

Enhancing Resilience to Natural Disasters in Sub-Saharan Africa

Regional Economic Outlook for Sub-Saharan Africa

**African Department
International Monetary Fund
January 2017**



Outline

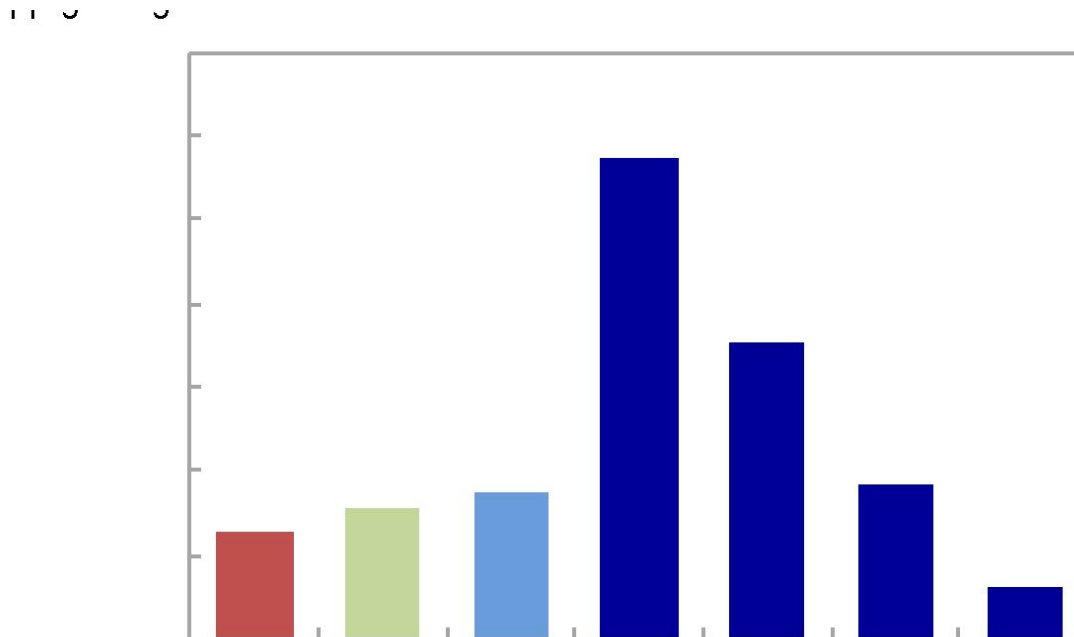


- Natural disasters in Sub-Saharan Africa
- Sources of vulnerabilities
- Macroeconomic and social impacts
- Risks posed by climate change
- Policies to enhance resilience

Based on the frequency of all disasters,
Sub-Saharan Africa is about as exposed as
other regions



Sub-Saharan Africa: Share in Selected Indicators, 2014

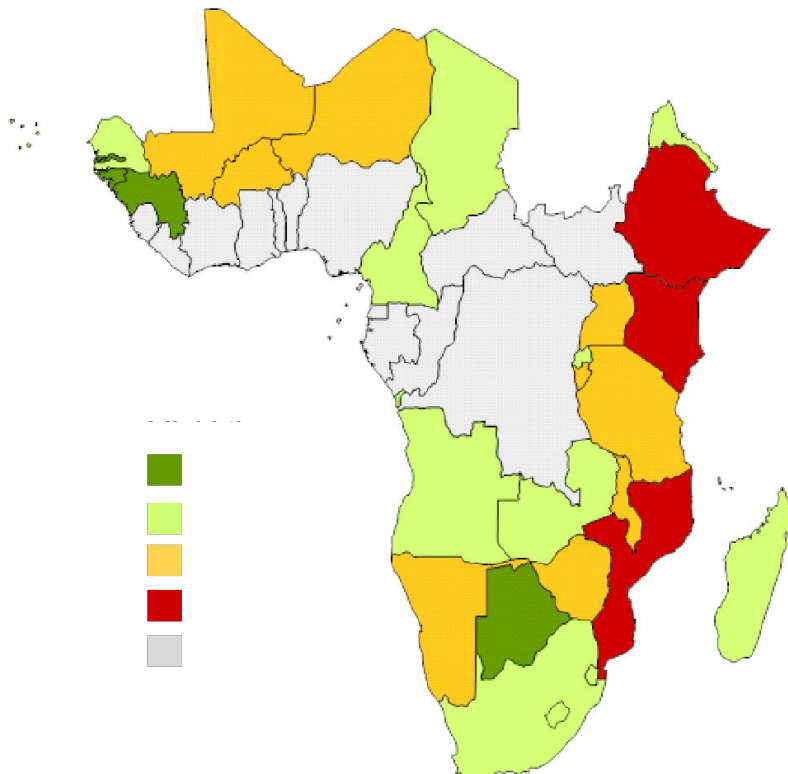


But the frequency of disasters varies across countries...

