

KIPPRA ANNUAL REGIONAL CONFERENCE 2018
BUILDING RESILIENCE TO MITIGATE THE IMPACT OF DROUGHT AND FLOODS
5TH – 7TH JUNE 2018, HILTON, NAIROBI, KENYA



DAILY CONFERENCE REPORT FORMAT

DAY 2: WEDNESDAY 6TH JUNE 2018

CLIMATE CHANGE: AGRICULTURAL SYSTEMS, TRADE AND COPING MECHANISMS AT FIRM AND HOUSEHOLD LEVELS

PLENARY SESSION 2.1 - DROUGHT AND FLOODS: IMPLICATIONS ON AGRICULTURE AND TRADE

Impacts of Drought and Floods on Agricultural Systems and Food Security: Emerging Issues and Interventions” (James Murombedzi, African Climate Policy Centre)

The presentation sought to help understand the implications of 2⁰ Celsius or more of global warming; given the Paris Agreement seeks to limit global warming to 2⁰ Celsius and if possible to 1⁰ Celsius. Implications of different scenarios: -

- 2⁰ Celsius: There is 93% chance of avoiding 2⁰ Celsius global warming if greenhouse emissions are reduced by 60% over the next decade.
- 3⁰ Celsius: Low chance of avoiding 3⁰ Celsius of global warming if the warming surpasses the 2⁰ Celsius limit, triggering carbon cycle effects.
- 4⁰ Celsius: Poor chance of avoiding 2⁰ Celsius of global warming if rise reaches three degrees.
- 5⁰ Celsius: Negligible chance of avoiding five degrees of global warming if rise reaches four degrees and releases trapped methane into the atmosphere.

Costs of extreme weather events

- At micro level it causes entitlement failure, i.e. reallocation of land from small scale farmers to large scale farmers with efforts to pursue large scale commercialisation.
- At macro level impacts, it imposes adaptation costs, loss of production and damage to infrastructure. Adaptation costs in Sub-Saharan Africa are on average 0.5% of GDP, with weather-related shocks causing 2%-3% of GDP.
- With increasing number of climate shock events over the years, global economic costs of extreme weather events are increasing.

To mitigate the costs requires:

- Effective institutional arrangements;
- Invest in early warning systems to enhance preparation to minimise damage;
- Undertake hazard mapping.

“A synthesis of the Impacts of Climate Change on Agricultural Production Systems in EAC”

(Dr Joshua Ngaina, SEKU and Head of Department of Meteorology)

The presentation aimed at exploring spatial effects of climate change on agricultural production and food security in the EAC region (all the five EAC countries). It looked at the past and future trends of climate change in EAC to determine the effects of climate change on maize production in EAC.

The findings show that:

- Minimum and maximum temperatures are increasing;
- Annual percentage change in production, area harvested and yield under maize were all positive in EAC countries, indicating increasing trends in production.
- Maize yield variability in most regions was either positive or showed no change.

Going forward, it is important to:

- Facilitate data availability by putting in place appropriate policies on data sharing on matters of climate change and economic activities.
- Harmonise similar projects to create synergy in addressing climate change. It is noted different countries undertake similar initiatives.
- Assessing the impacts of climate change requires a trans-disciplinary approach to holistically understand the costs and design required interventions.

“Impact of Climate Change and Agricultural Policy on Welfare in the East African Community” *(Richard Mulwa, University of Nairobi)*

The presentation sought to assess how the welfare of EAC member states evolve over the next five years. The analysis used three scenarios. First, the status quo in that regional and national agricultural and climate change policies remain unchanged and climate variables do not change. Second, regional and national agricultural policies change and conform to Malabo/Maputo Declarations (agricultural sector funding rising to 10% of GDP). Third, regional and national agricultural policies change and climate changes.

The findings show that if countries adopt the Maputo Declaration, output will be higher than without policies. With introduction of climate change factor (maize only) – Kenya will lose 2% of maize production.

Recommendation

EAC countries should craft climate change policies; and country level policies should be harmonised;

Going forward action points needed include:

- Harmonisation of individual country agricultural policies with regional agricultural policies to boost coordinated agricultural production;
- Allocating more funds to the agricultural sector to boost productivity;
- Prioritising production of grains where countries have comparative advantage;

- EAC partner states should draft own climate change policies to complement the already existing regional climate change policy.

