

ReSAKSS-SA Workshop Report

Launching regional analysis on options for accelerating agricultural growth and poverty reduction in Southern Africa

Report of the Technical Workshop, Pretoria, South
Africa, February 19-20, 2007

Chilonda Pius, Femi Olubode-Awosola and Isaac Minde (editors)

Regional Strategic Analysis and Knowledge Support
System for Southern Africa (ReSAKSS-SA)

Workshop Report

Report of the Technical Workshop on

**‘Launching regional analysis on options
for accelerating agricultural growth and
poverty reduction in Southern Africa’**

19-20 February, 2007
Pretoria, South Africa

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International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

and

International Water Management Institute (IWMI)

Technical workshop on “Launching regional analysis on options for accelerating agricultural growth and poverty reduction in Southern Africa”, was hosted by the International Water Management Institute (IWMI) and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in collaboration with the International Food Policy Research Institute (IFPRI) and the Common Market for Eastern and Southern Africa (COMESA).

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The ReSAKSS-SA aims to identify and assess strategic options for agricultural growth particularly poverty alleviation in southern Africa. ReSAKSS-SA supports review and learning processes in the region to contribute to the successful implementation of agriculture and rural development strategies with particular emphasis on Comprehensive Africa Agriculture Development Programme (CAADP) and Southern Africa Development Community Regional Indicative Strategic Development Plan (SADC RISDP). ReSAKSS-SA is jointly implemented by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and the International Water Management Institute (IWMI), in collaboration with the International Food Policy Research Institute (IFPRI), regional and national partners.

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Abbreviations

APRU	Agriculture Policy Research Unit
CAADP	Comprehensive Africa Agriculture Development Programme
CGIAR	Consultative Group for International Agricultural Research
CIMMYT	International Maize and Wheat Improvement Centre
COMESA	Common Market for Eastern and Southern Africa
FANRPAN	Food Agriculture and Natural Resources Policy Analysis Network
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FEWSNET	Famine and Early Warning System Network
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
ICT	Information and Communication Technology
IFDC	International Fertilizer Development Center
IFPRI	International Food Policy Research Institute
IITA	International Institute for Tropical Agriculture
IWMI	International Water Management Institute
MDG	Millennium Development Goal
MINAG	Ministry of Agriculture
MSU	Michigan State University
NGO	Non Governmental Organisation
NEPAD	New Partnership for Africa's Development
OECD	Organisation for Economic Co-operation and Development
PP	Public-Private
R & D	Research and Development
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
ReSAKSS-SA	Regional Strategic Analysis and Knowledge Support System for Southern Africa
RISDP	Regional Indicative Strategic Development Plan
SADC	Southern African Development Community
TRALAC	Trade law Centre for Southern Africa
USAID	United States Agency for International Development

Chapter 1

Background and purpose of workshop

The Regional Strategic Analysis and Knowledge Support System for Southern Africa (ReSAKSS-SA)¹ is one of the regionally focused programmes being established to support the implementation of the Comprehensive Africa Agriculture Development Programme (CAADP), and to inform and guide programme design and implementation of other regional strategies in the SADC region. It targets the identification and assessment of strategic options for agricultural growth and development in Southern Africa, particularly those contributing most to the alleviation of poverty. The ReSAKSS-SA sets out to address three main regional challenges.

1. The need to increase agricultural growth to target the average annual growth rate of 6% envisioned by CAADP as necessary for attaining overall economic growth, poverty reduction and food security.
2. The need to enhance the contribution of agriculture to the achievement of the first Millennium Development Goal (MDG) of halving poverty and hunger by 2015.
3. Assessment of policy and investment alternatives that will yield the highest payoff, given that countries in the region have committed themselves to increase national budgetary allocation to the agricultural sector to 10%.

The ReSAKSS-SA has prepared its work plan for the period 2007-2008 comprising the following activities.

Activity 1: Monitoring and evaluating the progress of agricultural growth, poverty reduction and public investments.

Activity 2: Region-wide options for accelerating agricultural growth and poverty reduction.

Activity 3: Options for increasing agricultural productivity.

Activity 4: Knowledge management and sharing.

Activities 2 and 3, the main focus of this workshop, are discussed in more detail below.

Activity 2: Region-wide options for accelerating agricultural growth and poverty reduction in Southern Africa

This activity was proposed to respond to the high poverty and low agricultural sector growth rates in the region. It entails a study to identify the type of investment and policy options needed to accelerate agricultural growth and poverty reduction in Southern Africa. The study focuses on exploring those options, from a regional perspective, that are needed to achieve the targeted 6% annual growth rate of agriculture (CAADP goal) and that enhance the contribution of agriculture to reaching the first MDG in Southern Africa. This activity is intended to contribute

¹ ReSAKSS-SA is being hosted by the International Water Management Institute (IWMI) and implemented jointly with the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), in collaboration with the International Food Policy Research Institute (IFPRI). IFPRI is providing technical leadership and guidance in implementing the ReSAKSS in southern Africa, East and Central Africa, and West Africa, as well as country SAKSS programmes in other countries in the region.

to a better understanding of the opportunities to leverage agricultural growth dynamics, food security, and poverty alleviation through regional agricultural and non-agricultural policies and investment priorities. This therefore implies that there is need for identifying the challenges and opportunities that countries face in the process of regional integration for different countries.