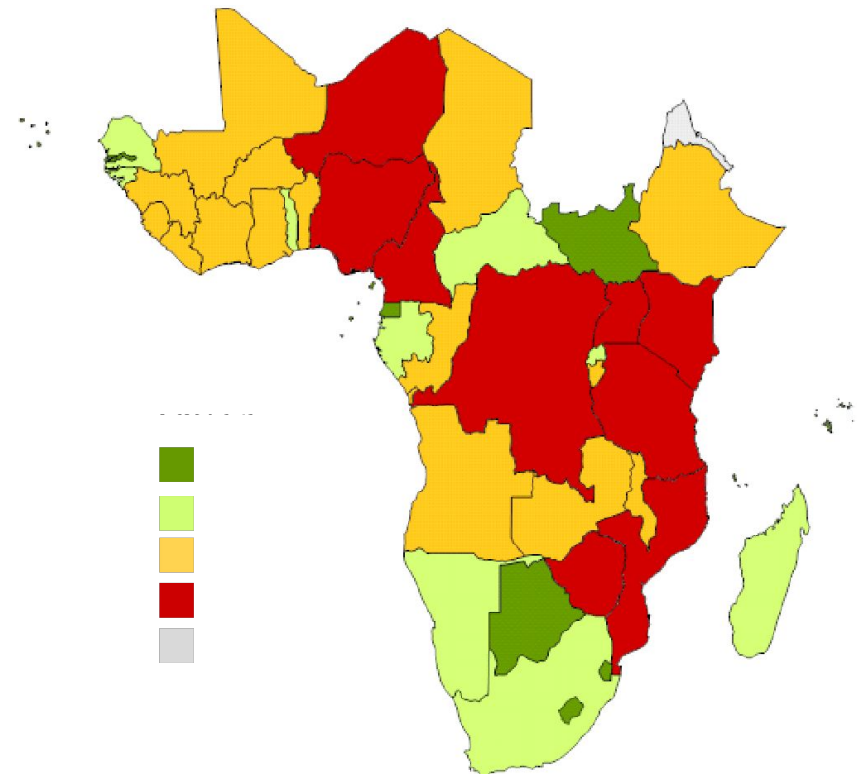


Sub-Saharan Africa: Frequency of Droughts and Epidemics, 1990–2014

Droughts



Epidemics

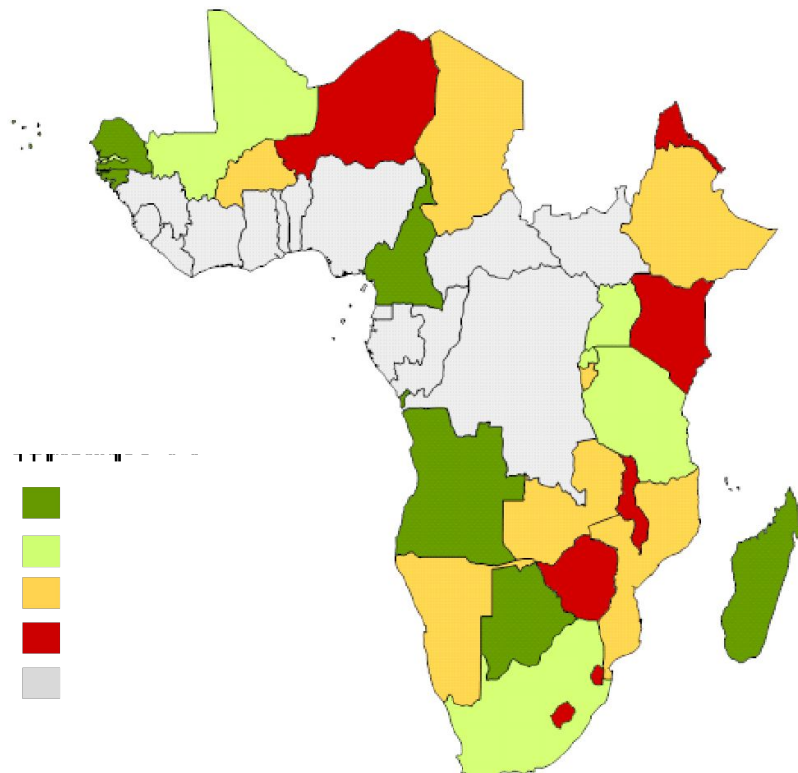


...as does the percentage of population affected

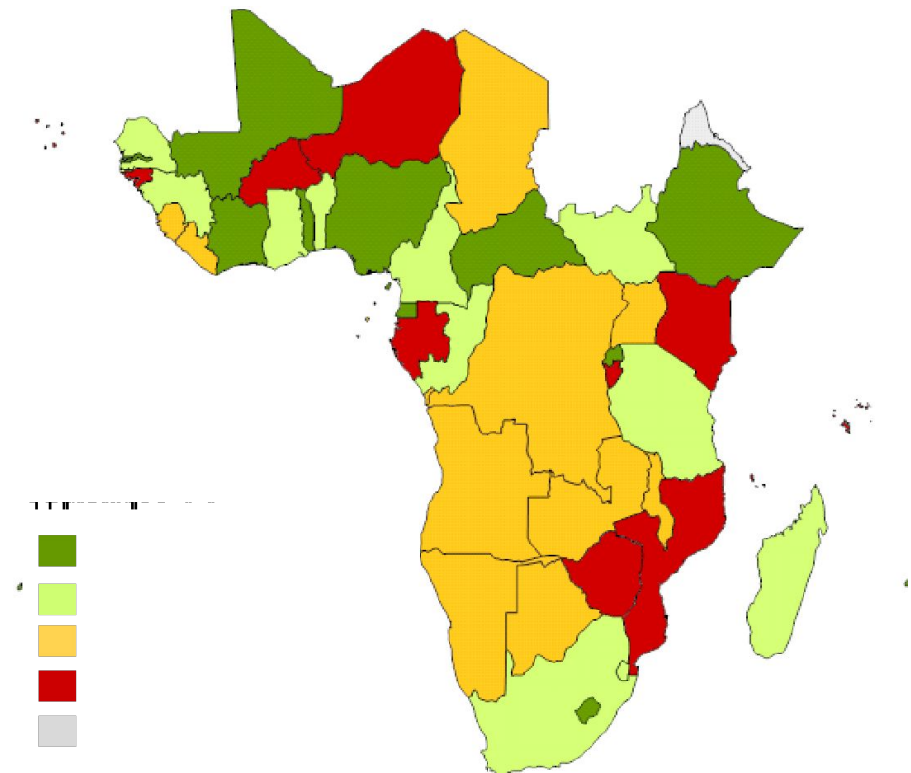


Sub-Saharan Africa: Human Cost of Droughts and Epidemics, 1990–2014