Implications of Trade Policies on EAC Agricultural Trade and Food Security (*Dr Chris Onyango, KIPPRA*)

The study aimed to analyse the implications of trade policies on agricultural products, both tariff and non-tariff barriers, on food security in the EAC region. Trade policies are essential because EAC is a net importer of food products. The key challenges relate to under-investment in agriculture and non-tariff barriers.

Trade policies in the EAC Treaty (agricultural issues enshrined A. 74, 75, 76); EAC Vision 2050 Strategy; and EAC five-year development plans.

Inter EAC trade is minimal at 9-10% of total EAC trade

Main constraints to trade in the region:

- Cross border trade is largely informal;
- Trade is affected by NTBs;
- Meeting growing needs of expanding population;
- Physical and soft infrastructure.

Priority areas for interventions to deepen trade of agricultural products include:

- Elimination of common external tariffs;
- Trade facilitation programmes;
- Infrastructure development;
- Simplified rules of origin;

Implications of intra-EAC trade due to climate change over forecast period of 2050

- Tanzania will be the main exporter of beans, sorghum and wheat to Rwanda, Burundi and Kenya.
- Uganda will export maize and rice to Kenya and Rwanda.
- Kenya is a net importer of all commodities from EAC except wheat and millet.

Panellists Comments

Milton Ayieko - Director, Tegemeo Institute

- Most agriculture is rainfed, making the sector prone to droughts and lower productivity. The livestock sector is also prone to shocks of droughts;
- To address the effect of droughts, there is need for preparedness, hence early warning information and data availability is critical;
- Government reaction slow, thus worsening the impacts of droughts and floods;
- Mitigation costs of droughts and floods is about 2% in Kenya;
- Need better coordination of food movement in the EAC region, hence addressing trade barriers is imperative;
- There is need for enough investment in technology, innovation and management practices; levels of investment in the agricultural sector should be guided by the Malabo Declaration (Ethiopia is apparently doing well compared to Kenya)

Dr Haile Kibret (Senior Research Fellow and Director of Research at HESPI)

- It is important to understand how costs of droughts and floods vary across ecological zones;
- There is also need to understand how the effects of droughts and floods vary (are they affected to same level or vary depending on magnitude). Also need to have analysis at national and regional level to holistically understand the issues.

Dr Joseph Karugia – Coordinator, ReSASS at ILRI

- Effects on households differ across agro-ecological zones and country. It is therefore important to understand dynamics at this level;
- Different countries have different capacities to produce in different agro-ecological zones, hence there is need to harness opportunity for specialisation and trade;
- Trade in agricultural commodities is still highly protected relative to other commodities, and impacts of trade barriers are relatively high;
- Agro-ecological zones do not coincide with administrative borders, hence agro-ecological zones are not restricted to national boundaries. There is therefore need for collaborative efforts for the EAC countries to create synergy in agricultural production that are supported by common ecological zones;
- Agricultural research expenditure is slowing down and is below the Malabo Declaration.

Dr. John Bore - KALRO

- KALRO is mandated to develop technologies in agriculture and livestock through extension services. The extension officers are few and government funding is unfavourable, hence extension services have dwindled over the years.

Agricultural Food Authority (Chair)

- The National Research Fund was established to address the challenge of fragmented investments in science, innovation and technology. This seems not to be happening.

Dr Lutta Mohamed – KALRO

- It's important to invest in science, innovation and technology to enhance agricultural productivity and introduce crops and livestock with enhanced resilience.
- Low level of competitiveness of local products is a challenge beyond climate change. There is need to address other constraints that exacerbate climate change impacts.

Questions from the Floor

Sahil Shah (National Chamber of Commerce);

- Cash crops such as tea tend to perform better than food crops. What lessons can be borrowed from performance of cash crops?

Esther Nyaosi

- For small scale farmers, women play greater role in agricultural production: Is the analysis gender sensitive to capture contribution of women?

Dr. Steven Muriithi – UON

- Extension services are imperative because of climate change; agricultural production of 1990s may not work in current times.

- Need to take advantage of devolution through county governments to support extension services. Currently, farmers rely on peer extension or personal experimental approach on what works.

