

# Climate change and development in Ghana

Climate change and cities

URAdapt  
January 2011



Government of Ghana

**Ghana Goes for Green Growth**

National engagement on climate change

Discussion document

# Why are we here?

- **Debate** on Ghana's plans & role of urban areas in tackling opportunities & challenges posed by climate change for development
- **National & international context** on climate change
- **Emerging climate change response**
  - Each area & sector as part of national solution
  - Ghana as part of international solution
  - Long-term implications & lock-in decisions
  - Securing international support & finance



# Why are we here? 2

## Ghana's response to climate change in development

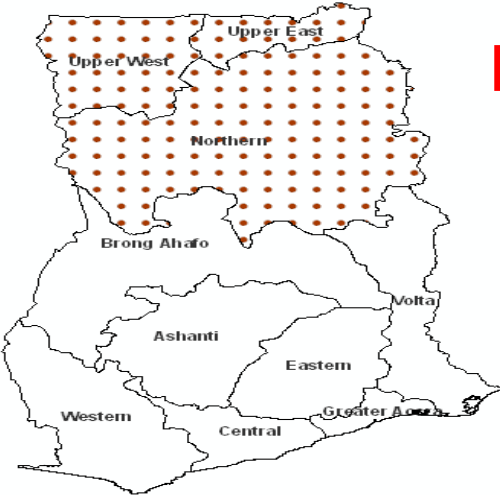
- A comprehensive vision & approach key
- Senior leadership commitment & direction
- Cross-government approach & inter-sectoral coordination & collaboration to scale up
- Integration with national, regional & sector plans
  - Med-Term Nat Dev Plan, budget cycle, PFM
- Systems approach – financing, institutions, measurement, reporting & verification

*but*

- stretch on technical capability & capacity



# Ghana dry scenario - °C change from base

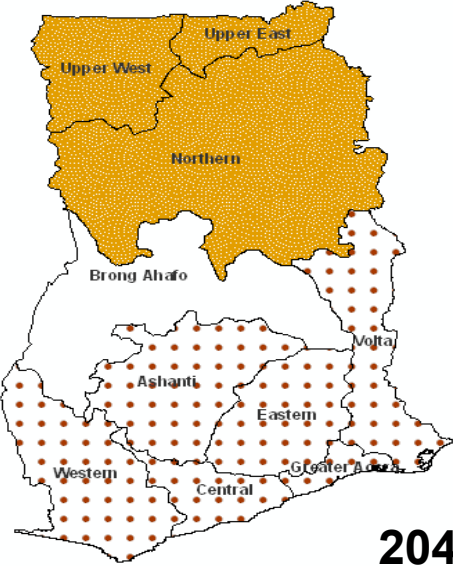


High increase in north

2020

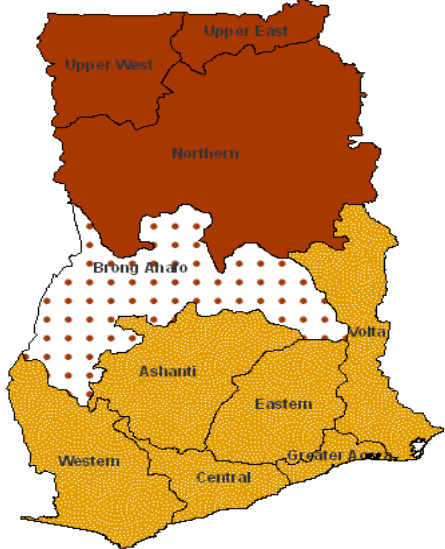
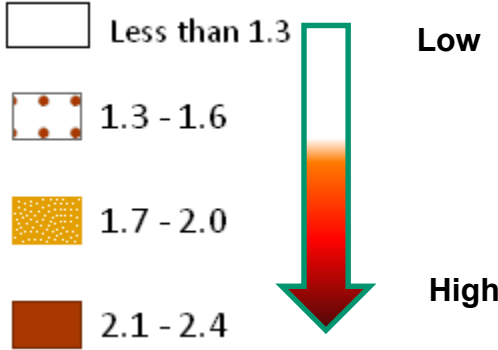


