
  - Gathering feedback to refine and improve services to partners
Operational IDSS: Social Media

- Text is plain language
- Easy to read/understand
- Tells the reader what they want to know
- Use of info-graphic
- When to expect new information
- Where to go for more information

TROPICAL CYCLONE FORMATION ALERT: SOUTH OF GUAM

IDSS AND THE U.S. NATIONAL WEATHER SERVICE
Operational IDSS: Weather-Ready Nation Emails

- When facing a weather threat, people want to know **what** that threat is, **what** it means to them, and **when**.
- This tangible item of the WRN is designed to do that.
- In the absence of Wireless Emergency Alerts (WEAs) in the region, this product is sent direct to the user.

- Text is plain language
- Easy to read/understand
- Tells the reader what they want to know
- Use of info-graphic
- When to expect new information
- Where to go for more information
- Provides a point of contact at the NWS (for better or for worse)
Impact-Based Decision Support Service (IDSS)

TYPHOON MANGKHUT
HEAVY WEATHER BRIEF

Guam Homeland Security/Office of Civil Defense
September 2018

Operational IDSS: Heavy Weather Briefs

IDSS AND THE U.S. NATIONAL WEATHER SERVICE
Assessing IDSS in the NWS

IDSS Surveys for Core Partners

Two surveys were created to examine: Accessibility, Consistency, Comprehension, Decision-Making, Timeliness, Service Quality and Trust

Episodic Surveys
Assesses event-driven IDSS; the provision of information and interpretive services to support an event or incident where weather, water or climate has a direct impact on the protection of lives/livelihoods

Annual (Routine) Surveys
Serves as an end-of-year assessment of IDSS that occurred throughout the year. Survey includes joint training, Integrated Warning Team interactions, pre-event/scenario planning, forecasts and planning, table-top exercises and daily coordination regarding high value decisions
Service Assessments

The NWS conducts Service Assessments to evaluate its performance after significant hydrometeorological, oceanographic, or geological events. Assessments may be initiated when one or more of the following criteria are met:

- Major economic impact on a large area or population
- Multiple fatalities or numerous serious injuries
- Extensive national public interest or media coverage
- Unusual level of attention to NWS performance

Teams composed of experts within and outside of the NWS evaluate activities before, during and after events to determine usefulness of NWS products and services to identify best practices and any service deficiencies, with a goal to continuously improve its service to the nation.
FOR MORE INFORMATION ON TOPICS DISCUSSED IN THIS PRESENTATION:

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THANK YOU!

STRENGTHENING IMPACT-BASED FORECASTING FOR IMPROVING THE CAPACITY OF TYPHOON-RELATED DISASTER RISK REDUCTION