Responses

- Financing institutions can leverage on Fintech to help farmers access information to address the gap in extension services. Such initiatives, however, require institutions that have technical expertise.
- Tea is a perennial crop, hence effects of drought on tea may be different from annual crops such as cereals. It may not, therefore, be meaningful to draw lessons from tea and apply to cereals production.
- Kenya faces weak policy implementations. Sometimes other countries have borrowed policies from Kenya and done better.
- Small scale agricultural production is mainly done by women and youth, hence analysis need to capture these dynamics.
- In this era of commercialization, the focus of agricultural production should not be on production of food crops such as maize in Trans Nzoia but on cash crops.

SPECIAL SESSION 1: OFFICIAL OPENING OF THE CONFERENCE

Executive Director of KIPPRA, Dr Rose Ngugi

Dr. Rose Ngugi made welcoming remarks, acknowledging the presence of the Chief Guest Cabinet Secretary for National Treasury and Planning, Hon. Henry Rotich; Principal Secretary for Planning, Dr Julius M. Muia; County Secretary for Garissa County, Abdi Ali; and Kajiado County representative Mr Daniel Nyoro, among other dignitaries and participants.

In her remarks, the Executive Director noted that the conference is being held at a time when the world is commemorating the UN World Environment Day. She highlighted the socio-economic impacts of droughts and floods on the country's economy, as part of the issues raised during the first day deliberations in the plenary, including the impacts of droughts and floods on agriculture, manufacturing, social protection and gender dynamics. She noted that the enactment of the National Disaster Management Bill will enable stakeholders to address droughts and floods phenomena more effectively.

Garissa County Secretary, Mr Abdi Ali

He started by acknowledging that the theme of the conference; "Building resilience on impacts of droughts and floods" is timely considering that ASALs have experienced severe droughts in recent times. Moreover, the damaging floods experienced this year have shown that the country needs urgent measures to address the disasters. However, Hon. Ali noted that Kenya and the region are somehow 'blessed' not to have other disasters such as volcanic eruptions, tsunamis, tornadoes, etc.

The County Secretary told the participants that Garissa County was badly hit by the recent floods, and especially for communities living along River Tana. Villages were submerged in floods. In his view, floods are largely caused by human-induced factors. Many residents had invested in riverine agriculture along the River Tana. Over 1,500 engines were washed away by floods. The county government has put a lot of flagship projects in agriculture. The problem is compounded by KenGen at the Seven Folks Dams. When the floodgates are opened, they sweep away whatever is downstream. He recommended that more dams should be built downstream to contain the ravaging waters from the upstream.

Kajiado County Government, Dr Daniel Nyoro

In his remarks, Dr Nyoro said that majority of the people have lost crops, livestock, and livelihoods. The issue of climate change brings droughts, famine and conflicts. When pastoralists move with their livestock, they are likely to be conflicts between herders and farmers. Livestock mobility is also prone to disease outbreaks during drought situations. Movement of livestock across international borders has led to Kenyan animals being auctioned by the authorities in Tanzania.

There is a need to come up with policies and strategies that will help in mitigating the effects of climate change. It is a nightmare to all of us. If not addressed, the residents of Kajiado County could face worse natural disasters.

Opening Remarks by the Cabinet Secretary the National Treasury and Planning Hon. Henry Rotich

The Cabinet Secretary appreciated the fact that the conference is timely, coming at time when the country is experiencing floods after a prolonged drought spell that started in 2016. He noted that Kenya's geography makes it vulnerable to climate induced hazards (floods and droughts). With over 80% of the country being arid and semi-arid land, which receives erratic rains.

He pointed out some of the effects of floods and drought as:

- Disruption of production flows which results in production loss
- Increased operational cost
- Loss of income
- Unemployment
- Loss of government revenue with an estimated 2-2.8 percent per annum of GDP and between 2008-2011 the total drought loss and damage amounted to 968.6 billion and resulted to reduction in Gross Domestic Product growth rate from an average of 6.5 percent in 2006/2007 to an average of 3.8 per cent between 2008 and 2012.

