NASA Energy and Water Cycle Study Road Map

**NEWS Challenge:**
Document and enable improved, observationally-based, predictions of water and energy cycle consequences of Earth system variability and change.

**Phase 1 Deliverables:**
- Coordinate global W&E description
- Current prediction system evaluation
- Identify required improvements

**Phase 2 Deliverables:**
- Fix model problems
- New measurement approaches
- End-to-end prediction system

**Phase 3 Deliverables:**
- Dataset gaps filled and extended
- Intensive prediction system testing
- Prediction system delivery

**APPLICATION:**
- Improved water & energy cycle forecasts for use in decision support systems

**ANALYSIS & PREDICTION:**
- Understand variability
- Accurate cloud prediction
- Improved latent heating & convection models

**OBSERVATIONS:**
- Quantify mean state, variability, and extremes of the water & energy cycles
- Flux, transport, and storage rate quantification

**Address the ESD vision of the SMD; deliver and evaluate system**

- Systematic observations of water and energy cycle including national and international partners


Updated 1/2010