

THE ROBERT S. STRAUSS CENTER™

FOR INTERNATIONAL SECURITY AND LAW



CLIMATE CHANGE  
AND AFRICAN  
POLITICAL STABILITY



# Political Disorder in Africa: a New Dataset

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University of North Texas

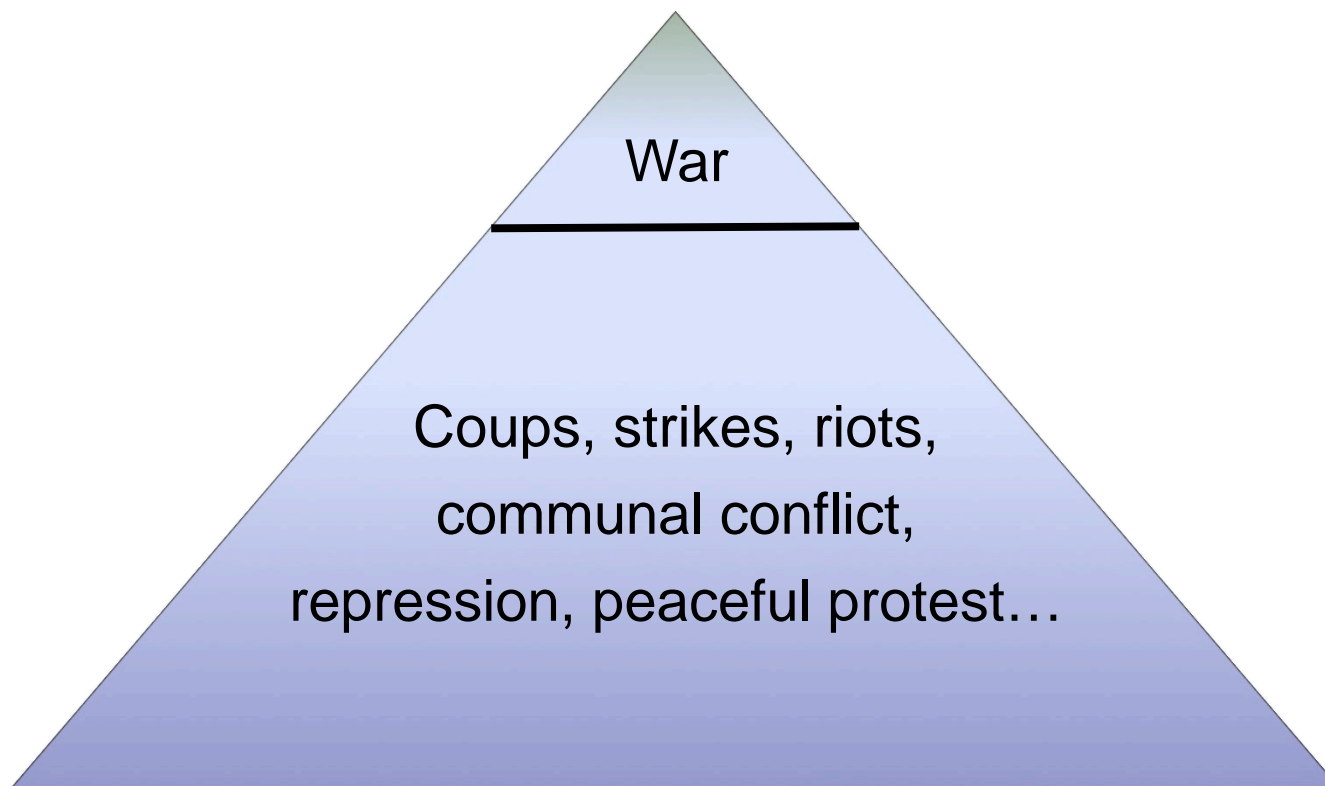
*May 7, 2009*

# Data on political unrest and violence

- Many datasets on civil and international war.
- Defined as organized, armed conflict between states, or between states and rebel groups.
  - Correlates of War
  - Uppsala Armed Conflicts Dataset
  - Minorities at Risk
  - State Failure Task Force
  - Global Terrorism Dataset



## Broader definitions of conflict



# Potential disruption

- Marred 2007 Kenyan elections led to riots killing 800-1,500. Forced a political compromise.
- Over 17,000 politically-motivated deaths in Nigeria since 1990. Ethnic rioting, religious extremism, disruption of oil supplies.
- Early 1990s, protests against Zambian President Kaunda force regime change, multiparty elections.



# Climate change and conflict

- Some scholars have posited that climate change & resource scarcity will lead to conflict.
- Weak and ambiguous findings with respect to civil and international war.
- However, other forms of unrest may be more likely.
  - Insurgency requires significant start-up costs.
  - The state may not be the most appropriate target.



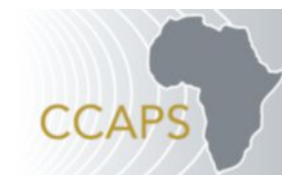
# Political Disorder in Africa Dataset

- Data collection project at the University of North Texas.
- Covers the entire continent, 1990-2009.
- Still a work in progress!
- Thus far, we have over 6,200 events.