He highlighted measures undertaken by the government to address floods and droughts hazards. These include;

- Government has prioritized droughts and floods in its development agenda and a separate sector under MTP III (2018-2022)
- Several county government have also integrated climate hazards in their County Integrated Development's Plans (CIDPs)
- The Ministry of Interior and Coordination of National Government has developed National Disaster Risk Management (DRM) Policy, 2017 that has been approved by the Cabinet. The policy aims at building a safe and disaster resilient country
- The Government has established the National Drought Management Authority to exercise coordination on drought management issues, including implementation of policies and programmes.
- National Drought Emergency Fund (NDEF) has been established with an allocation of Ksh 2 billion annually from the Exchequer to support action against climate induced risks. In addition, the national Drought Emergency Fund Regulations, 2018 were approved by the cabinet recently. The Regulations proposes that the resources to the NDEF shall be allocated to various drought risk management components: resilience and preparedness measures, response interventions and recovery interventions
- The government has developed a Disaster Risk Financing Strategy to manage any residual risks more effectively. The strategy sets out four strategic priorities namely ensuring a coordinated approach to disaster risk financing across national and county government

institutions dealing with disaster risk financing instruments; improving sovereign financing capacity by strengthening and expanding the national and counties' portfolio; supporting key programmes to protect the most vulnerable populations and enhancing the capacity to respond to disasters of national govt ministries, departments and agencies

- Government allocates Ksh. 5 billion annually for the Contingencies Fund
- Other measures include support to the Kenya Livestock Insurance Programme; Kenya Agricultural Insurance and Risk Management programme, and Hunger Safety Net Program (HSNP)
- Enactment of the Climate Change Act, 2016.

To be effective, these measures will require a well-coordinated mechanism involvement all stakeholders: county committees, development engagement partners forum.

PLENARY SESSION 2.2: COPING MECHANISMS

Showcasing Initiatives and Interventions: Victor Orindi – Coordinator Adaptation Consortium

The objective of the presentation was to showcase initiatives and interventions undertaken by ADA consortium in collaboration with the local community and the County government.

Objectives of the Presentation

- To demonstrate the importance of governance in project implementation.
- To show how community ownership made the projects sustainable.
- To demonstrate how the project implementation impacted on lives of the beneficiaries.

Highlights of the Presentation

- The presentation showcased what ADA was doing with the county government and local community.
- ADA has supported govt devolved units to support climate change in an effective manner.
- It demonstrated how the consortium developed governance structures that make the projects sustainable in the long run.
- Consultations with the local community ensured that the projects being undertaken were relevant and had community ownership because they set priorities.
- Collaboration with relevant government agencies like Kenya Meteorological department helped in providing early warning systems.
- The local community have their own adaptation measures depending on the season.

Main Recommendations

- Governance is the most critical element in project implementation.
- It is important for the local community to prioritise projects and be involved in implementation to ensure ownership and sustainability.
- It is important to involve the county government in implementing projects.
- Accountability measures are an important element of project implementation.
- Projects need to have the capacity to build community resilience to climate change.

A satellite-based resilience strategy for drought and flood: Dr Fabio Vescovi – Airbus

The presentation focused on the IPP (International Partnership Program) covering Ethiopia-Kenya Project, which uses satellite derived index values to develop a dashboard to get a picture of how crops are performing during the drought season.

Objectives of the Presentation

- Demonstrate how we can build drought resilience.
- Create awareness on how satellite technology can be used to detect drought.
- To show how the mechanism makes use of intermediaries in implementation of the strategy.

Highlights of the Presentation

- Dashboard is a web-based tool based on satellite data, modelled data, local data and contextual data.
- Two market sectors are identified: Micro-insurance and Governmental institutions
- The satellite detects drought or floods and uses this information to compensate farmers.
- Farmers are ranked before compensation is awarded. The least ranked receive compensation.
- The dashboard can also serve government institutions to show how healthy crops are among other things.

Main Recommendations

- This new technology is more effective than the traditional insurance schemes.

Kajiado County Drought Experiences in 2017, Constraints and Lessons *(Dr D. Nyoro)*

This presentation highlighted the experience in dealing with the 2017 drought in Kajiado county

Objectives of the Presentation

- To give an account of Kajiado county's drought experience in 2017.
- List the stakeholders involved in response during the drought.
- Present the extent of damage or losses incurred.

Highlights of the Presentation

- Quantities required for some interventions were not adequate.
- County came up with flagship projects to strengthen resilience of livelihoods.
- The county was constrained in planning for the county wide disaster since the whole county was affected.
- Funds were unavailable for drought response.
- There existed a weak Monitoring and Evaluation Framework.