Droughts



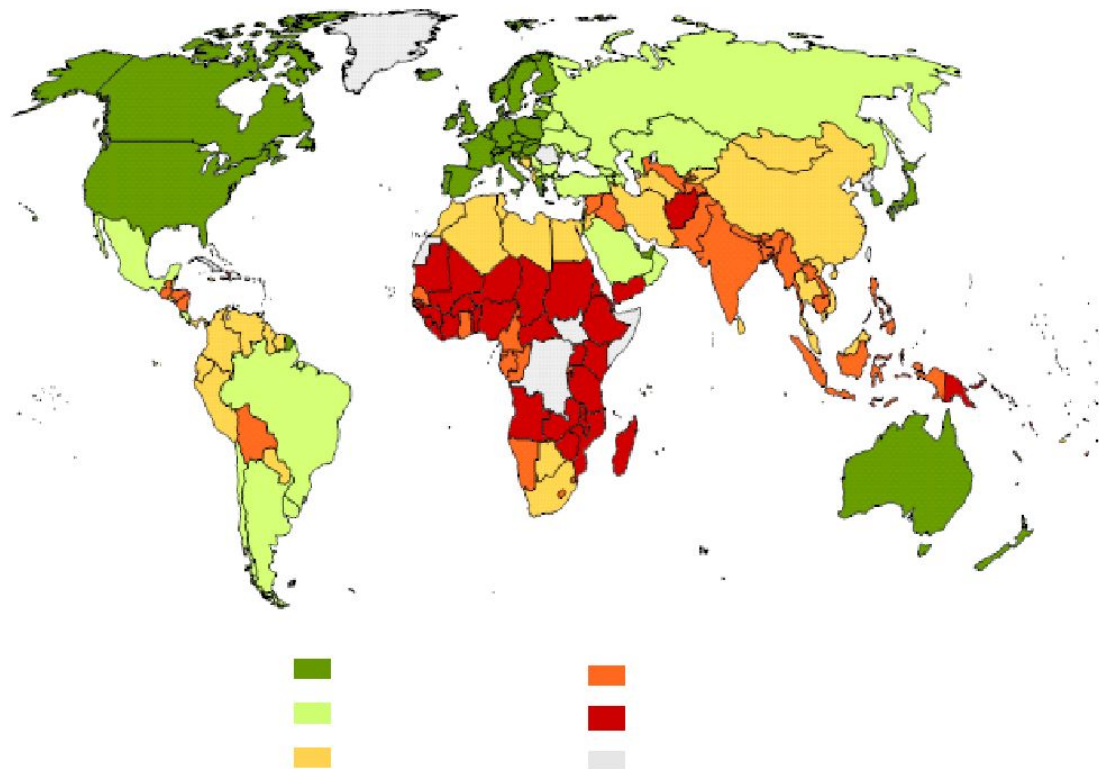
Epidemics



However, the region is more vulnerable,
due to structural factors...



Sub-Saharan Africa: Vulnerability to Natural Disasters

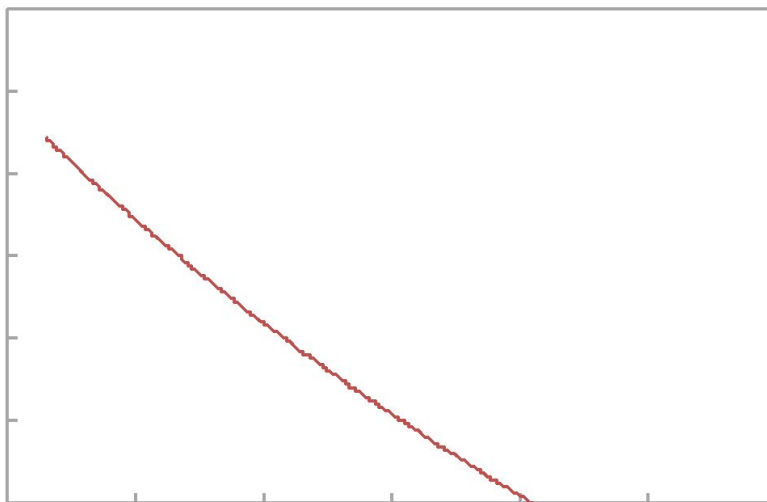


...including high reliance on rain-fed agriculture,...