# Political Disorder in Africa Dataset

- Keyword searches in Lexis-Nexis.
- Associated Press and Agence France Presse newswires.
  - Good coverage, but some issues to consider.
- Explicitly excludes civil war events as defined by the Uppsala University Armed Conflicts Database.



LexisNexis® Academic: Results - Windows Internet Explorer

http://www.lexisnexis.com/us/lnacademic/search/newssubmitForm.do

smu judo

File Edit View Favorites Tools Help

LexisNexis® Academic: Results

Start Page | Sign Out | Contact Us | Help

# LexisNexis® Academic

News - Agence France Presse - Eng... > Nigeria (560)

Search Sources Help Results

Show List Search within results Go

Sort Publication Date 1-25 of 560 Next Steps Edit Search Go

View Tagged

Result Groups

View Multiple Groups >

All Results (560)

Sources by Category

- Newswires & Press Releases (560)
  - Agence France Presse - English (242)
  - Associated Press Worldstream (163)
  - Associated Press Online (81)
  - The Associated Press (24 hour delay) (7)
- Publication Name
- Subject
- Industry
- Company
- Geography
- Language
- People

Help

Results

- Nigerian labour seeks apology over use of teargas to disperse demo  
Agence France Presse -- English, 187 words
- Protesters burn down four churches in northern Nigeria  
Agence France Presse -- English, 157 words
- Rights group: Nigerian soldiers commit killings, rapes in Delta  
Associated Press Worldstream, December 22, 1999; Wednesday, Racing results and entries, 688 words, GLENN MCKENZIE
- Long queues for fuel in Nigerian capital  
Agence France Presse -- English, 273 words
- Nigerian police use teargas to disperse demo in Abuja  
Agence France Presse -- English, 605 words
- Lagos governor attacked in militants' 'civil war'  
Agence France Presse -- English, 581 words, Peter Cunliffe-Jones
- Lagos governor escapes death in attack, four killed: reports  
Agence France Presse -- English, 1429 words
- Two more Nigerian states take steps to adopt Sharia  
Agence France Presse -- English, 647 words
- Govt plans to rebuild Lagos slum, dwellers protest  
Agence France Presse -- English, 312 words
- 15 die, two villages razed in Nigerian communal clashes: report  
Agence France Presse -- English, 203 words
- Nigerian lawmaker admonishes U.S. delegation on trade visit  
Associated Press Worldstream, December 7, 1999; Tuesday, International news, 515 words, GILBERT DA COSTA
- Nigerian Senate enacts Niger Delta development law  
Agence France Presse -- English, 215 words
- Shoot-at-sight order 'irreconcilable with democracy' in Nigeria  
Agence France Presse -- English, 1181 words
- Death toll mounts in Lagos ethnic clashes  
The Associated Press, December 1, 1999, Wednesday, BC cycle, International News, 246 words, By FRANK AIGBOGUN, Associated Press Writer
- Death Toll Mounts in Lagos Clashes

Done

Internet 100%

Start Sent Items - Microsof... LexisNexis® Acad... C:\Documents and S... EST\_terrorism\_June2... EST\_terrorism\_June5... Political disorder in Af... Political disorder in Af... 1:59 PM



## Variables included

- Start and end dates.
- Type of event:
  1. Organized protest
  2. Unorganized protest
  3. Organized riot
  4. Unorganized riot
  5. Limited strike
  6. General strike
  7. Government repression
  8. Anti-government violence
  9. Extra-government violence
  10. Intra-government violence



## Variables, cont.

- Escalation
- Actor(s) and Target(s) (text & binary for government)
- Number of participants (categorical)
- Number of deaths.
- Government repression (lethal & non-lethal)
- Location (text and code)
- Issue(s)
  - 14 issue codes, incl. elections, economy, environment, education, ethnicity, others
- Brief description of event



## Examples

- Some 2,000 Muslim Brotherhood members protest outside a courthouse in Zagazig in support of a senior Brotherhood member on trial there (Egypt, 12-June-04)
- Lou Nuer raiders attack a small Dinka Bor settlement in the Twic East region of Jonglei state in order to steal cattle (Sudan, 28-August-09)
- Several hundred soldiers mutiny over back pay, seize control of parts of the capital (Central African Republic, 18-May-96 to 27-May-96)



# Inter-coder reliability checks

- 10% of country-years double coded
- Two issues to consider
  - Do the coders identify the same events?
  - Do they code the same event identically?
- Same event:
  - No standard way of doing this
  - “Needle in haystack” problem
  - 65% match rate