2030



2040

Temperature Change C°



2050

# Conclusions Economics of Adaptation – 1

- **Cost:** Estimated cost of adaptation \$60m - \$300m per year (mid-range) – agriculture, roads, energy & water, coastal infrastructure – selected elements only
- **Shocks:** Potential negative impacts of CC shocks significant & increasing over time
- CC shocks will become greater & increase in variance
- **GDP:** Present values of losses under scenarios are significant compared to a historical climate base simulation
- 1.2% - 3.9% of present value of discounted baseline GDP

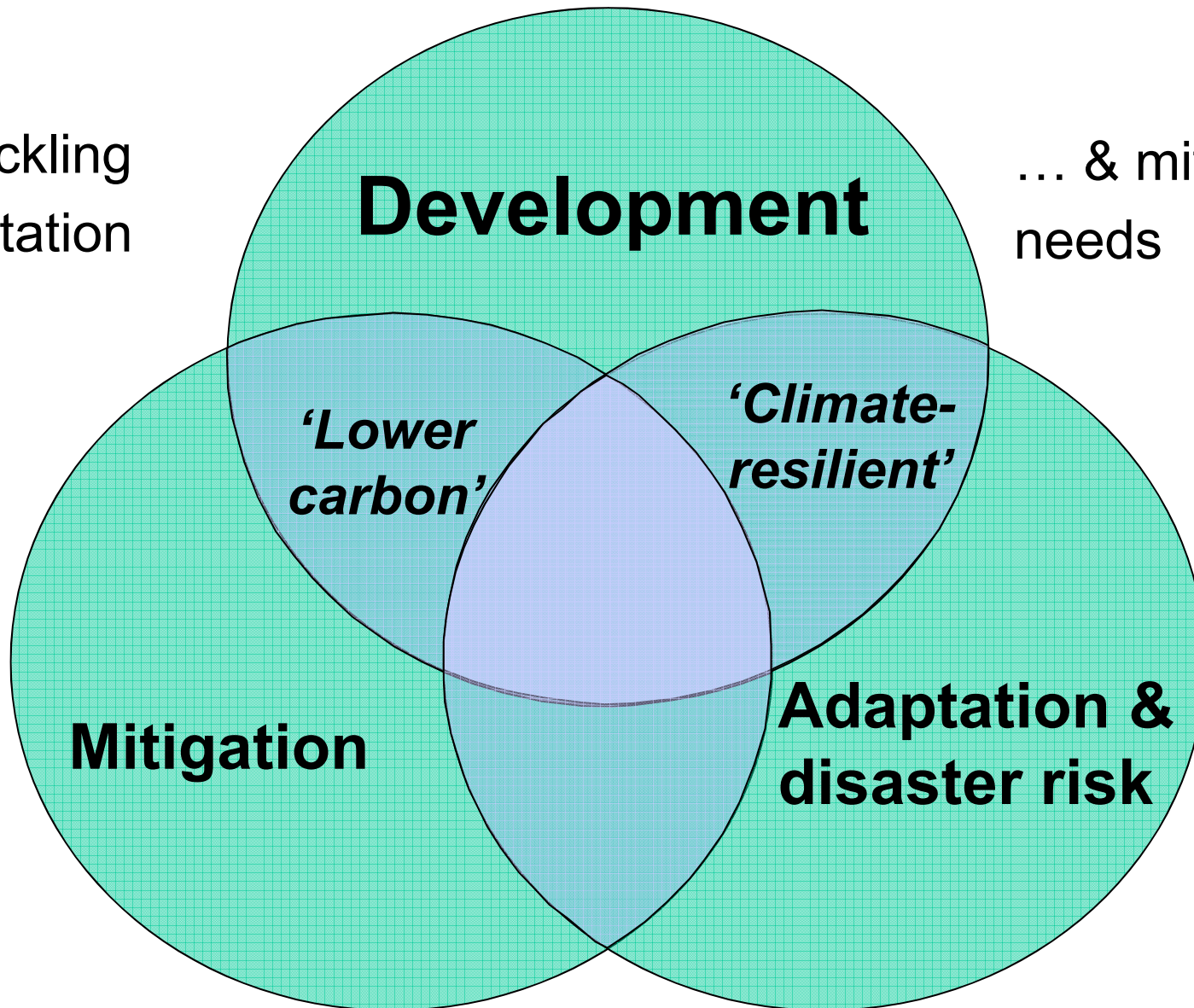
## Conclusions – 2

- **Agriculture:** Significant drop in crops requires intervention for food security & productivity
- **Energy:** Energy mix needs to include diversified renewable sources (e.g. mid-size hydro & mini-hydro)
- **Roads:** Costs of roads adaptation high
- **Coastal:** Coastal communities very vulnerable to CC