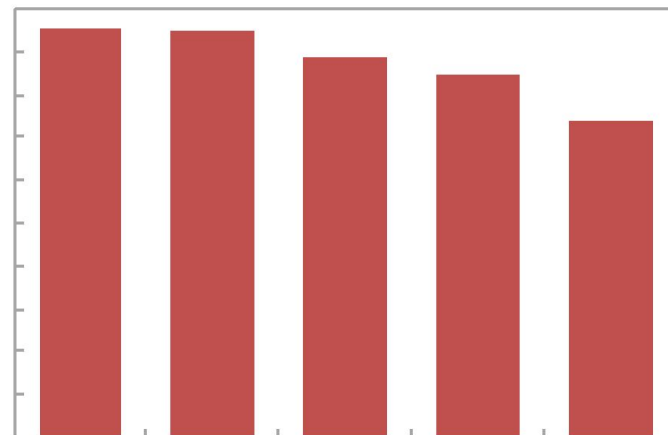
High share of agriculture in GDP

Share of Agriculture and GDP per Capita, 2014



And nearly all agriculture rain-fed

Percent of Rain-Fed Farmed Area, Average 2005–13

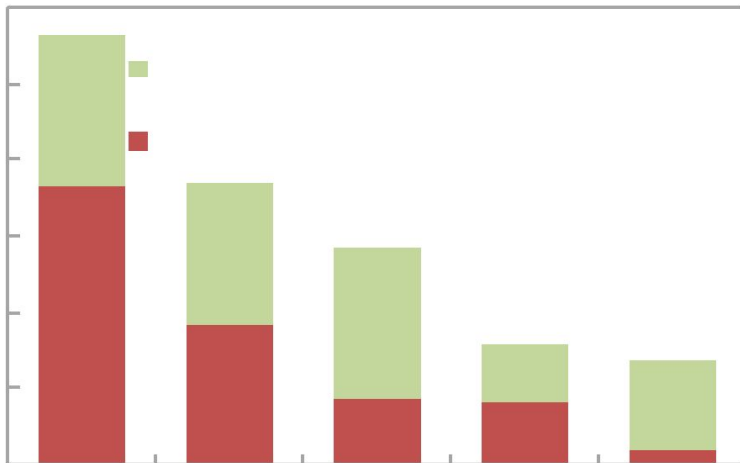




... and limited adaptation capabilities

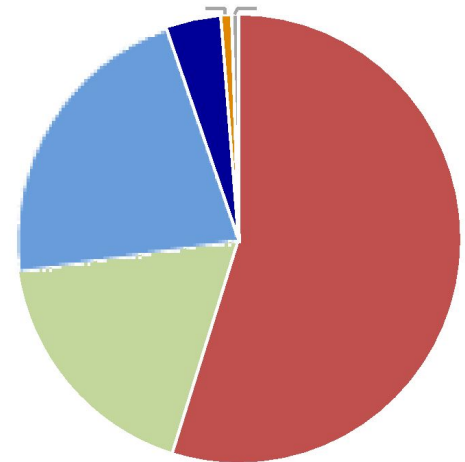
High levels of absolute poverty

Selected Regions: Poverty Headcount Ratios, 2012

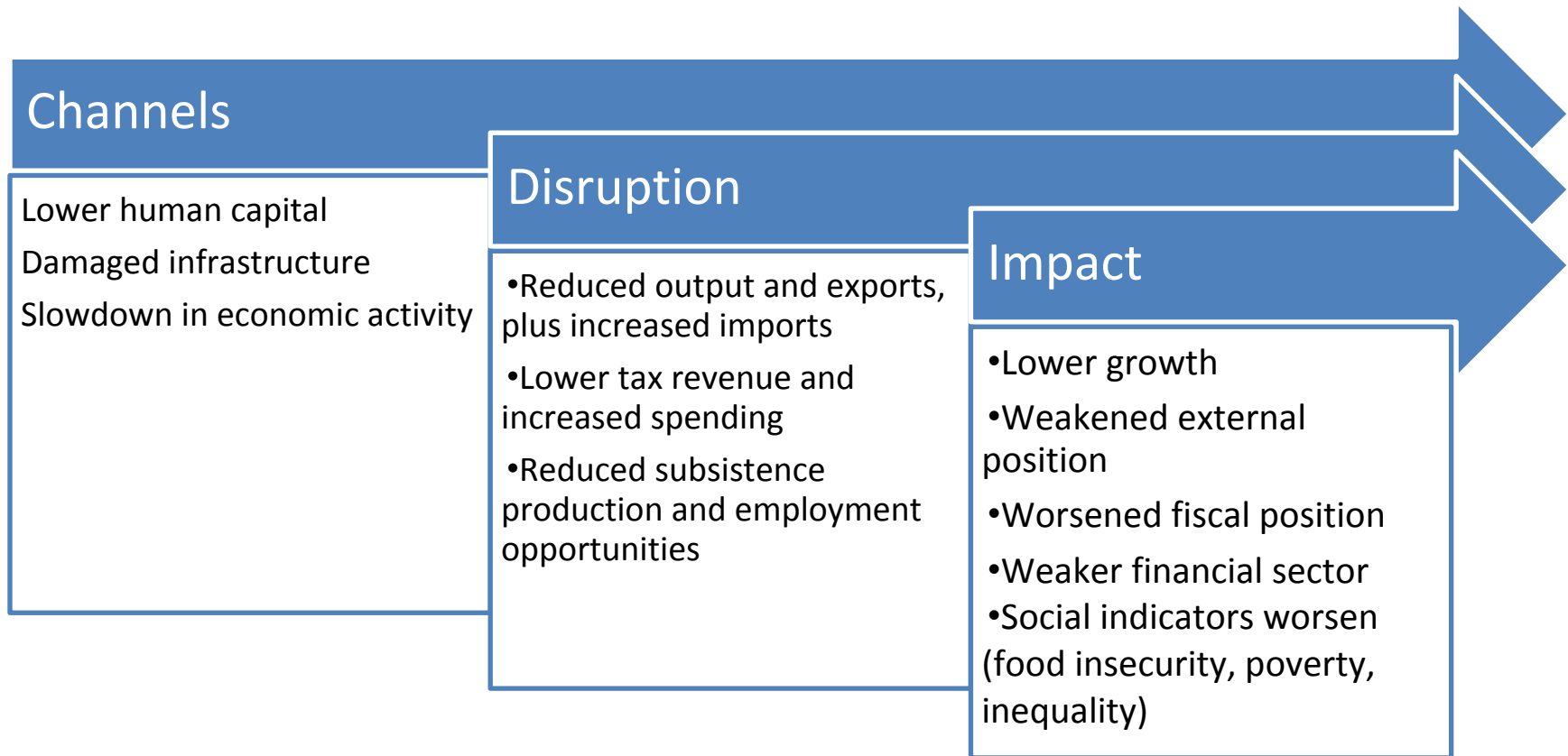


Limited financial sector development

Selected Regions: Agricultural Insurance Premium, 2011
(Percent of total)



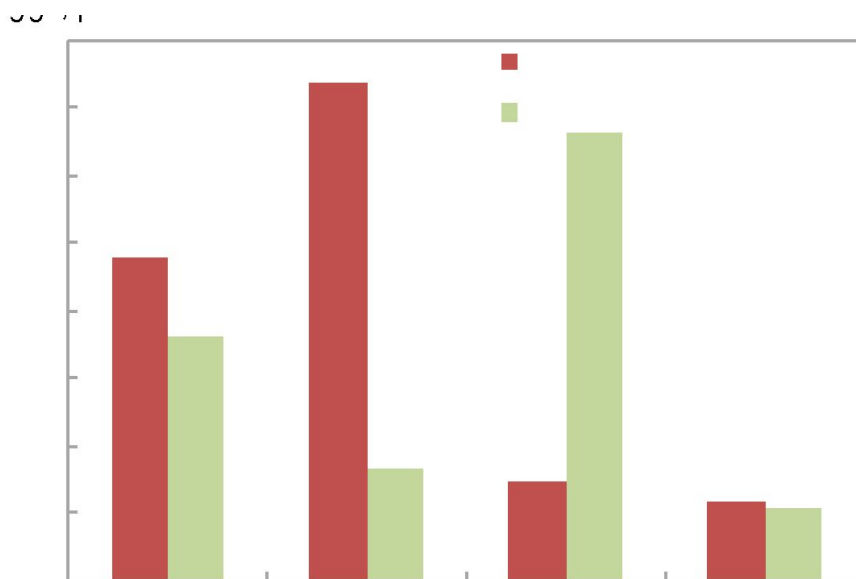
These vulnerabilities exacerbate economic and social impacts through several channels ...



