# Private Sector and Adaptation

- Relevance of the private sector to adaptation
- Climate impacts and risks
- Public sector role in achieving private sector resilience
- Financing climate resilience
- Private sector roles in achieving resilience

# What does the private sector have to do with adaptation?

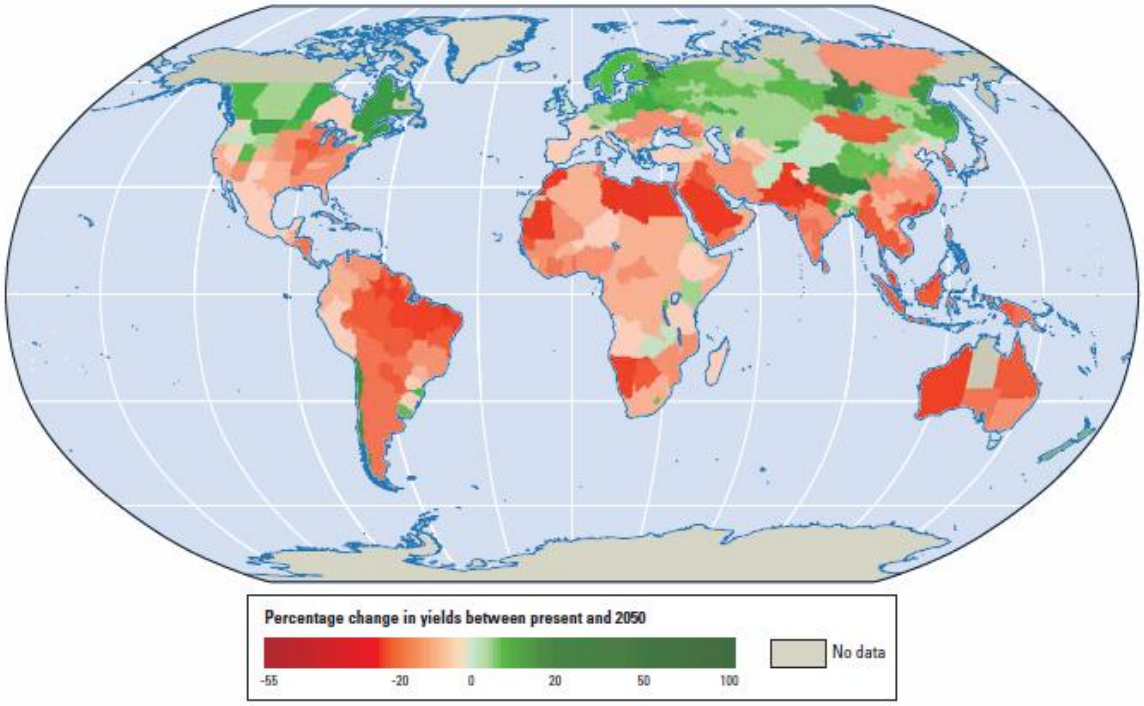
- Action on adaptation is often seen as primarily a responsibility for governments
- The private sector is sometimes seen just another stakeholder to be consulted...
- ... but the private sector has a critical role to play in actively contributing to climate resilience.

"*As the countries' economies are based on private sector investments, from small farmers to large global companies, the private sector will be a key partner in understanding vulnerabilities and in development of options.*"