# Inter-coder reliability check

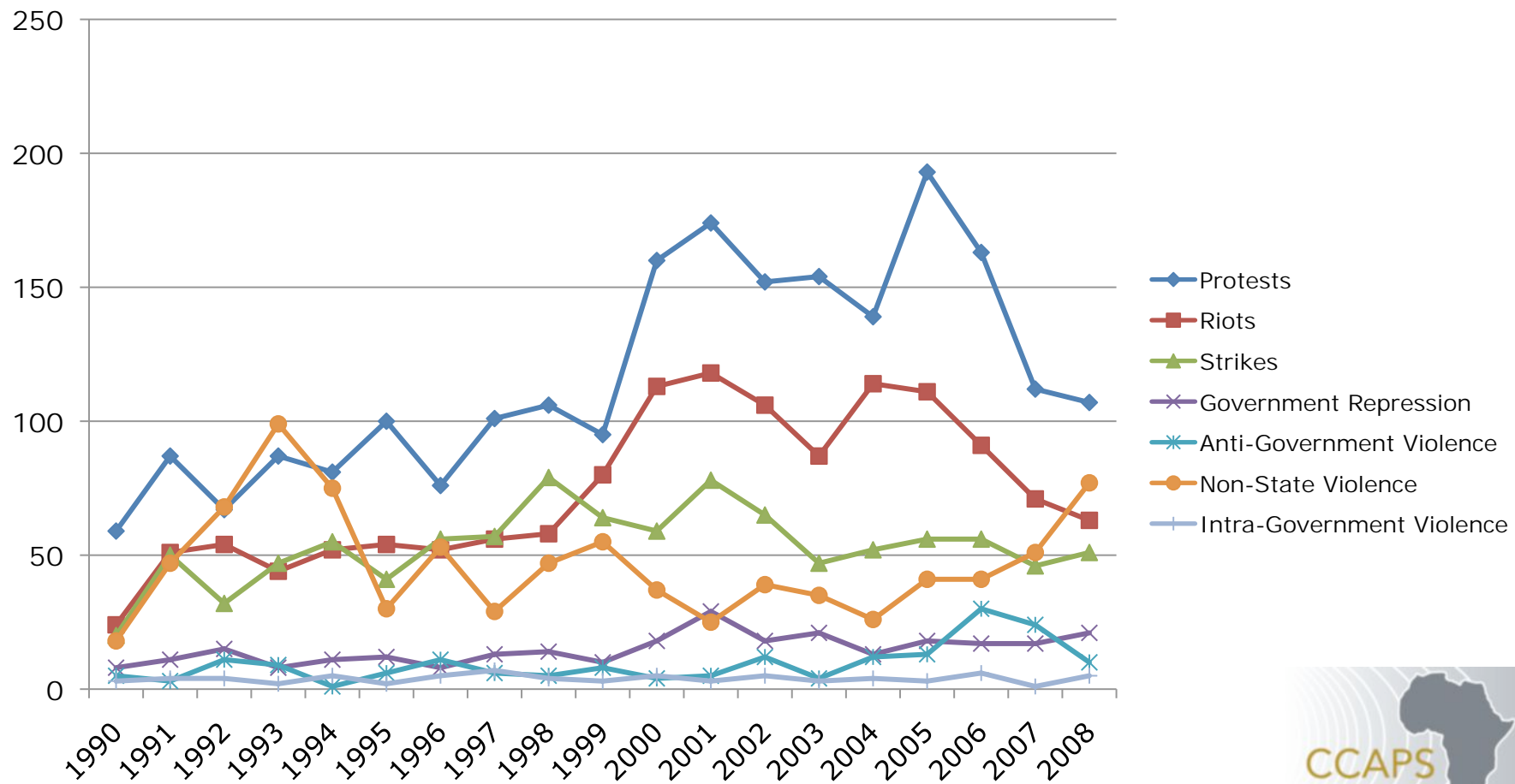
- Identical coding of same event
- Cohen's Kappa

$$\kappa = \frac{\text{Pr}(a) - \text{Pr}(e)}{1 - \text{Pr}(e)},$$

- Kappas above .61 considered "substantial agreement"
- All variables have a good agreement rate
  - Somewhat weaker for issue code
  - We may combine some categories



