Brief Overview of THORPEX Societal and Economic Research and Applications (SERA)

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Societal Impacts Program - NCAR
NAT SERA Workshop - Boulder, CO
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“THORPEX is unique, in that . . . it explicitly integrates a societal and economic research and applications sub-program in the meteorological research program . . .

THORPEX International Science Plan - Version III: 2 November 2004
THORPEX Working Groups

- OS: Observing Systems
- DAOS: Data Assimilation and Observing Strategies
- PDP: Predictability and Dynamical Processes
- SERA: Societal and Economic Research and Applications
- GIFS-TIGGE: Global Interactive Forecasting System-THORPEX Interactive Grand Global Ensemble
- Data Policy and Management
SERA Working Group

- Working Group Membership
  - Frederic Atger – Météo-France
  - Gerald Fleming – Met Eireann, Ireland
  - Chiu-Ying Lam – Hong Kong Observatory
  - Jeff Lazo – NCAR, USA
  - Brian Mills – Met Service of Canada
  - Peter Webster – Georgia Inst. of Technology
  - Xie Pu – Beijing Meteorological Bureau

- WG meetings
  - SEA-01 11-12 January, 2006 Geneva
  - SEA-02 21-22 March, 2006 Reading
Core Objectives

Develop and apply new methods that enhance the utility and value of weather forecasts to society, economies and environmental stewardship through:

- user-specific probabilistic forecast products;
- the introduction of interactive procedures that make the forecast system more responsive to user needs;
- the design of and training in the use of user-specific forecast products.

Research will identify and assess the societal-economic costs and benefits of THORPEX recommendations for implementing interactive forecast systems and improvements in the global observing system.

*THORPEX Science Plan*
Research

- Communicating uncertainty
  - Decision analysis
  - Risk analysis
- User relevant verification
  - Development of verification methods for ensembles
  - Survey instruments
- Marginal benefits of high impact forecasts
- Societal impacts (cost-benefit) of THORPEX forecast improvements
- International equity & GIFS
- Cost of THORPEX programmes
- Develop protocol for user engagement
- User requirements / engagement (trust)
- Beta-test products
- Use of current products

Applications

Capacity Building

- Database weather impacts / forecasts
- Developing country training
SERA Activities

- inventory studies - information use and benefit
- collection of existing survey instruments
- revised research agenda based on TIP - “one-pagers”
- SERA WG meeting with ISDR, IFRCC, WHO
  - high priority needs for weather information
- finalize list of sectors / interest groups
- funding for small scholarships for social scientists
- guidelines for SERA demonstration projects
- concept paper to adapt NCAR WAS*IS training and education programme
SERA Activities

- health forecasting demonstration project
  - weather + climate meningitis & malaria forecasts in west Africa
- food security demonstration project
  - locust outbreaks in west Africa

- Second THORPEX International Science Symposium (STISS) - December 4-8, 2006   Landshut, Germany
  - http://www.wmo.int/thorpex/2nd_Symposium.html
- International Conference on “Secure and Sustainable Living: Social and Economic Benefits of Weather, Climate and Water Services”
  - aka - Socio-Economic Benefits Conference – Madrid, Spain - March 2007
  - http://www.wmo.int/Madrid07/
- WMO Task Force on SERA
- WMO Task Force on PWS
SERA Issues

Positive
- initiated SERA working group
- identified WG group activities
- developing baseline efforts
- coordinating SERA work with other groups

Weaknesses
- limited social-economic community involvement
- coordinating verification activities
- integrating SERA activities throughout THORPEX
- funding SERA work from meteorological resources
Thank you for listening!