Discussion: Feedback, Validation, Future Activities

1. Feedback on Decision Making

- How might the system be useful to you (decision-making, planning, …)?
- How would it interface with existing methods?
- What other agencies and stakeholders might use it (agriculture, energy, …)?

2. Validation

- How can the system be validated? (Validation exercise?)

3. Feedback on the Monitoring System

- What improvements would you like to see (new products, new processes, regional improvements, user interface enhancements, new features, forecasting, further training, feedback and communication, validation, …)?

4. Data Improvements

- How to incorporate local data/knowledge?

5. Potential GDIS Pilot Study

1. Feedback on Decision Making
(write down or email to justin@princeton.edu)

1. What kinds of decisions does your agency/department make that are climate-sensitive or water-sensitive?
   Que tipos de decisiones toman sus agencias que son sensibles a las condiciones climatologicas o hidrologicas?

2. What data accuracy (acceptable error) and precision do you require for these decisions?
   Que certeza y precision requieren al tomar estas decisiones?

3. What kinds of new information would make the greatest difference? (Improved accuracy, more timely, higher resolution, new variables?)
   Que tipo de nueva informacion tendria el mayor impacto? (Mayor certeza, tiempo real, mejor resolucion espacial, nuevos variables?)

4. What kinds of information delivery would help in decision-making? (Internet, email, telephone, mobile phone, …)
   Que tipo de mecanismos para proveer la informacion ayudarian a la hora de tomar decisiones? (Internet, email, telefono, celular, …)