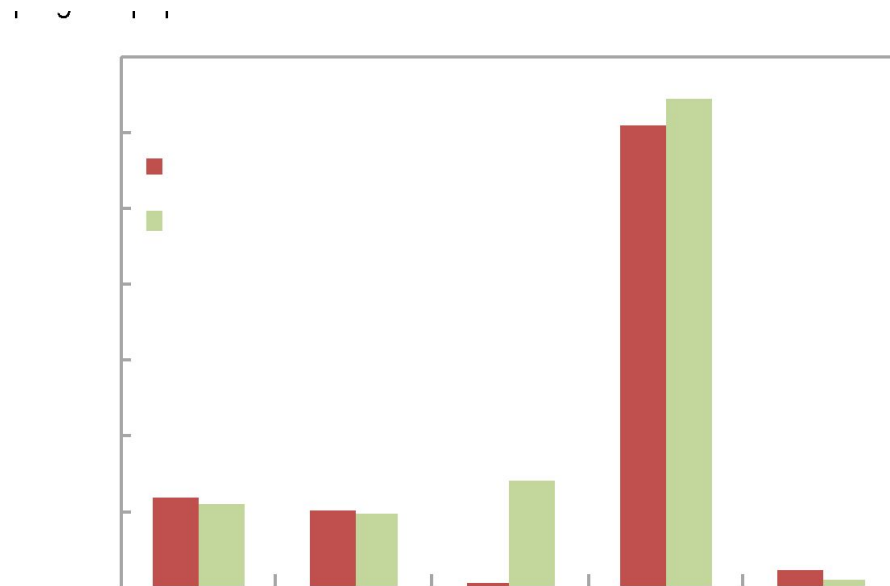
... And lead to a relatively higher cost of disasters in Sub-Saharan Africa than in other regions



Average Economic Cost, 1990–2014
(Top 20 percent of disasters)



Average Human Cost, 1990–2014
(Top 20 percent of disasters)

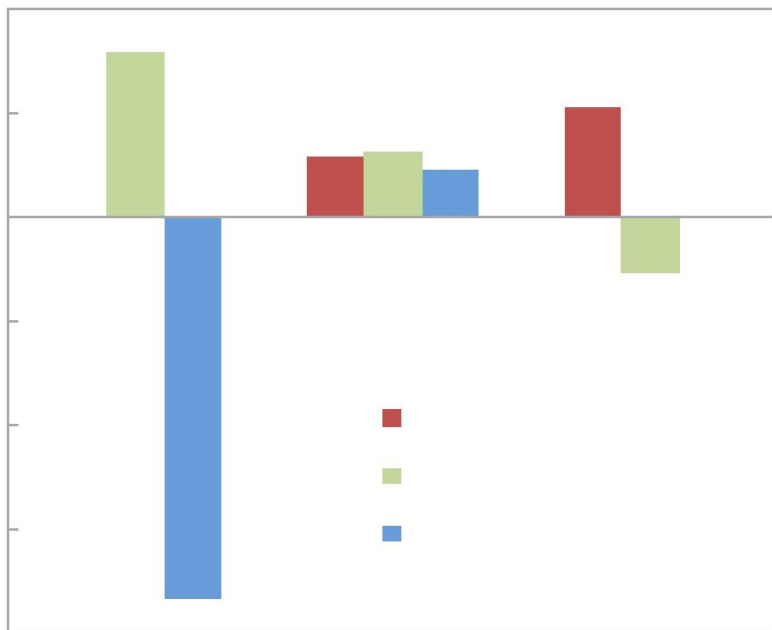


The growth impact is significant in the long-term



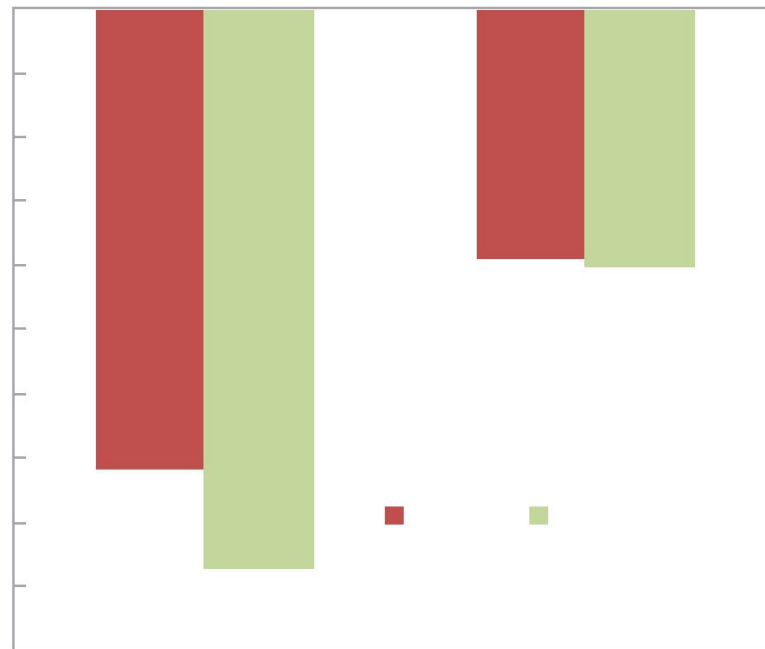
Muted growth impact in short-term

Average impact on income per capita growth, 1990–2014
(year of impact)



Significant impact in long-term

Average impact on real GDP growth, 1990–2014
(compounded over a 10-year period, percent)