# Events over time

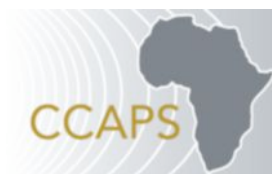


## Events, deaths, and repression

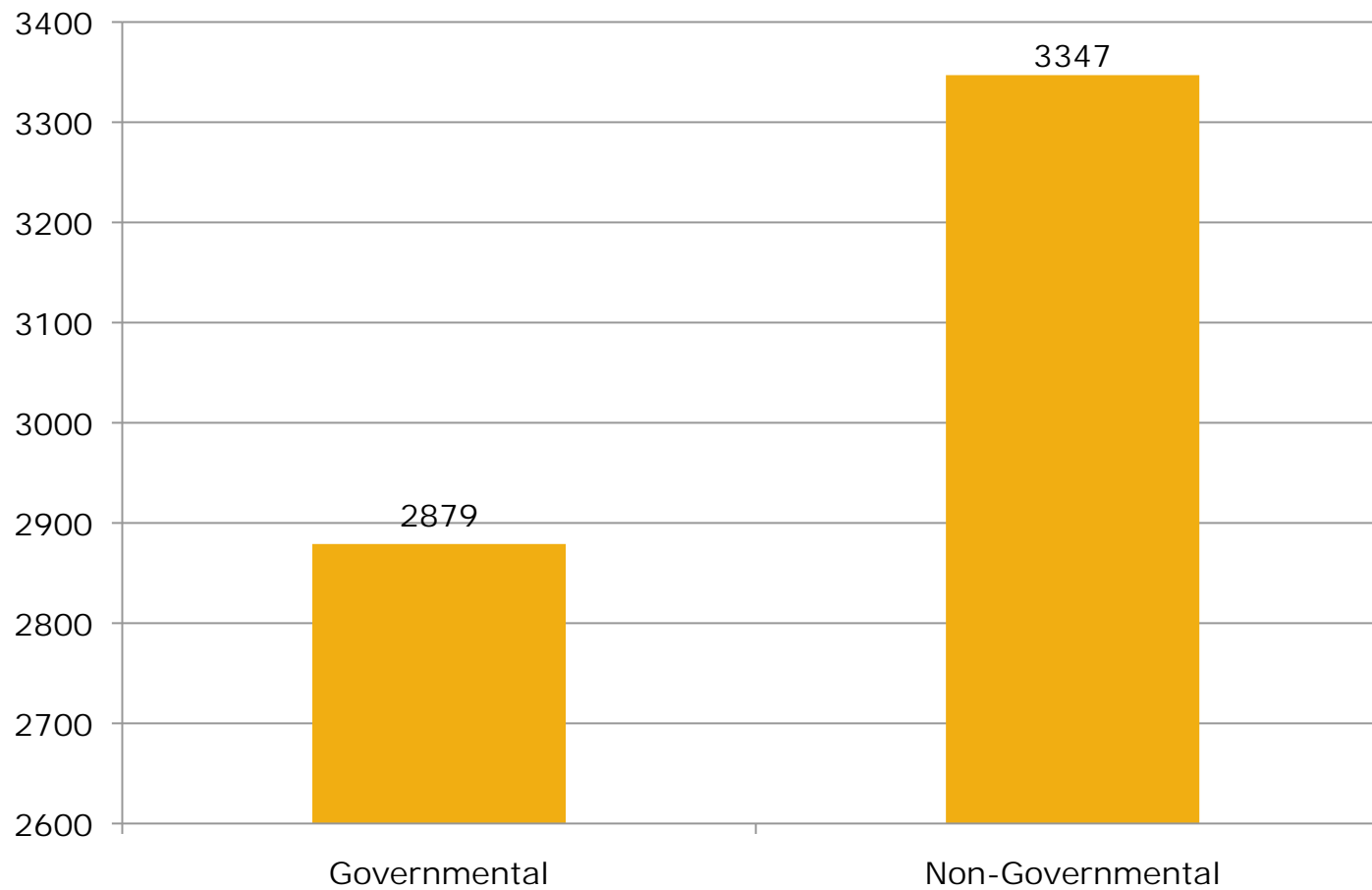
| Country      | Events |
|--------------|--------|
| Nigeria      | 853    |
| South Africa | 801    |
| Somalia      | 439    |
| Zimbabwe     | 336    |
| DRC          | 334    |
| ...          |        |
| Namibia      | 21     |
| Botswana     | 14     |
| Gambia       | 11     |
| Eritrea      | 8      |
| Mauritius    | 8      |
| TOTAL        | 6,226  |

| Country      | Deaths |
|--------------|--------|
| DRC          | 22,307 |
| Nigeria      | 17,402 |
| South Africa | 7,246  |
| Somalia      | 5,789  |
| Kenya        | 4,688  |
| ...          |        |
| Namibia      | 13     |
| Mauritius    | 11     |
| Congo        | 11     |
| Swaziland    | 10     |
| Botswana     | 1      |
| TOTAL        | 78,676 |

| Country      | %Repressed |
|--------------|------------|
| Guinea       | 64%        |
| Cameroon     | 53%        |
| Egypt        | 47%        |
| Mauritania   | 47%        |
| Gambia       | 45%        |
| ...          |            |
| Botswana     | 14%        |
| Rwanda       | 12%        |
| South Africa | 12%        |
| Benin        | 9%         |
| Somalia      | 1%         |
| TOTAL        | 26%        |