2. Informal Validation

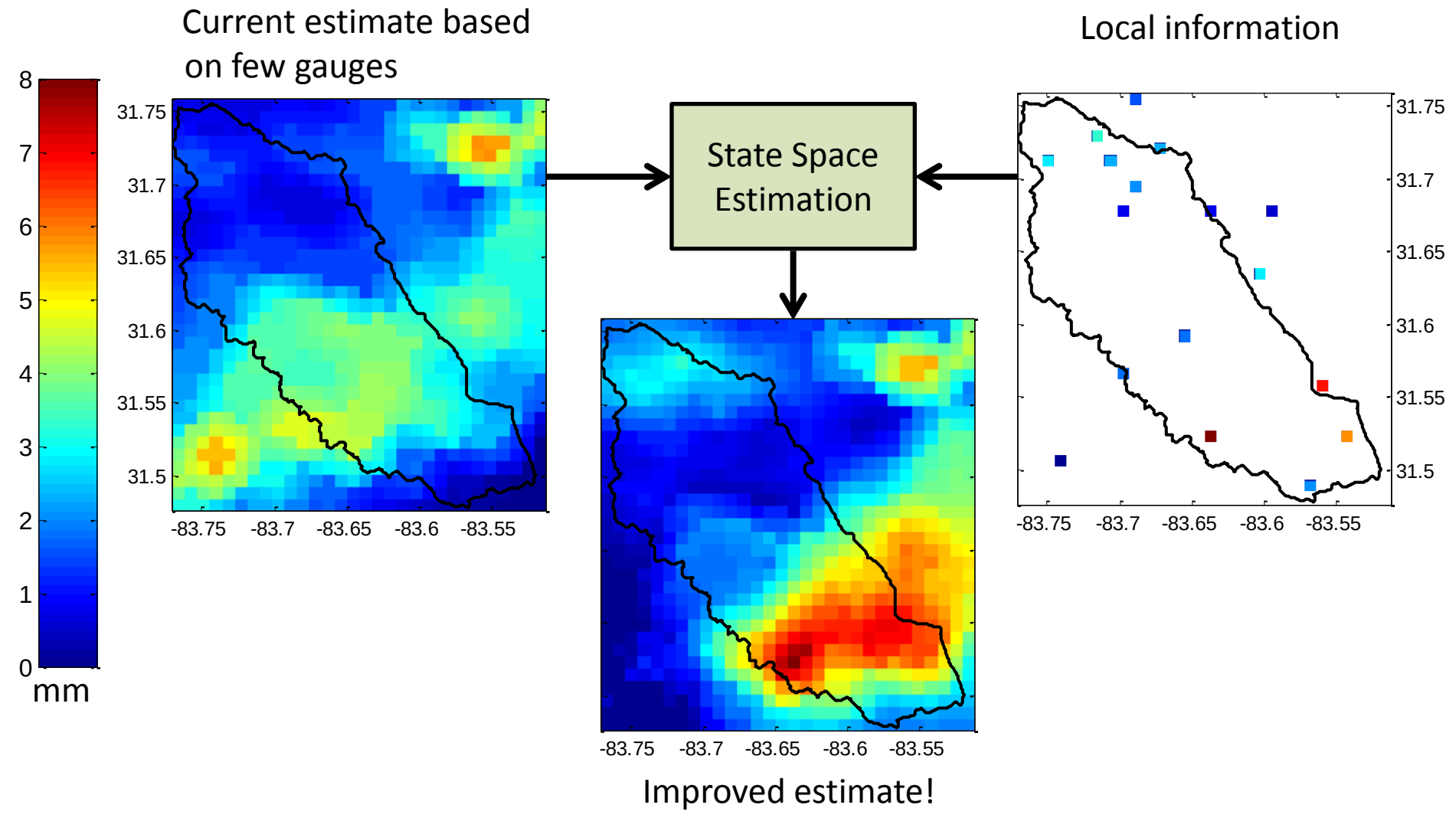
3. Feedback on the Monitoring System

What improvements would you like to see (new products, new processes, regional improvements, user interface enhancements, new features, forecasting, further training, feedback and communication, validation, …)?

multiple applications / calibration?
Updates by catchment / region
temperature indices
Regional applications with unique needs
About box (publications, sources, technical background)
Uncertainty estimates (error bars)
Reseach on determining most appropriate indices for LAC
Calibration (gauges)

4. Data Integration

How can local data and knowledge be incorporated into the system to improve predictions?



5. Global Drought Information System – Pilot Study

Background

- GDIS is a joint research activity under WCRP/GEO/WMO and others.
- Goals:
  - To develop and test a global, consistent drought information system that is easily accessible to all users
  - That includes information on real time assessments of on-going drought and predictions, as well as information about the physical mechanisms and predictability of drought
  - That interfaces with user communities (e.g. agriculture, food security, energy, …)

Potential Pilot Study

- Short duration pilot projects (1-2 years) to demonstrate current GDIS capabilities
- To understand how to balance top-down global and bottom-up approaches?
- To understand how to ensure links to national systems and users

Proposal

- Latin-American-Caribbean pilot studies (Chile, Peru, Honduras, Uruguay, Brazil, ???)
- 1 year initial project (late 2015-2016) with potential 2nd year
- Coordinated by UNESCO-Chile with support from Princeton
- Protocols for comparison of products, drought assessments, forecasts, etc
- OGC WMS compliant maps, zooming to national level, generic platforms, …
- Potential pilot regional systems (CAZALAC data library, LACFDM, …)
- Funding??? National training workshops. User/stakeholder interactions.

Roadmap for Future Activities

For example: system improvements, validation plan, data integration, national systems, GDIS pilot studies, …

Short-term (3-6 months)

Medium term (6 months - 1yr)

Long-term (1yr+)

Validation Plan

5 gauges (natural as possible)
Gauged basin area (minimum 5000km^2 or largest)
Lon, lat
Name of river
Name of gauge
Image of basin outline/river network
Time period > 10 years if possible
Operational preferred
Your email contact to send data to

Send to Nate/Colby
nchaney@princeton.edu
cfk@princeton.edu

Validation and Data Improvements

Discussion of validation methods

- Discussion on methods and datasets for validation.
- Which variables? Streamflow, precipitation, others?
- Drought episodes from the historic record