Given that countries in the region have committed themselves to increasing budgetary allocation to agriculture (specifically to the 10% Maputo goal of CAADP), this activity will also provide guidance on investment prioritisation and the level of investment required to meet the growth targets, including regional investment in agricultural research and development (R&D) investment. Information generated from activity 2 can also be used to advice ongoing dialogue and decision-making process for the SADC countries to identify regional agricultural development priorities needed to stimulate pro poor growth and food security. This study would contribute to better understanding of the challenges facing national research and extension systems and contribute to more effective and efficient R&D investments.

The main components for this activity are:

- Identification of the challenges and opportunities of regional integration for economic growth and poverty alleviation,
- Optimal regional integration paths for different countries and
- Assessment for alternative regional R&D countries.

Activity 3: Options for increasing agricultural productivity

This activity builds on and reinforces the implementation and outputs of activity 2 (but will be carried out in parallel). It is designed to address topical issues that have been raised by key stakeholders in the region in order to fill knowledge gaps and/or feed directly into any ongoing policy dialogues in the region. The purpose of this activity is to find answers to some of the critical questions in a quick and timely and relevant way in order to support the key on going policy debates on future investment and policy alternatives at country and regional level. Short briefing notes (rather than longer term studies) will be that target to ensure timely delivery and relevance of outputs. Country case studies assessments of key policy and investment alternatives will be conducted where data is available and these will be used as instruments for removal of key constraints of productivity.

The main components of this activity are:

- Key policy briefs on alternative policy and investment options for improving productivity,
- Salient features affecting the performance of regional agricultural research collaboration and
- Monitoring on non-tariff barriers in regional agricultural trade.

1.1 Objectives

The technical workshop brought together several regional and international experts in the agricultural and rural development field. This workshop was held in order to refine the research agenda, which will guide ReSAKSS-SA's delivery on activities 2 and 3.

The specific objectives are as follows.

- To identify country case studies and, where possible, collaborators;
- To draw up a final conceptual framework with deliverables and timelines and
- To draw up terms of references for the identified case studies.

These objectives were addressed through several brainstorming sessions held over a two-day period.



Chapter 2

Day 1: Presentation of activities 2 and 3, discussion and agreement on approaches and overall framework

Pius Chilonda, Sub-regional Coordinator, ReSAKSS-SA, opened the workshop by presenting a brief overview of the objectives, activities, organisation, partners and programme focus areas of the ReSAKSS-SA. The presentation also explained the purpose of the meeting.

This was followed by a presentation by Dr. Isaac Minde, the senior scientist ICRISAT, on activities 2 and 3. He also presented a list of possible study topics. The delegates were then each asked to list and rank three proposed priority research topics on options for accelerating agricultural growth in the region, which they felt could be added to the proposed list. The delegates were in addition requested to report on known case studies related to these topics that have already been done in the region.

2.1 Key outcomes

This process led to the following outcome.

1. The proposal to include the following study topics:

- Agribusiness as a key issue in agricultural development,
- Capacity building in agriculture,
- The issue of winners and losers,
- Technology adoption in agriculture,
- Rural finance,
- Natural resource sharing,
- Livestock versus crop production,
- Land tenure issues in the region,
- Trans-border livestock diseases,
- Inter-linkages between low and middle income countries in the region,
- Regional food reserves and
- Dual membership of countries to regional economic communities.

2. Discussants agreed to categorize all research activity under three main themes namely:

- Trade and regional growth dynamics (focusing on inter-regional trade for economic growth).
- Productivity and the commercialisation of agriculture (including issues such as the assessment of current policy and institutional arrangements and infrastructure).
- Research and development (R&D) (key R&D parameters in selected member states, yield gaps and so on).

3. Delegates provided the following input on related studies already conducted in the region (topics, persons and institutions concerned and possible sources of collaboration in planned studies), as requested by the facilitator.

- Related studies already undertaken and the research institutions concerned under the *regional trade* theme:
 - » cross trade monitoring by FEWSNET – contact person Phumzile Mdlala,
 - » cross border trade analysis by TECHNOSERVE,
 - » staple food trade in Malawi, Zambia and Tanzania – contact person Jones Govereh,
 - » studies of comparative advantages by TRALAC available on the institution’s website,
 - » cross border trade in maize and cassava for Mozambique by the Michigan State University and
 - » monitoring food aid in Mozambique by the FAO.

- Related studies already undertaken and the research institutions concerned under the *regional growth dynamics* theme:
 - » The Labour Ministry and Investment Centre have conducted a number of studies (especially regarding investments from South Africa).

- Related studies already undertaken and the research institutions concerned under the *productivity and commercialisation* theme:
 - » cassava commercialisation in Malawi, Zambia, Tanzania and Mozambique by the MSU,
 - » seeds and fertilizer marketing in Malawi, Mozambique and Zambia by FANRPAN,
 - » maize, rice intensification by the MSU and
 - » contract farming in Malawi, South Africa and Zambia by FANRPAN and by Prof. Kirsten of the University of Pretoria.