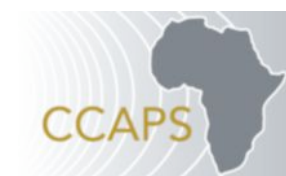
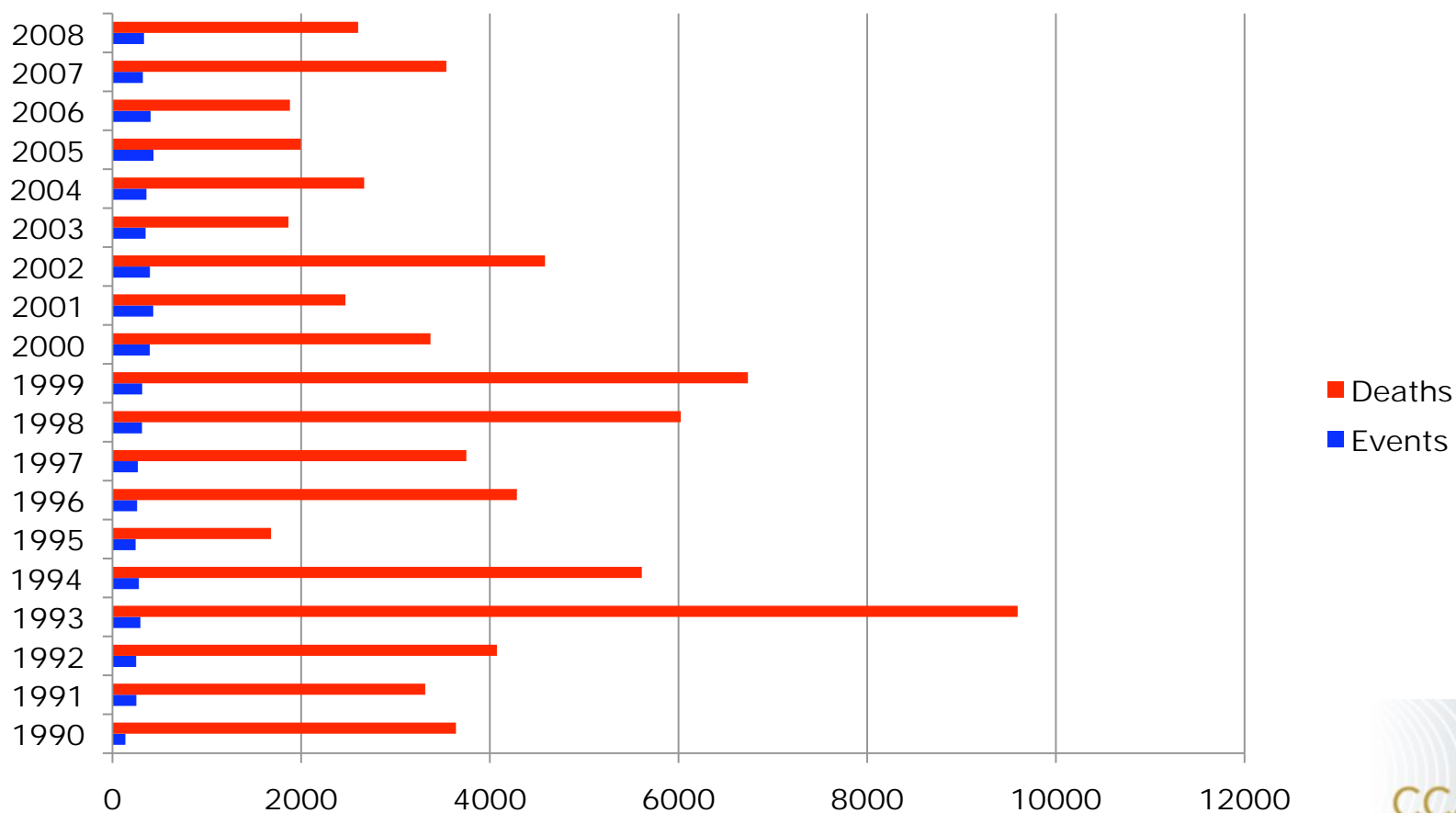