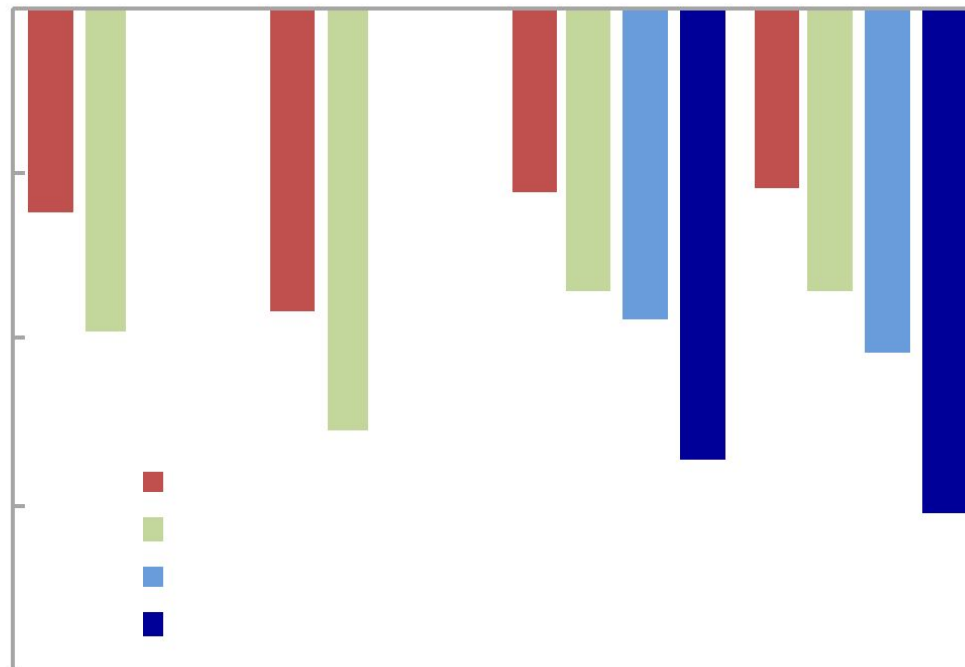


Natural disasters tend to worsen external vulnerabilities...



Econometric Estimates, Impact on Current Account Balance

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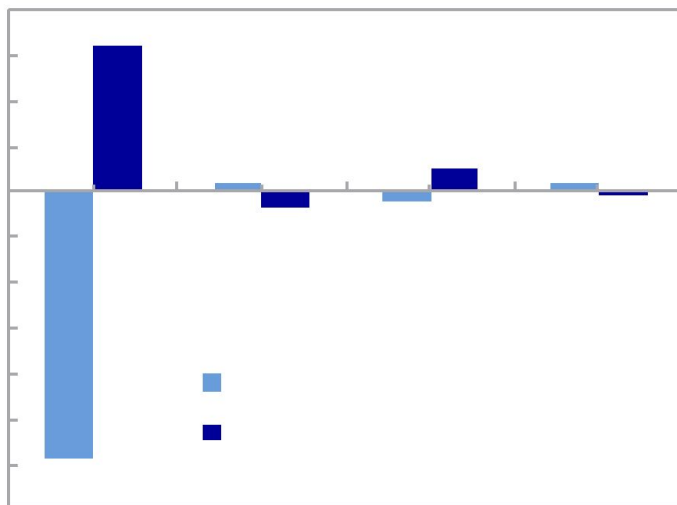


...as well as fiscal positions and the financial sector



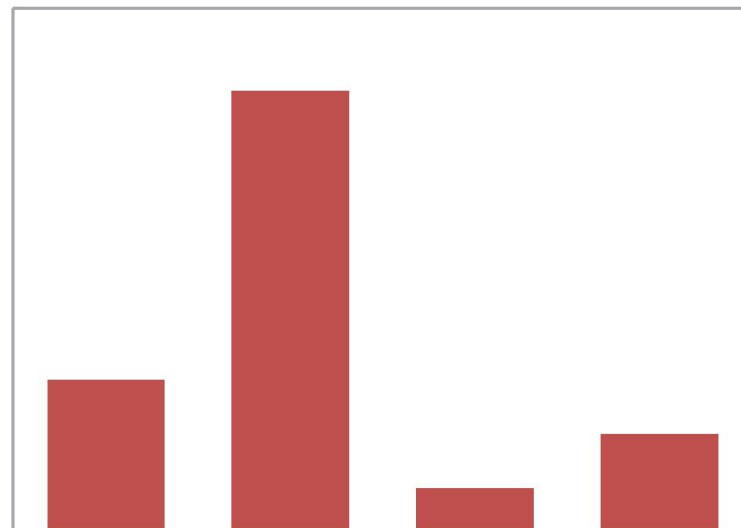
Weaker fiscal position in some cases

Event Analysis, Impact on the Fiscal Balance Excluding Grants, 1990–2014



Increasing Non Performing Loans

Econometric Estimates, Impact on NPLs

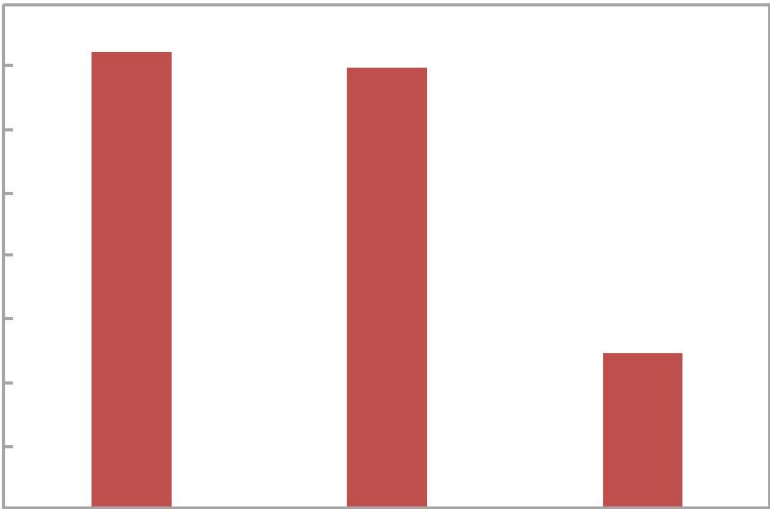




Social conditions also deteriorate.