# Response to climate change in development

... tackling  
adaptation

... & mitigation  
needs



**Mitigation**

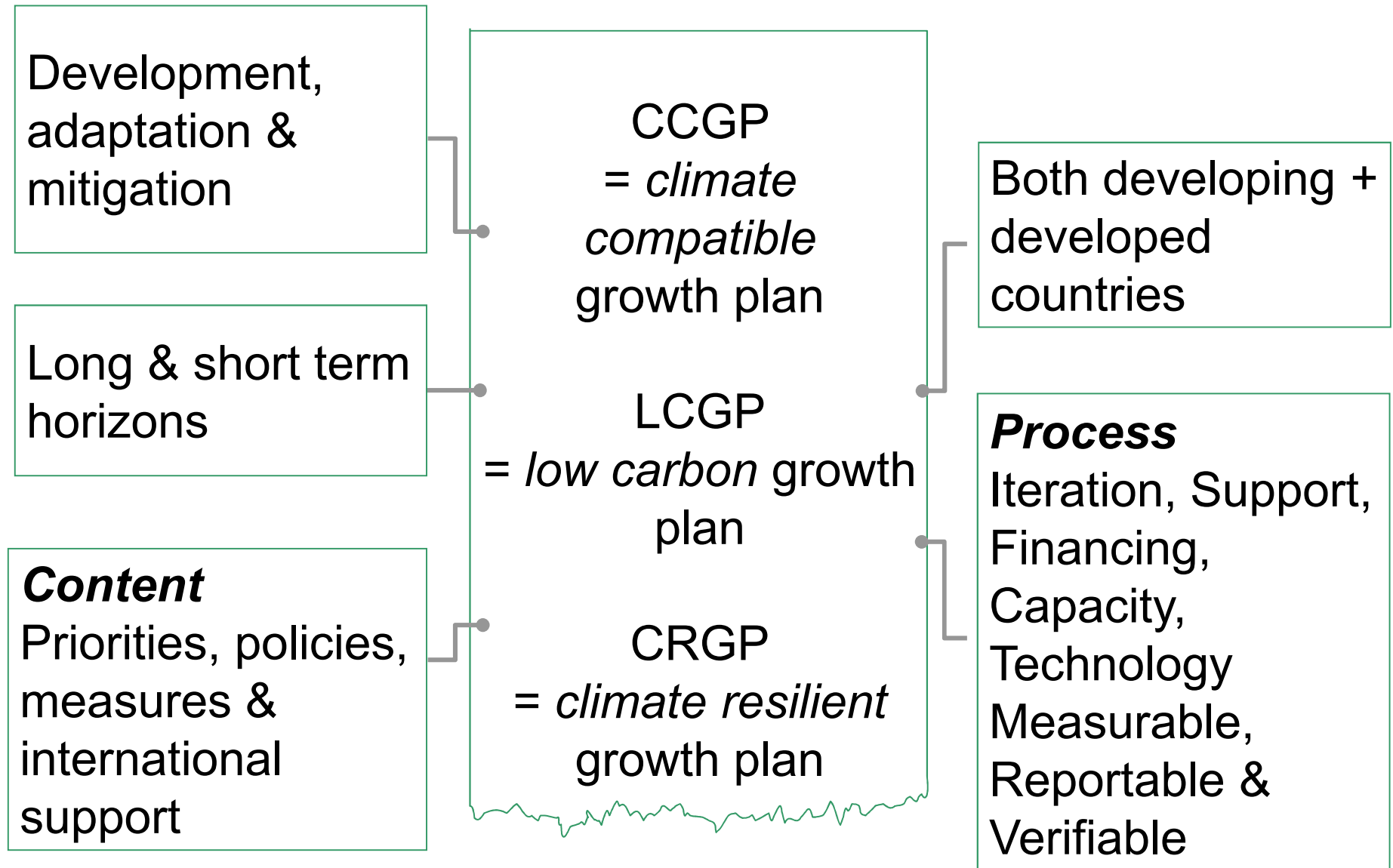
**Development**

**Adaptation &  
disaster risk**

*'Lower  
carbon'*

*'Climate-  
resilient'*

# Climate & development plans





# Cities & climate change initiatives

**BUILDING CLIMATE AND DISASTER RESILIENCE INTO CITY PLANNING AND  
MANAGEMENT PROCESSES**

## **Climate change, urban flooding and the rights of the urban poor in Africa**

Key findings from six African cities

**Ranking Port Cities  
with High Exposure and  
Vulnerability to Climate  
Extremes**

**Flood Risks, Climate Change  
Impacts and Adaptation  
Benefits in Mumbai**



# Cities & climate change

- How cities contribute to & are affected by CC
- How policy makers can use cities to change behaviour & technology on CC
- How cities could use CC as an opportunity to raise profile, reinforce sensible policies & move toward a more sustainable pattern



CITIES AND CLIMATE CHANGE:  
**AN URGENT AGENDA**

# Cities & climate change

- Urban transition - future population growth in low- & middle-income country urban centres – 3M a week!
- Cities most vulnerable, especially poor groups
- Cities account for bulk of consumption & GHGs
- Infrastructure of 2050 being built today – is it adequate?
- Fit for past or for future purpose?
- Vulnerability – location, economy, scale
- Congestion or competition?



**Climate change and cities: why urban agendas  
are central to adaptation and mitigation**

## Why scenarios?

- Acknowledge & explore uncertainty – not ‘one future’ or projection, need to understand extremes & implications
