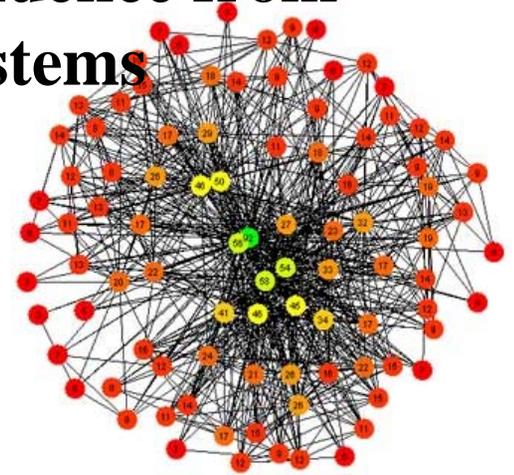# What Binds a Network? Preliminary Evidence from Niger Drought Early Warning Systems

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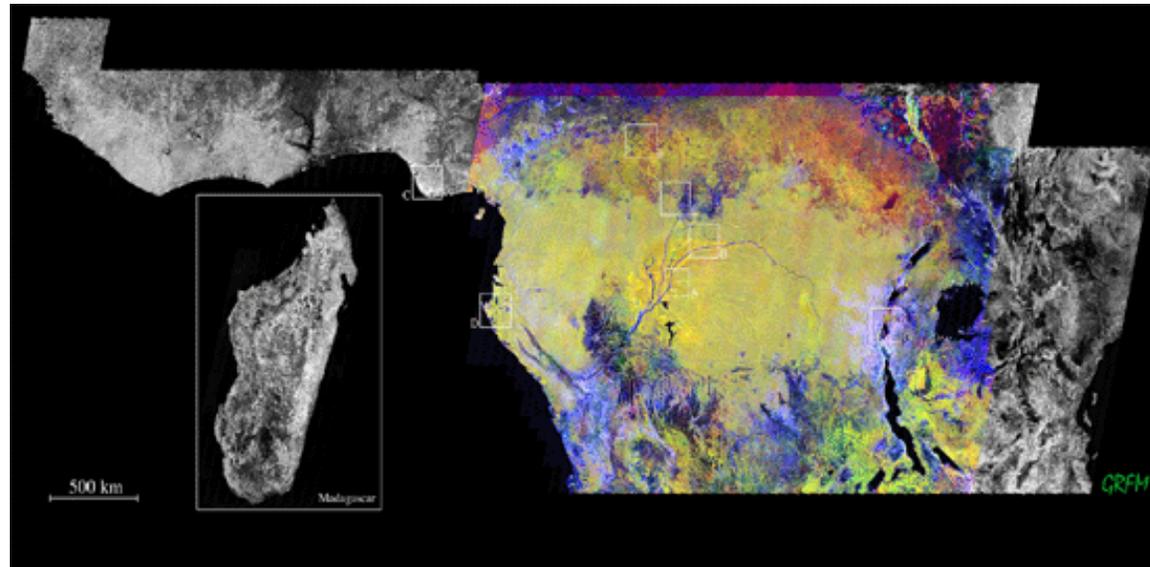**robertsp@vt.edu**

VirginiaTech
Invent the Future

Drought

- slow onset disaster
- typically lasts 2 - 4 years
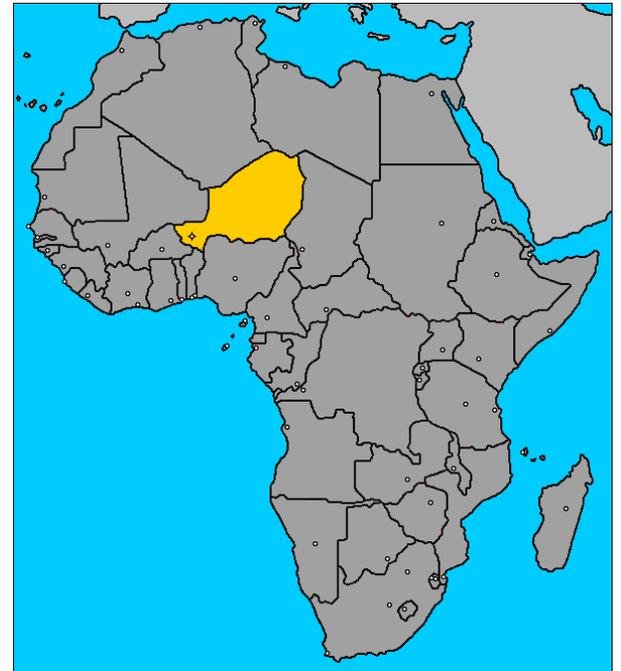- low rainfall, high temp, low water flows