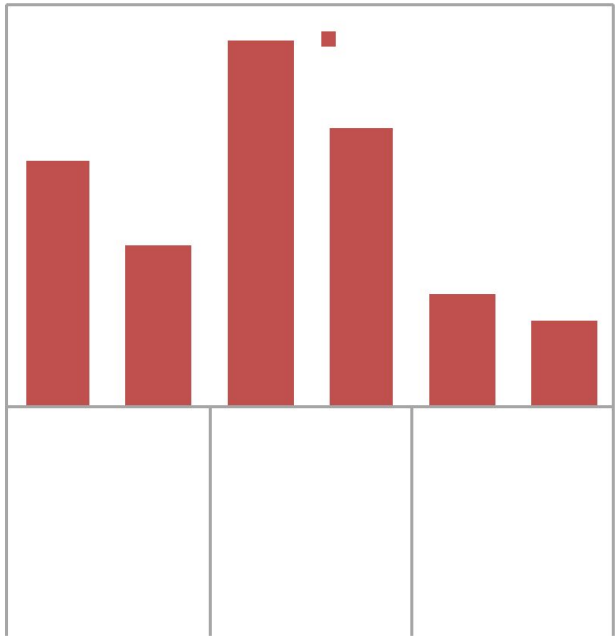
Food insecurity

Event Analysis, Food Security Index, 2011–14



Higher poverty and inequality

Event Analysis, Poverty and Inequality, 2011–13

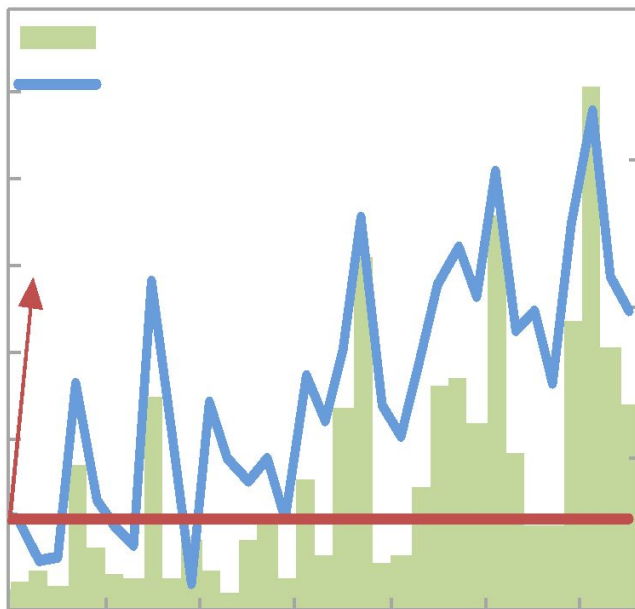




Climate change adds to the risks

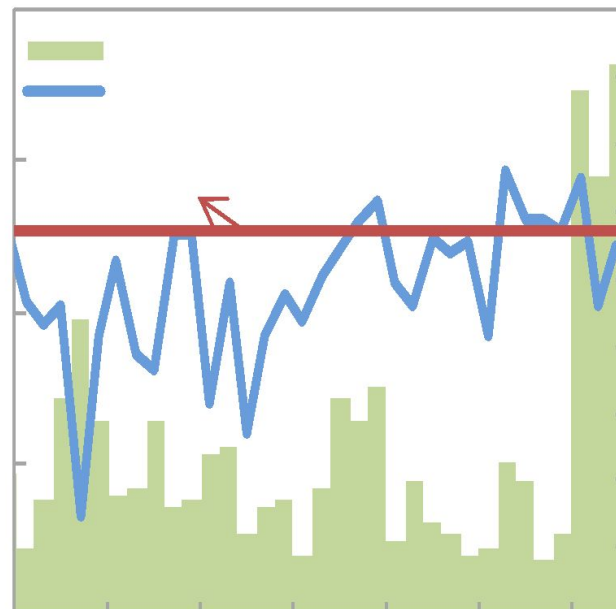
Rising temperatures

Temperature, 1980–2012



Increasing rainfall volatility

Rainfall, 1980–2012



The impact of climate change will be significant, although the exact magnitude is uncertain



Channels

- Reduced agricultural productivity and output
- Desertification
- Hydro generation capacity
- Rising sea levels
- Environmental degradation
- Propagation of diseases

Macro effects

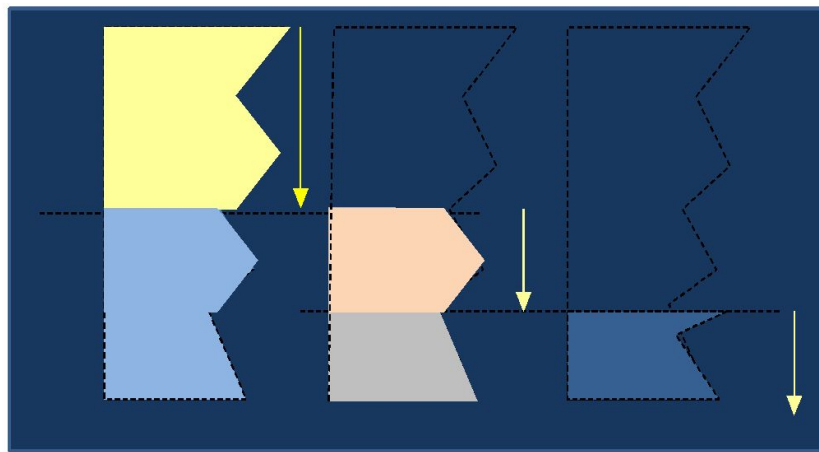
- Growth
 - Rising temperatures have reduced growth by 0.5 pp
 - Reduced rain has reduced agric. growth by 0.08 pp per cm.
- Fiscal
- Financial