Programming and Financing Modalities for the PPCR, July 16, 2009

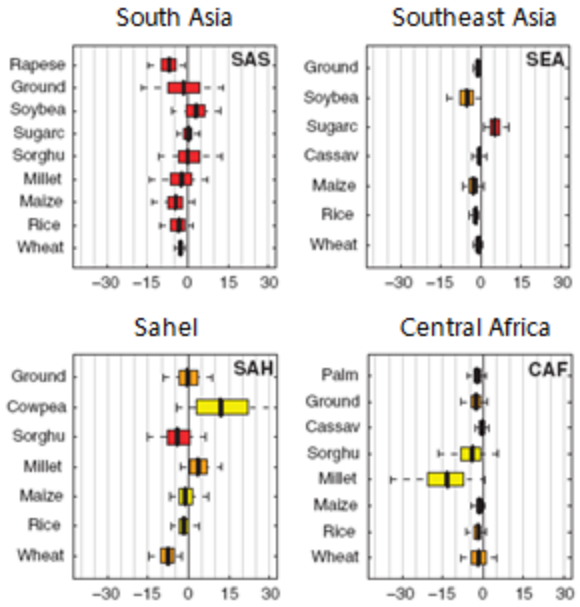
# Systematic and compound impacts on all levels of the private sector, independent of size and time horizons

Map 1 Climate change will depress agricultural yields in most countries in 2050, given current agricultural practices and crop varieties



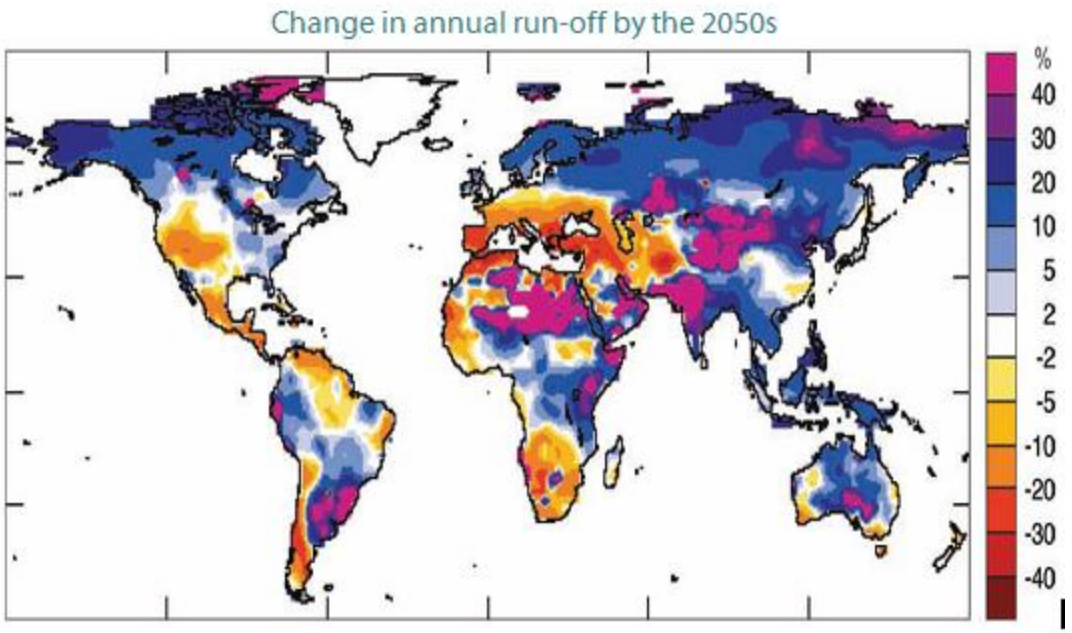

Sources: Müller and others 2009; World Bank 2008c.

Projections of production impacts in 2030 from climate change (% of 1998-2002 average yields).