Main Recommendations

- Sharing of resources, expertise and technical personnel
- Joint targeting and identification of beneficiaries
- Coordination of all stakeholders across the County
- Monitoring and Evaluation of intervention programmes
- Development and updating of contingency plans
- Reporting and consolidation of response activities

A new dawn in Pastoralism: Producing Fodder for Enhanced Resilience and Economic Growth *(Dr Stephen M Muriithi, University of Nairobi)*

The presentation focused on how fodder production can enhance resilience and spur economic growth.

Objectives of the Presentation

- Demonstrate the importance of the livestock market to the Kenyan economy.
- Enumerate the constraints to livestock farming.
- Present the economic impact of the deterioration of livestock farming.
- Show the existent policy gaps.

Highlights of the Presentation

- Positioned fodder production within Vision 2030, SDGs and CIDP plans.
- There is an untapped potential for livestock and livestock products.
- Identified the missing link in livestock production.

Main Recommendations

- Reposition the fodder value chain by strengthening investments and agribusiness enterprises in fodder and fodder seeds production
- Review and develop supporting policy regulations and institutional framework, research, extension and training to build a robust fodder value chain and well managed pasture lands.
- Strengthen collaboration among all fodder value chain actors including national and county governments and other partners to synergize efforts towards curbing the national fodder deficit
- Facilitate the mapping and establishment of large-scale pasture fodder production at National level

Issues arising during plenary discussion

1. How can we build resilience towards drought?
2. We need to have a common planning and coordination system
3. Early warning early action mechanisms could be improved in the effort to build resilience
4. Coordination is one of the key issues
5. Has the innovation by airbus been rolled out in the market?
6. What informs decisions to set aside funds for mitigating effects of droughts and floods. How do we arrive at the figures?
7. NDMA- use of satellite info does not account for crop failure; what other methods can be used to compliment the method?

Responses

1. The index has input the index of Boko Univ. Drought is described by temperature variation. You can detect ailment the same way the thermometer detects fever.
2. The technology is not yet in the market but will be there in 2019 because there is emphasis on marketable result of the project.
3. Index detects failures but 90% of failure due to disease. Index works for other disease or pest situations.
4. AFC carrying capacity – the thinking is that under non-equilibrium systems, how can we approach livestock keeping to be market oriented? Livestock migration will continue but there will be the issue of fodder production. Costs of irrigation much higher than the value of crops produced
5. There is need to work out /embedded drought emergencies in the county workplan.

Plenary 2.3 Adaptation and mitigation

- Climate change is about lives and assets and not about policies. The weather is predictable and therefore manageable, and it is the biggest threat to the BIG FOUR agenda, if not corruption.
- We were able to manage Nairobi 50 years ago, but now we cannot. Yet, we can transform the country if we plan to. How?
 - Plant more indigenous vegetation, build more water dams and harvest rain water. If we have our priorities right, this can be done
 - Learn from communities and work with them. Communities know more than we do, and we should allow them to tell us what to do
 - Leverage on technology (i.e. early data and information)
 - We need strong leadership and institutions. We can forget intervention if we do not have strong leadership [new acronym for NATO - No action, talk only]
- He noted that planting vegetation, water pans and small dams is not an event but should be an everyday thing.

Title of presentation: An index-based livestock insurance, towards sustainable scaling of financing, presented (F. Fava, ILRI)

- Drought represents the major source of vulnerability for communities. This is being made worse by increasing climate variability, increasing population and evolving land tenure
- There is need for insurance as a sustainable intervention that can help pastoralists quickly recover from the shock. They (farmers) should not result to quick sales of livestock in distress. Insurance is a market driven solution, therefore can drive in investments.
- Conventional insurance not the best way to go for the livestock sector now. The best way to go is livestock index based. The Index is strongly correlated with individual losses, it is objective and it does not insure individual losses. It is thus better suited to the risk profile of pastoral communities.
- Since 2008, ILRI has worked to develop the index for pastoralists. Satellite imagery is used to assess forage availability and detect drought related forage scarcity.
- Unit of insurance - takes into account migration patterns.
- Compensation is presented early in the season aiming at protecting pastoralists from losing their livestock.

Activities so far:

- 2008 – product launch
- 2010 - first commercial product launched
- 2011 – drought triggered contracts in all covered areas
- 2015 – KLIP issues first policies to 5000 pastoralists households slip across Wajir and Turkana.
- 2016 – Kenya Livestock Index Product (KLIP) further scaled to 8 other counties.
- Over USD 7m was disbursed in 2016/17

Why Index Based Livestock Insurance has worked so far: The missing middle research implementation feedback loop

- Accurate product design
- Evidence of value and impact
- Establishing informed effective demand
- Low cost, efficient supply chain
- Policy and institutional framework infrastructure has been critical
- They respond to the needs of the people hence the success.