# Government v. non-government targets



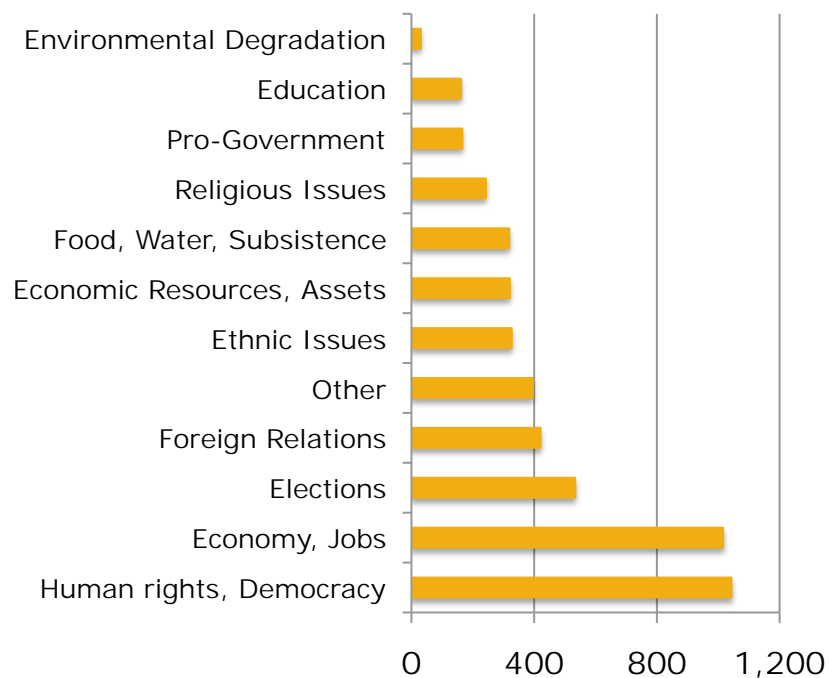


# Events over time

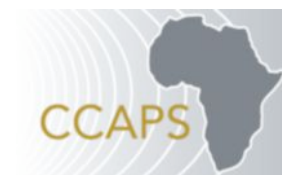
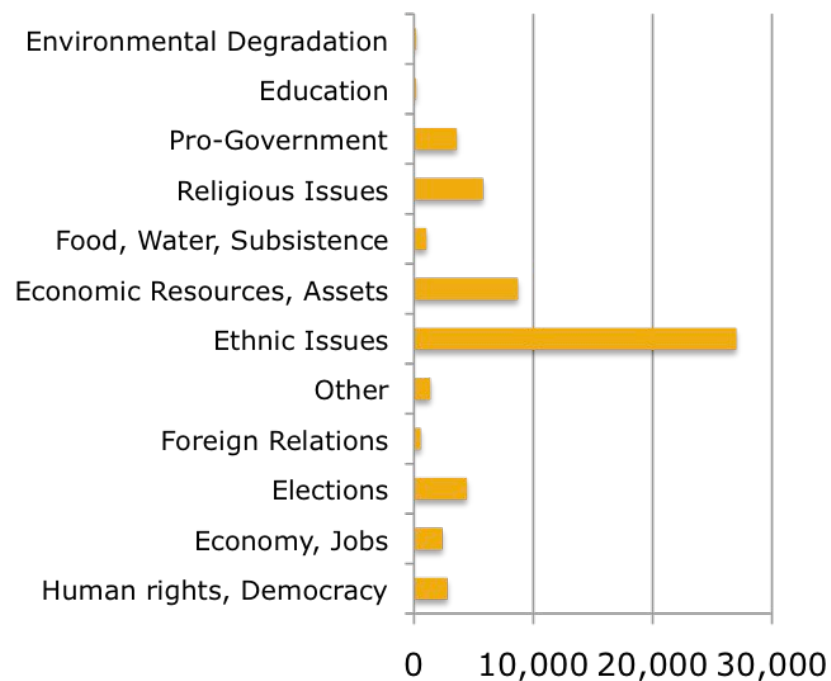