From small farmers (annual crops, small plots)…

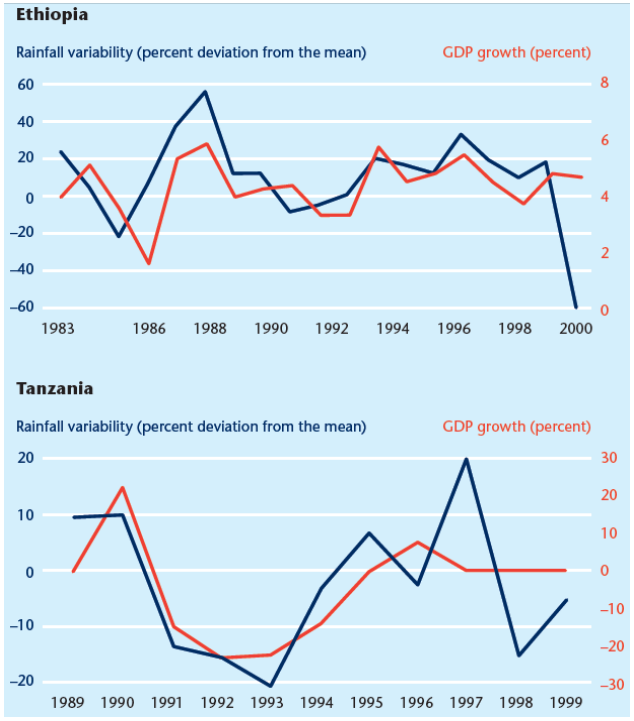
# Systematic and compound impacts on all levels of the private sector, independent of size and time horizons

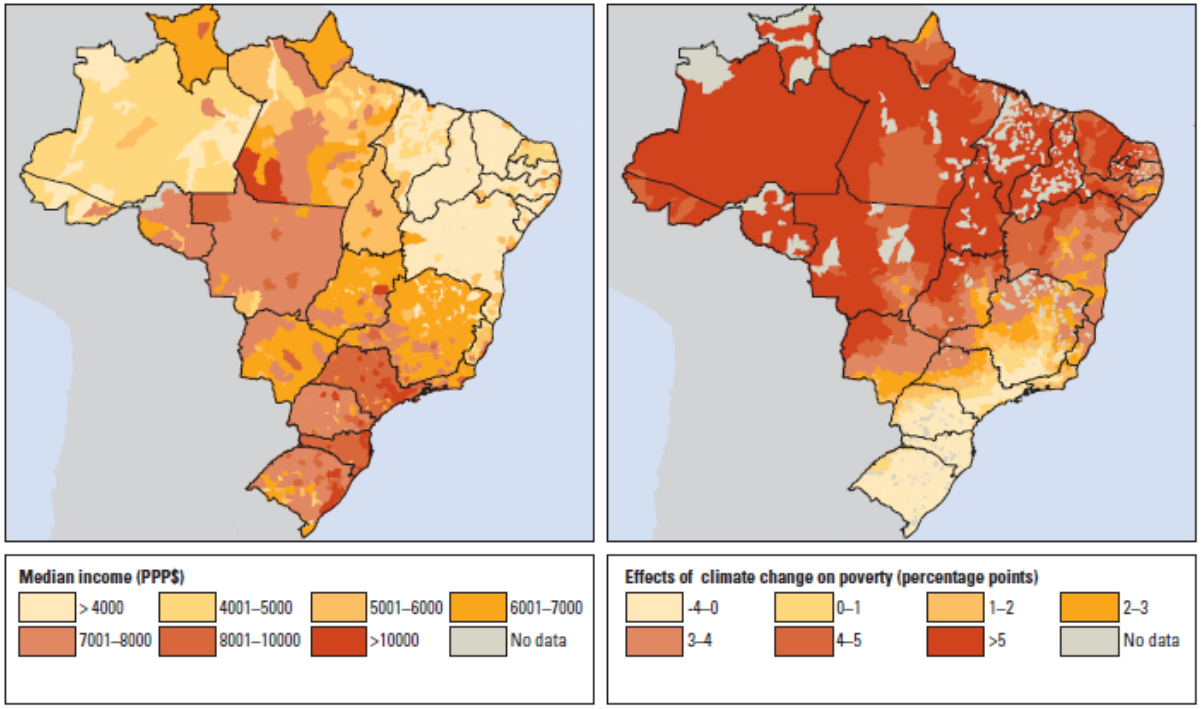



| Basin | Average annual flow | |
|---|---|---|
| | A2 (%) | B2 (%) |
| Paraná River | −2.40 | −8.20 |
| Grande | 1.00 | −3.40 |
| Paranaíba | −5.90 | −5.90 |
| Paranapanema | −5.00 | −5.70 |
| Parnaíba | −10.10 | −10.30 |
| São Francisco | −23.40 | −26.40 |
| Tocantins–Araguaia | −14.70 | −15.80 |
| **Brazil (SIN)** | **−8.60** | **−10.80** |