Early Warning

- drought plans contain three basic components:

  monitoring and early warning, risk assessment, and mitigation and response

- in Niger,

  systems to

  monitor rainfall

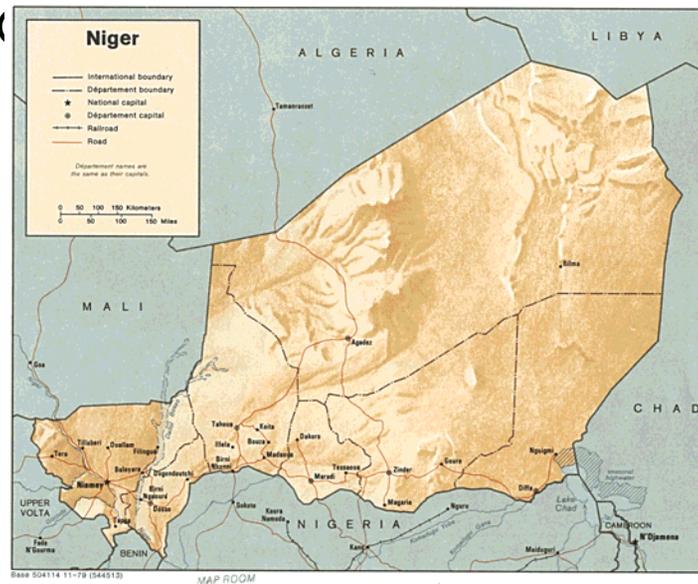 and water flow

  (FEWS 2003)

Niger

- year 2000 population of 12 million
- depends on agriculture for food and income
- population concentrated in rural areas
- only 10 percent of land area suitable for rainfed farming
- multiparty democracy

Three facts

- One child in five is acutely malnourished in some regions

- Cereals are important for the diet

- "Agriculture must therefore serve as a springboard for economic   the rural areas"   2002, 60).

Timeline

- 2003   locust warning
- 2004   rainy season and locust invasion

  some evidence of drought and malnutrition

  Niger asks for food and animals

  US disaster declaration

- 2005   cereal prices rise

  » For example, in February 2005, the price of millet was 46 percent higher than at the same time in 2004 (USAID 2005)

  » In June people leave urban areas to scavenge for food

  » Not enough food left over for livestock

  » animal deaths

  » poor seed quality

Various aid in 2005

- USAID's Office of Food for Peace, $4.6 million to Africare, CARE, CRS, and Helen Keller to reduce food insecurity
- USAID sends $1.6 million in emergency humanitarian assistance to region (through CRS, World Vision and others)
- EU aid
- UN aid (OCHA, others)

Conventional Wisdom?

Aid arrived too late despite widespread predictions of famine.

But Why?

Causes?

- Standard argument: governance crisis
- Other arguments flowing from the case:
  - Intl community focuses on drought
  - Lack of gov't capacity and chronic food shortage
  - Weak trade and transportation infrastructure
  - Early marriage model

Theory: What binds a network?

- Standard approaches

- In the case of Niger, many networks

- Focus on purpose of network and what binds it

Implementation and policy solutions

- do not rely solely on the media to bind a network

- need multiple warning signs (FEWSNET)

- efforts to build and monitor local and regional capacity (how much can be expected of international community)

- tie early warnings to relief funds and resources

Implications for theory

- Problem definition --> approachable problems

- What binds these networks?

    a) communication of information b) trust

- Trust for what?

a) accurate prediction

b) ability to problem solve (and mobilize resources)