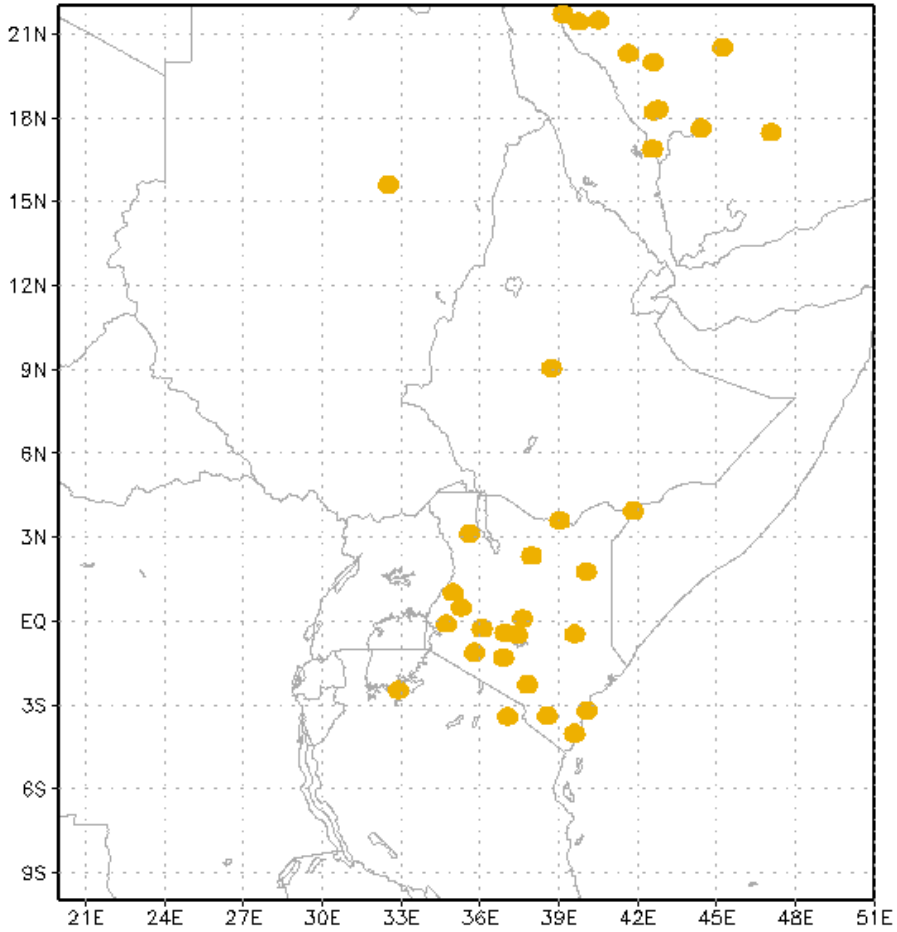
Possible plan for streamflow validation

- Decide lead for each basin/country (Senegal, Mali, Niger, …)
- Select X basins and Y gauging points
- Potential to add new stations
- Select metrics (seasonal cycle, timing, high/low flows)
- Who will do it?
- Feedback on validation???

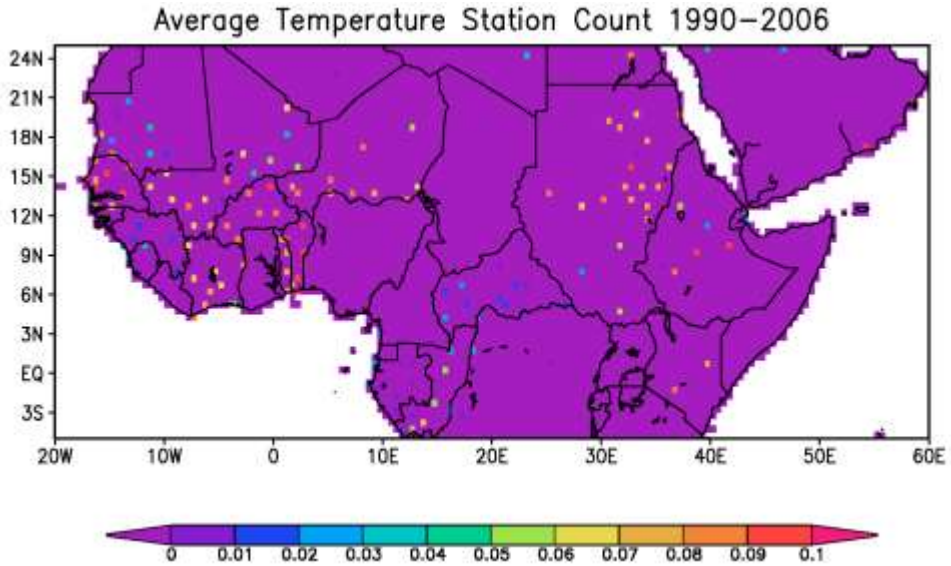
Potential sources and use of local/regional data.

- Local/regional data sources?
- What is most needed and where?
- How best to ingest these data into the system
- How these can be assimilated into the system?
- Can this be done in real-time?

Gauges with historic data (GSOD database)



Gauges in the gridded forcing data



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