- Take a holistic view – show interconnections
- Long-term mindset - beyond the day-to-day
- Make explicit impact of decisions made now on future
- Enable ‘future-proofing’ of initiatives – a useful tool

# A framework approach for Ghana

- Climate adaptation & disaster risk reduction
- Lower carbon growth in carbon-constrained world
- Social development – equity, poverty & gender
- Governance & coordination
- Capacity
- Research & knowledge management – gaps, uncertainty
- Financing mechanisms – markets, risk, scale
- International cooperation
- Communication
- Measurement & reporting



# An approach for Ghana - content

- Assist Ghana to achieve its growth & development objectives in a resilient & lower-carbon way
- Both long-term vision & short-term strategy/action plans
- Coordinate action across sectors, link to national policies
- Spell out requirements for domestic & international resources - funding, technology transfer & capacity
- Nationally appropriate mitigation actions
- Specify international support needs



## An approach for Ghana - process

- Base on sectoral and geographical needs & capabilities
- Integrate with other policy documents & overall economic & development objectives, esp. MTNDP & sector plans
- Build on previous consultation, extend with multiple stakeholders, (public, private & non-state) & public debate
- Ensure consistency – or surface trade-offs - between overall national plan & individual measures
- Mandate & ownership directly from leadership
- Allow for iterations, learning & refinement