…to large hydropower (50+ year horizon, large investments)…

# Systematic and compound impacts on all levels of the private sector, independent of size and time horizons




Effects of unmitigated climate impacts on GDP and poverty

## Systematic and compound impacts on all levels of the private sector, independent of size and time horizons

- Direct risks and impacts
  - Financial
  - Credit
  - Operational
  - Environmental
  - Reputational
- Indirect risks and impacts
  - Shifts in market behavior
  - Environmental services
  - Water supply
  - Supply chain
  - Regulatory

# Towards climate resilience: Public sector role in creating a business enabling environment

- Examples of initiatives and solutions:
  - Climate information, for time horizons and geographic scopes that are useful for specific sectoral needs
  - Climate risk information, for vulnerable / strategic sectors and areas (e.g. watersheds)
  - Interpretation of climate risks, in terms that are useful for specific sectoral needs
  - Policy, effective regulation, appropriate incentives
  - Market based instruments
  - Investment in R&D (e.g. new crops)
  - Access to finance
  - Etc.

# Financing climate resilience

- Estimated investment needs for adaptation:
  - 0.2% to 0.8% of global investment flows by 2030 for 5 sectors: water; human health; agriculture, forestry & fisheries; coastal resources
  - Various studies estimate the need between $9 and $109 billion per year
  - Much of financing will have to come from the private sector

- Current investments in vulnerable sectors:
  - US$33 billion invested in transport, water & sanitation projects in low & middle income countries in 2007

# Private sector roles in achieving climate resilience

- Introducing best international practice and/or new technology
- Complementing state investment in sectors where investment needs are great and state budgets limited (e.g. power, infrastructure)
- Contributing to a greater diversity of sources and modalities of financing for adaptation
- Responding more flexibly to changing market conditions (which may be climate-driven)
- Demonstration impact that can influence governments and other market players

# Adaptation: Examples of private sector investment projects

- Climate proofing of existing projects, esp. infrastructure (e.g. ports, bridges, dams)
- Water storage (single and multi-purpose)
- Efficient / new irrigation
- Desalinization
- Flood and sea barriers (likely to be PPPs)
- R&D (e.g. new crops, likely to be PPPs)
- New financial instruments (e.g. weather derivatives, guarantees, insurance)
- New technologies and products (e.g. crops for new climate)
- Private sector and/or PPPs perceived as having a key role
- Etc.

# PPCR financing examples

"It should also contribute to improving the enabling environment and/or access to finance for the private sector to invest in adaptive measures (including innovative adaptation technologies)."

"Concessional financing, to attract private sector investments that may on their own not deliver the required rates of return, but where blending highly concessional loans with conventional financing to the private sector can help buy-down the additional costs and risks of private sector investments that would bring significant contribution to increasing national climate resilience. Some examples include:

i. guarantees and risk mitigation (e.g. first loss may be necessary to cover the risk of a bank lending to small scale farmers for water conserving irrigation technologies);

ii. monitoring and data collection programs (e.g. weather and yield patterns in strategic agricultural crops where the benefits are both private and public but where only blending with concessional finance would provide a private company with the incentive to invest in the project);

iii. additional costs that address climate uncertainties in public-private partnerships"

# Case study: Tajik Agricultural Finance Facility

- Small farmers were accustomed to growing cotton and lacked the financial and technical means to diversify
- Cotton requires large amounts of irrigation and other inputs
- Water intensive agriculture is highly vulnerable to climate change – models predict reduced water availability
- EBRD provided credit lines and technical assistance to enable farmers to diversify into other crops
- Farmers can make business decisions based on market, climatic and other conditions
- Increases flexibility, responsiveness and climate resilience