Evidence of impact and value if IBLI

- Increase herd survival rate by reducing risks.
- In terms of demand, they work on capacity building so that the client understands the product. They developed a strategy across all the levels from institutions to community level. This entails;
- Efficiency agency models and tools
- Developed mobile sales.

In terms of institutional infrastructure, it includes a sustainable large-scale Index which requires a well-articulated policy

Conclusion:

They have demonstrated that index-based livestock insurance can add value to pastoralists and have proposed a model that identifies key barriers for scaling it up. However, more is needed to make it an effective strategy, for example:

- Support impact evaluation studies
- Product design and integration into other systems e.g. early warning
- Product quality metrics
- Development of digital platforms and data infrastructure.

Title of presentation: climate risk financing: Financial instruments for mitigating and coping with climate disaster risk: what do we know? (Christine Oughton)

IPCC predicts climate change will increase weather variability and intensity of related extremes. The effects will be felt mostly in African countries. There is thus urgent need to mitigate risks by taking measures to reduce cc and be prepare

Financing instruments and planning

- They are useful for governments, donors and individuals but need to be integral.
- It is better to have ex ante instruments, i.e. plan in advance as opposed to ex-post instruments. This ensures that one has a financing plan on how to deal with the disaster. What is needed is a contingency fund or budget allocation. Also, an insurance scheme to compensate those who have lost using an index.

Ex ante instruments include:

- Contingency fund or budget allocation
- Line of contingent credit
- Traditional insurance or reinsurance
- Indexed insurance
- Capital market instruments
- Risk pooling – this has to be over a wide area otherwise it will be difficult to manage
- Micro insurance.

Issues that need to be solved:

- Climate change issues are not like theft. It (Climate change) often leads to large claims payment hence the need to pool risks.
- Moral hazard -may give less incentives for risk mitigation
- Then the question is; how do you price the products to give incentives for risk mitigation?
- Adverse selection – those that feel they will suffer more are the only ones who will buy insurance. However, there is need for all to have insurance
- Cherry picking – private insurers cherry pick low risk individuals and can lead to exclusion of high risk individuals
- Need to ensure financial inclusion
- Role of government to cover larger risks

- Need micro insurers for small farmers/individuals

How do you encourage the small farmers to take up scheme? The scheme should be explained by those close to them in the community, to encourage them to take up the products.

Conclusion

- Distinguish between ex ante and ex post disaster risks to reduce the cost of the risk through mitigation
- Finance can be good for the society
- Issues in insurance, adverse selection, moral hazard, thin reinsurance, etc explain why private insurance are not rushing in
- Need for public insurance, private insurers, mutual schemes, micro and risk pooling mechanisms to deal with the risks and scale complexity. One size does not fit all

Livestock insurance for pastoralists (Hassan from Takaful Insurance)

Livestock insurance has moved from animal compensation to forage scarcity product insurance. The idea is that once you insure fodder, the livestock can survive for a period. Hence, livestock insurance is not based on the market value of the livestock.

- They cover 75% of Kenya (in 8 counties) and they started in 2013
- Cover only drought, pastoralists and cover forage cover because 80% of livestock loss results from drought
- Livestock covered include goats, sheep, camel and cattle

Forage contract – colour moves from green to black

- Green – it means things are good
- yellow
- Red – the pastoralist is feeling the pressure of the disaster but no payment is done here.
- Black- This is when the situation is bad, and payment is done
- Average pay-out so far: > 100 million per year
- There is need for a shared risk approach as it is the only way the risk can be managed.
- Their insurance works in such a way that pastoralists buy the product directly. Government, donors and private sector brings in money. However, County government absent, and are encouraging them to get involved.

They have products at various levels, including;

- Macro level product – national level
- Meso level – not yet implemented
- Micro level – already on sale for the last 5 years

Their model:

Kenya livestock insurance product + county level index = total coverage.