Enhancing resilience requires a multi-pronged policy response

Mostly about risk management

Managing Disasters and Risks



With additional considerations

- Financial and technical considerations
- Many cost-effective initiatives undertaken in SSA
 - Including in low capacity LICs
- Enhancing resilience to natural disasters can also aid against climate change
- Local initiatives as part of global efforts



Emphasizing both risk reduction and transfer

Risk Reduction

- Risk assessment and information dissemination
 - More resilient agriculture
 - Economic diversification
 - Physical infrastructure
 - Stronger financial infrastructure
-

Risk Transfer

- Increased access cost-effective insurance
- Improved international assistance and coordination



But also dealing with residual risks and coping with disasters when they occur

Risk Retention

- Higher reserves and fiscal buffers can help in some cases
- Stronger social safety nets and public health systems
- Reliance on international assistance

Post disaster response

- Expenditure flexibility for disaster relief and reconstruction
- Domestic financing or aid
- Maintaining liquidity
- Exchange rate flexibility can complement adjustment



How can the IMF help?

Disasters

- Various instruments to meet Balance of Payment needs
- Augmentation of access
- Debt relief

Climate change

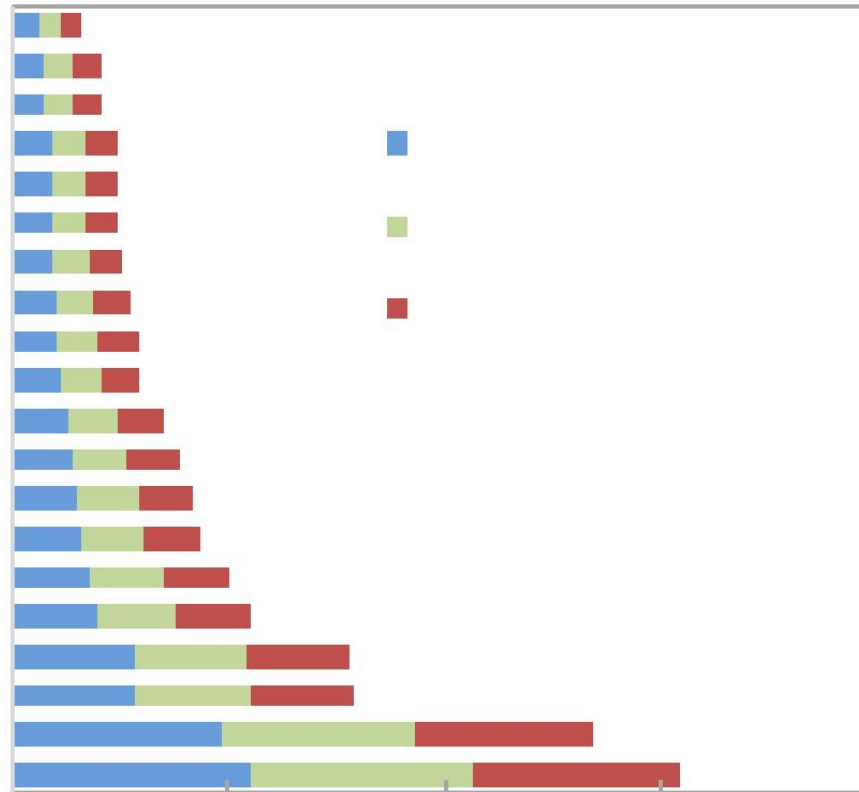
- Macro aspects and carbon taxation

Carbon taxation can help mobilize more revenues as part of a global response to mitigate climate change



Potential Revenue from Carbon Taxes, 2013 or Latest Available

Source: IMF



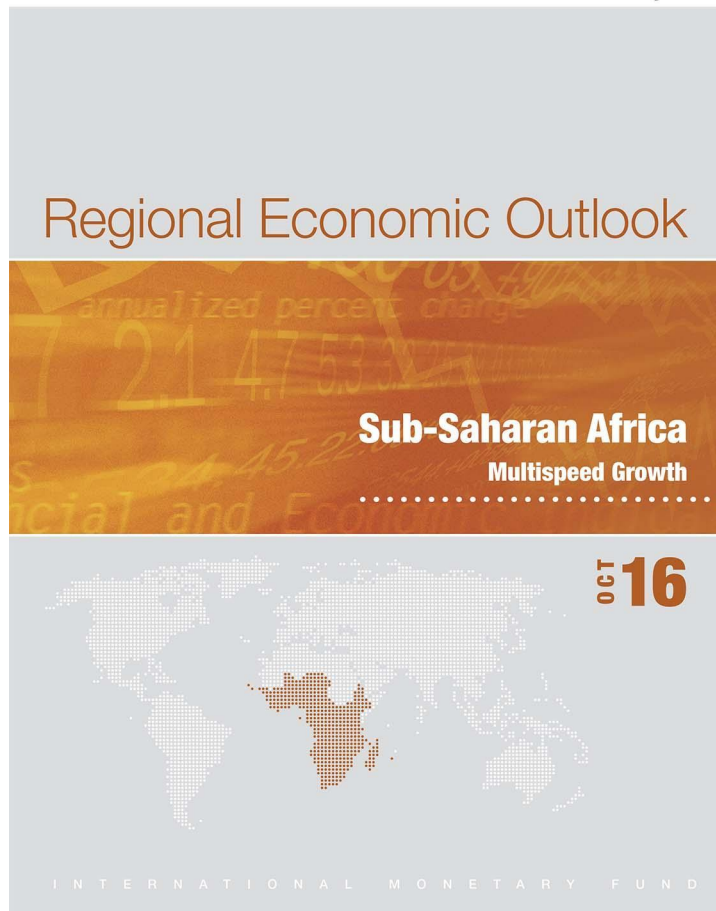
Concluding Remarks



- Natural disasters generate significant economic and social costs
- Climate change adds to the uncertainty
- Imperative to accelerate efforts to enhance resilience



World Economic and Financial Surveys



Thank You!

The online edition of the
Regional Economic Outlook
for sub-Saharan Africa
is now available at
www.imf.org