# Issues and events: what's it all about?

Total Events by Main Issue

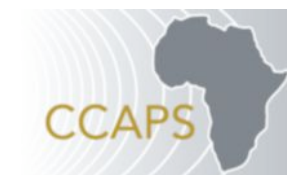


Deaths by Main Issue

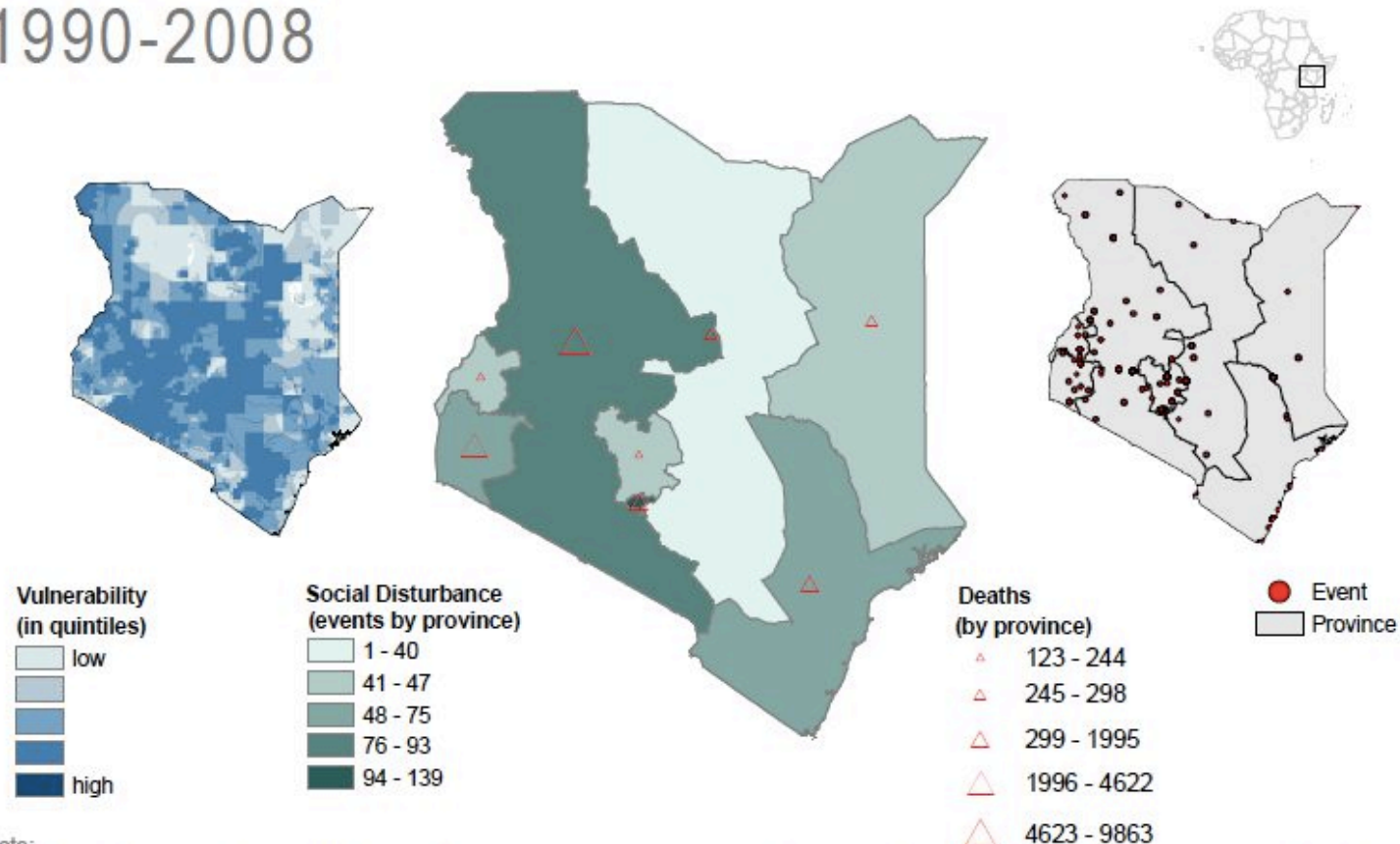


## Repression by event type

| Repression? | Organized Protest | Unorganized Protest     | Organized Riot           | Unorganized Riot          | General Strike            |
|-------------|-------------------|-------------------------|--------------------------|---------------------------|---------------------------|
| No          | 501               | 983                     | 83                       | 733                       | 111                       |
| Yes         | 263<br>(34.4%)    | 497<br>(33.6%)          | 60<br>(42.0%)            | 566<br>(43.6%)            | 38<br>(25.5%)             |
| Repression? | Limited Strike    | Pro-Government Violence | Anti-Government Violence | Extra-Government Violence | Intra-Government Violence |
| No          | 802               | 275                     | 146                      | 892                       | 63                        |
| Yes         | 95<br>(10.6%)     | 10<br>(3.5%)            | 41<br>(21.9%)            | 54<br>(5.7%)              | 13<br>(17.1%)             |



# Vulnerability and Political Disorder in Kenya 1990-2008

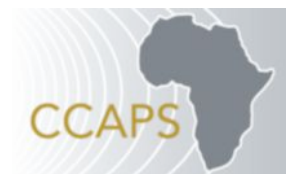


**Note:**

The vulnerability index was created using four main categories: natural disasters (cyclone winds and surges frequency; drought events; fires and floods), governance (World Bank indicators), atrocities (political violence) and access to primary roads and airports. The first three categories were assigned equal weight while access was simply subtracted from our final equation.

Author: Erika Grajeda Projected Coordinate System: GCS WGS 1984

Source: LBJ Africa Climate Data Server; The University of Texas at Austin, 2010.

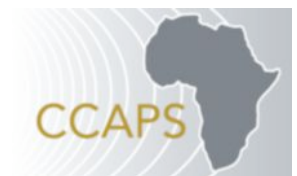
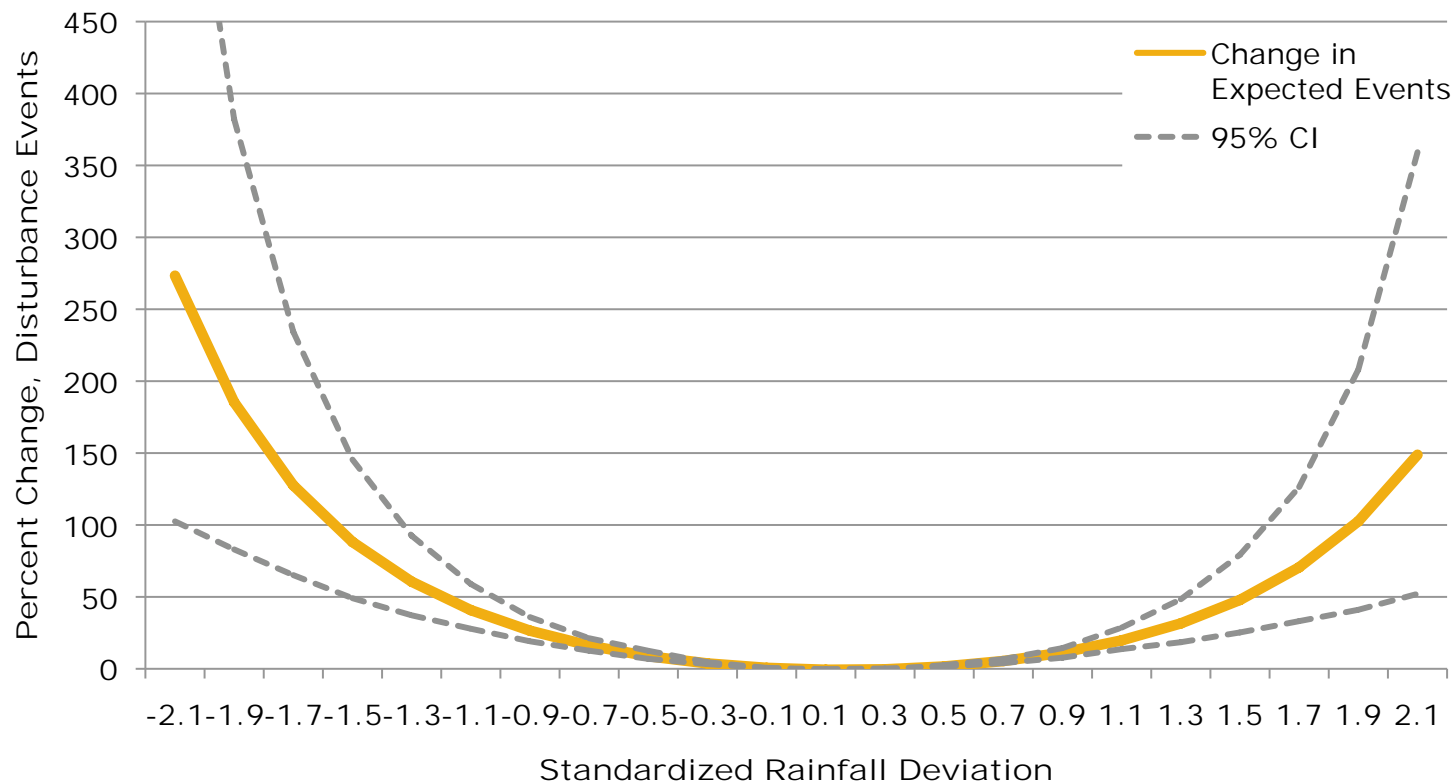