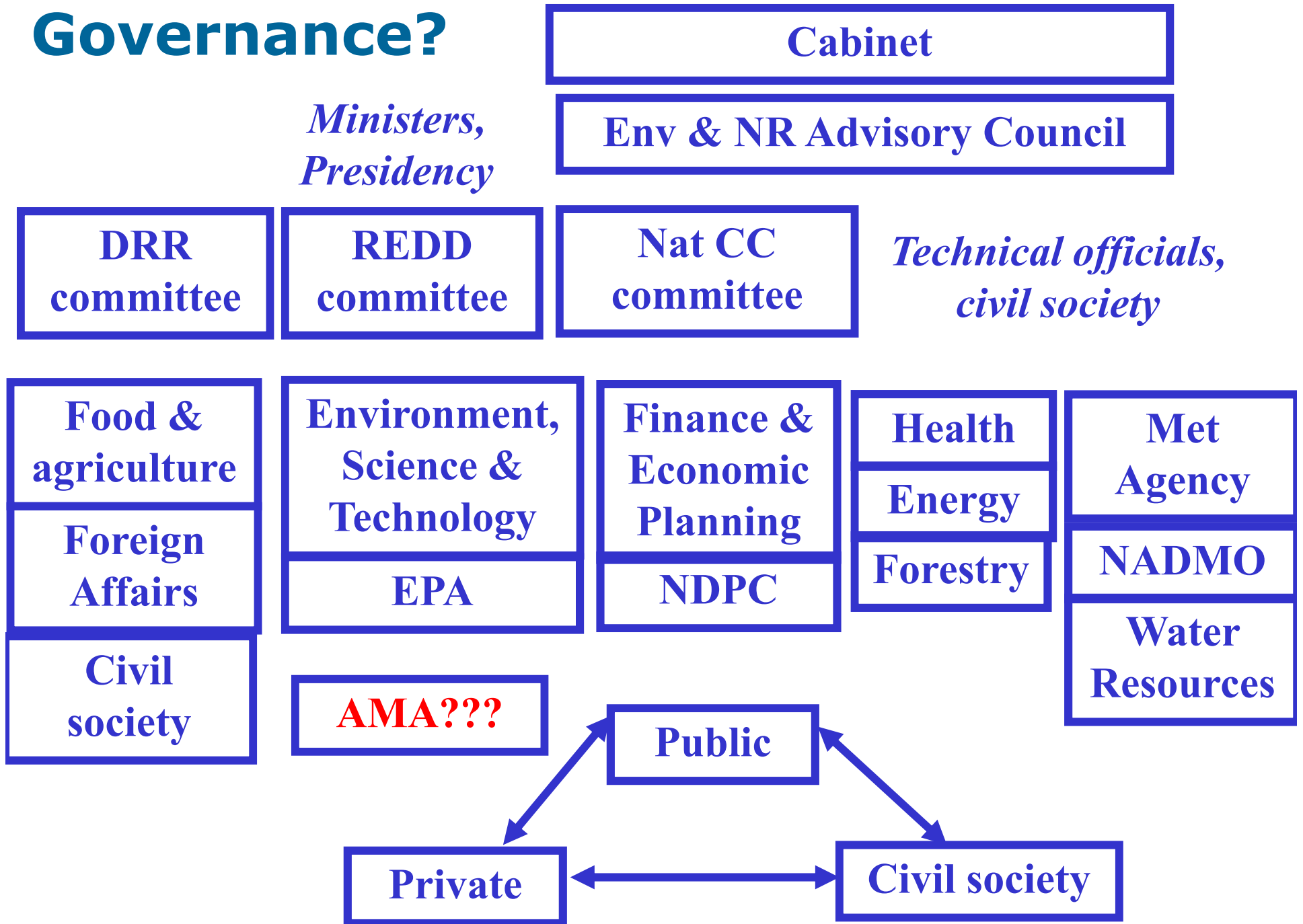


# Urban risk assessment

- Historical incidence of hazards
- Spatial data
- Institutional mapping
- Community participation
  
- Integration???
- Flood action & preparedness
- NADMO? AMA?
- Private sector, informal sector?
- Infrastructure, assets, shelter



# Governance?





## Why are we here again?

- Each area & sector as part of national solution
- Ghana as part of international solution
- Act now, Act together, Act differently
- Urban risk assessment & integrated action essential
- *How implement a comprehensive climate vision & approach for Accra & urban areas, at highest levels?*
- *How consolidate & extend existing climate practice in light of technical, resource & political stretch?*