There is need to identify and mitigate show stoppers for their products. These include:

- Need for geographic diversity
- Product sophistication

- High transaction cost

The product is sold at community level, i.e. shopkeepers involved at village level and then the shopkeepers are left to sell the product. Therefore, it is a community-based agency model. Features include:

- Application of mobile technology – shopkeeper uses an android phone. No cash transactions are done but relies on mobile money.
- The customer does not claim but pay comes from an analysis of satellite imagery
- Noted that payouts outstrips premiums
- There are 30,000 families on board and hopes to grow this in future

Impact on community

- product comes at a time of distress making availability of cash critical
- Provision of fodder and water at the height of the drought
- Reduced panic sale of stock
- Builds confidence among pastoralists

Interventions in agricultural – adaptation and mitigation (*Esther, Equity – Financial intermediation experience*)

Focus on how to add value to community by understanding their needs. In agriculture financing, they are guided by:

- SDGs. They don't see challenges but look for opportunities in the SDGs.
- Malabo declaration commitments

Equity Bank is willing to finance all opportunities that entrepreneurs find and are willing to capacity build for investment purposes. They look at their capabilities from a lens of technological innovation. Because they understand that bankers may not understand issues in agriculture well, they hire agriculturalists and turn them into bankers to be able to articulate the issues well.

Their approach – how to overcome challenges using the right partners. Collaboration is key with government, research institutions, farmers, consultants etc

Agricultural investment challenges/risks

- Production risks linked to natural hazards. Agricultural products subject to seasonality and gestation period. This leads to market uncertainty
- Limited collateral – farmers lack collateral, traditionally required by banks
- Land use management/ownership
- Poor infrastructure especially in rural areas
- High transaction and logistical costs
- Increasing climate variability and rampant land degradation
- Low financial literacy levels in communities

In overcoming the challenges, they have resorted to:

- Partnerships with local and international organizations. This allows integration of the various players in agricultural production. It defines scope and purpose of supporting agriculture while spreading risks
- Other interventions – staff training, developing customer focused products (agricultural customised loan products that are relevant to farmer's needs)
- Offer indemnity, index-based insurance
- Social payments in partnership with WFP, Red cross, UNICEF etc
- Risk contingent credit
- De-risking through financial literacy
- Re-forestation programs – they help communities near forests to fix their livelihood needs so they don't destroy forests
- KCEP-CRAL card components – it is card based. Money is put in the card and a farmer goes to an agro dealer to pick seeds.
- Kilimo biashara
- Warehouse receipt system
- Digital banking channels as it reduces costs and helps them reach as many clients as possible

Summary from presentations

The following are key:

- Community involvement
- Leveraging on technology
- Climate risk is not like theft and one can plan
- We need to start engaging the youth and letting them make presentations

Panellists

CIC group

CIC is strong in the index-based livestock insurance and have paid out more than they have received in premiums. In addition, they are large in private sector for wheat, groundnuts, lentils, green grams, barley etc, and in commercial agriculture insurance.

- He noted the need for involvement of more players in agricultural insurance to pool risks.
- Despite the high pay-outs and low premiums, they are still in the business as they believe they are giving value to the country and more and more people will be educated to make it grow from a loss making product to a profitable one
- They are also big on area yield crop insurance – they guarantee yields for farmers and if they fall short, they compensate
- Other Multi-peril products - includes fire, pests and others not necessary climatic related. They use cooperatives as aggregators where premiums are paid through cooperatives and then insured against the various perils.
- How do they determine how much to allocate to insurance on floods and droughts? Actuaries do this. They get satellite weather patterns and number of households and sums to be paid can then help calculate premiums.

Banking sector representative

- Climate change may hamper the government's BIG FOUR agenda. However, banks are committed to innovative products to cater for the adverse effects. They focus on financing projects that create social and economic value to turn back the clock on global warming. This needs concerted effort with the private sector.
- We need to reduce concentration of GHGs by planting trees and the banking sector has been very active in this.
- In terms of addressing recovery of the green cover, they select projects to finance based on their impact on the green economy.

Questions

- The solutions given so far are market based. Given moral hazard issues, what is the constraint for market solutions? What is the market detection mechanism to ensure polluters pays for it?

Answered

- Don't just insure high riskers, ensure everyone has insurance. This is more difficult under CC because the risks are predictable and those who view themselves as low risk will not be willing to take up insurance (Selection bias). There is need for private companies to come in.

Questions

- Are you expecting things to improve for takaful? Will you continue to compensate or what?