# Application: political disturbances and weather events

- Exploring the climate and conflict nexus
  - A different way of thinking about/measuring conflict and instability
  - A different way of thinking about conflict triggers
    - Rainfall deviations from long-term means
      - Standardized to country-specific “normal” variability
    - Extreme events (floods and droughts)

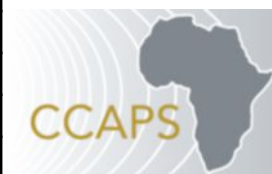


# Application: political disturbances and weather events



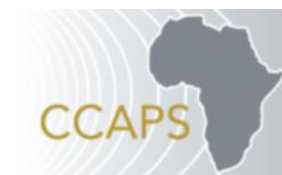
# Application: political disturbances and weather events

|   | Total Events | Nonviolent Events | Violent Events | Government-Targeted Events | Non-Government-Targeted Events |
|---|--------------|-------------------|----------------|----------------------------|--------------------------------|
| Lagged DV   | 0.041***     | 0.052***          | 0.069***       | 0.040***                   | 0.078***                       |
|   | -0.008       | -0.016            | -0.018         | -0.015                     | -0.019                         |
| Drought Events  | 0.055        | 0.122             | -0.199         | -0.072                     | 0.187                          |
|   | -0.118       | -0.133            | -0.072         | -0.146                     | -0.151                         |
| Drought Events, lagged  | 0.301***     | 0.069             | 0.606***       | 0.101                      | 0.510***                       |
|   | -0.113       | -0.133            | -0.148         | -0.143                     | -0.135                         |
| Flood Events  | 0.08         | 0.077             | 0.116          | 0.06                       | 0.054                          |
|   | -0.054       | -0.064            | -0.173         | -0.069                     | -0.067                         |
| Flood Events, lagged  | -0.071       | -0.038            | -0.022         | -0.04                      | -0.076                         |
|   | -0.059       | -0.069            | -0.072         | -0.075                     | -0.069                         |
| Time Trend  | Yes          | Yes               | Yes            | Yes                        | Yes                            |
| Year Dummies  | Yes          | Yes               | Yes            | Yes                        | Yes                            |
| Fixed Effects   | Yes          | Yes               | Yes            | Yes                        | Yes                            |
| Observations  | 518          | 518               | 518            | 518                        | 518                            |
| Countries   | 32           | 32                | 32             | 32                         | 32                             |
| Standard errors in parentheses                                    |              |                   |                |                            |                                |
| * significant at 10%; ** significant at 5%; *** significant at 1% |              |                   |                |                            |                                |



## Use in qualitative research

- For qualitative social scientists, journalists, NGOs, etc.
  - Descriptive statistics
  - Event histories
- Ability to follow search parameters in Lexis-Nexis to find additional information





## Event history: Jos massacre



*London Times, March 8, 2010*

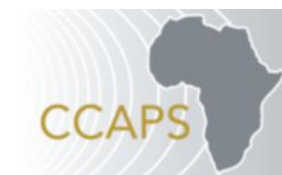
“Officials estimate that 500 people were massacred in night-time raids by Muslim gangs near Jos, the city that bestrides Nigeria’s Christian-Muslim fault line.”

| Event Type                | Year | Deaths | Actor            | Repression ? |
|---------------------------|------|--------|------------------|--------------|
| Unorganized Riot          | 2001 | 500    | Muslim militants | Yes          |
| Unorganized Riot          | 2002 | 1      | Civil Servants   | No           |
| Unorganized Riot          | 2004 | 4      | Muslim militants | No           |
| Unorganized Riot          | 2004 | 20     | Christians       | No           |
| Unorganized Demonstration | 2006 | 1      | Citizens         | Yes          |
| Unorganized Riot          | 2008 | 700    | Muslims          | Yes          |



## How to promote accessibility?

- How data are presented will make a big difference
  - HTML link to a .csv file = little impact
  - Searchable website with maps, etc. = big impact
  - Accessibility, ease of use are key



## Not just for climate-related research

- When do states repress dissidents?
  - Reliance on broad measures of repression
  - Allows for analysis at the event level
- How do protests affect regime longevity?
- Which countries experience most non-state violence?
- How do election cycles affect violence?
- How does economic development influence protest?



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