Answered

- Takaful: – They expect to make profits in future. Initial losses of new products expected. For now, they have 30,000 families but will be scaled up to about 150,000 families to ensure profits. They will also focus on geographic diversity to include other areas and not just ASALs. Government taking the bigger risk. Livestock insurance not a profitable business anywhere in the world.

BAG 2.2 Coping Mechanisms: What Works for Households and Firms (*Adan Shibia, KIPPR*)

Owing to time constraints the presenter indicated that he would focus on the findings of the research. Consequently, the presentation focused on identifying and prioritizing the key coping mechanisms deployed by households and firms, respectively, in mitigating the effects of droughts and floods in Kenya's ASAL regions. The findings of the study were based on two triangulated data sources, from a KIPPR Survey data which surveyed 1000 households and 800 firms, as well as from the KIHBS 2015/16 data. Alongside the surveys, the combined studies also relied on Key Informant Interviews.

Highlights:

The presentation covered existing coping mechanisms, including traditional, informal, and modern coping mechanisms, such as the use of financial instruments. The presentation sought to bring out the take-up of various coping mechanisms by the surveyed households and firms.

According to the KIHBS data, households adversely affected by droughts deployed the following coping mechanism as their first recourse for mitigating the effects of drought: doing nothing (deployed by a third of the respondents); spending of family savings (adopted by nearly 20% of respondents); while others either reduced their levels of consumption, worked for longer hours, sold their investments or sought financial assistance from family members as a primary recourse for

mitigating the effects of droughts. In addition, the same households indicated secondary coping mechanisms that ranged from reducing non-food and food related consumption. Uptake of credit-insurance was effectively absent as a common coping mechanism.

On the other hand, findings from the KIPPRA study on household coping mechanisms in drought and flood prone areas found that households resorted to stock-piling food reserves, saving in formal financial instruments, saving in informal financial instruments such as 'Chamas', obtaining family remittances and investing in assets, in this order, as a means of mitigating the effects of such disasters. Of note regarding coping mechanisms was the significant improvements made in Kenya to promote formal financial inclusion, which affected uptake of formal financial instruments as a coping mechanism.

Regarding the decision to save as a coping mechanism, only 22%-23% of households indicated that they borrowed to cope. Of those who sought not to resort to saving as a coping mechanism, the reasons provided included low levels of income or not seeing the benefit of saving for future or uncertain events.

On borrowing as a coping mechanism, low household income prohibitive of borrowing, that saving was simply not necessary or that it was not tenable on religious grounds. Financial literacy also affected choices in household coping mechanisms, with 35% indicating that they had no knowledge of how insurance worked and others indicated that they did not see the benefits of insurance.

Firms surveyed regarding their coping mechanisms were drawn from the manufacturing, wholesale and retail, and hotel and restaurants sectors and ranged in size from micro enterprises to small and medium-sized enterprises; or firms with a headcount of no more than 50 staff. KIPPRA's findings showed that these firms were more severely affected by droughts than floods. Of those affected by droughts, 61% were severely affected, with 33% being moderately affected. Likewise, droughts had more impact than floods on the average sales of these firms. Micro-enterprises were also more affected than larger firms. Overall, firms in the manufacturing sector faced less severe constraints from droughts and floods than those in the wholesale, retail, hotel and restaurants sectors.

Firms attributed their low uptake of credit facilities as a coping mechanism to perceiving no need for more money or to the high cost of borrowing.

Key Questions:

1. How can we use the KIPPRA findings to inform policy formulation and advocacy at the county level?

The presenter indicated that KIPPRA is engaged in stakeholder engagement and more ought to be done to engage policy stakeholders at the county level. This would include national level initiatives supporting policy inclusion and public dissemination.

2. Did the KIPPRA study differentiate between positive and negative coping mechanisms adopted by households and firms?

Adan indicated that negative coping mechanisms were found in the study, however due to time constraints were not mentioned during the presentation. An example would be the sale of assets, which he indicated would increase household vulnerabilities in subsequent periods.

3. What accounts for the differences in the ranking/order of coping mechanisms adopted by households as articulated by the KIPPRA and KIHBS studies respectively?

Adan indicated that the survey questions were not asked in exactly the same way across both studies, however, both surveys were complementary. A crucial difference was that the KIHBS study sought to identify coping mechanisms based on retrospective self-reports, while the KIPPRA study focused on habitual or likely coping mechanisms by households and firms.