- Related studies already undertaken and the research institutions concerned under the *research and development (R&D)* theme:
 - » concept note on yield gap analysis by SADC,
 - » fertiliser use, profitability and conservation farming by the MSU and
 - » cassava and sweet potatoes by the IITA.



Chapter 3

Day 2: Presentation and discussion of proposed case studies

3.1 Process

Delegates were divided into three groups, each group with a task of identifying and designing at least one case study under the research theme assigned to it (the 3 themes were; Regional growth dynamics, productivity/commercialization, and research and development). The resultant case studies are outlined below.

3.2 Key outcomes

3.2.1 Group 1

Case Study 1: Potential of intra-regional trade in Southern Africa: an analysis at the sub-national level.

Objective

To identify potential commodities, sub-national trade in these commodities between regions and actual barriers to trade between these regions. This was done in order to understand the potential of intra-regional trade.

This requires:

- identifying the most tradable commodities (maize, livestock);
- identifying potential sub-national trading regions
- which region of a country supplies what commodity to a region in a neighbouring country and
- which region of a country demands what commodity from a region in a neighbouring country;
- what are the barriers to trade between the regions (policy, infrastructure and so on);
- how to remove trade barriers and
- the information and dissemination component.

Methodology

- Analysis based on secondary information from governments and other institutions working on related issues (for example informal trade);
- Spatial and seasonal analysis for potential supply and demand between neighbouring regions;
- Analysis of existing market access conditions (infrastructure, cultural and trading traditions);
- Review of policies related to cross border trade, seasonal trade and other non-tariff barriers;
- Subject to data constraints, use of a numerical model to simulate potential increase in intra-regional trade through the elimination of barriers to trade between sub-regions, improved infrastructure, improved productivity and increased demand in the different regions and
- analysis of regional versus country investment options to increase trade.

Coverage

Representative countries in the region: Malawi, Mozambique and Zambia.

Resources

- Literature review of case studies and policies,
- Determination of the spatial pattern of the study regions and
- Determination of the relevant commodities based on a potential supply and demand simulation model.

Case study 2: Potential factor mobility under full regional integration: linkages between factor mobility and trade policy.

Objective

Predict future factor mobility and potential gainers and losers in the region.

Methodology and activities

The methodology is a combination of broader assessment and an in depth case study.

Broader assessment

- Literature review incorporating an OECD study and studies on infrastructure projects (see below),
- Identification of recent trends in labour and capital flows through an analysis of production trends and structure, and initial endowments in each country,
- Assessment of current foreign investment in each country and sector and
- Identification of different policies in the region affecting factor mobility such as investment and immigration policies, land policies and so on.

Case study

- Identification of factors affecting potential future factor mobility based on ongoing investment projects that might affect future flows of factors (Mtwara corridor; Zambezi waterway, Maputo corridor) and
- Technology spillovers through factor mobility.

Coverage

The southern African region.

3.2.2 Group 2

Productivity and commercialisation

Case Study 1: Development of the fertiliser market; sequencing government and private sector investments in order to enhance household marketed surplus and the resource base.

Problem

- Food insecurity, low productivity, nutrient depletion and low incomes,
- Stagnant consumption levels and

- Fertiliser consumption is key for increasing productivity and for agricultural growth.

Research Objective (general): Improving the understanding of fertiliser market development.

Specific Objectives

- Options (role) for public /private (PP) investment partnerships,
- Determine the impact of alternative delivery systems in enhancing marketed surplus and resource and
- Regional fertiliser procurement programme.

Approaches, methodology and coverage

Study countries: Malawi, Mozambique and Zambia.

A two pronged approach.

- Synthesize the available evidence and use existing secondary household data and
- Use primary interviews for understanding PP investment partnerships.

Implementation

- Regional team leader,
- Working country researchers/focal points and
- Regional methodology workshop to thrash out methodology.

Skills required

- Econometric skills,
- Understanding of fertiliser industry and markets,
- Qualitative and quantitative analytical skills and
- Household survey skills.

Timeframe

Based on resources and quality (six months from today).

Questions

Are you considering the constraints on the output market side?

What value does this study add to previous studies?

Case Study 2: Development of smallholder supply chains through contract farming.

Problem

- Inadequate input and output markets;
- Individuals have difficulties in accessing markets;
- High transaction costs and risks in accessing markets;
- Lack of joint negotiation;
- Smallholders are sparsely spread and
- Insufficient resources.

Objectives

To understand how contract farming can improve market access and reduce risk for smallholder farmers.

- Socio-economic viability of contract farming and
- Identification of potential cash crops (low value crops such as sorghum and millet, and high value crops such as floriculture and horticulture).

Approaches, methodology and coverage

Study countries: Zambia and Malawi.

A two pronged approach:

- Synthesize available evidence and use existing secondary data and
- Use primary interviews with farmer groups and agribusiness.

Implementation

- Regional team leader,
- Working country researchers/focal points and
- Regional methodology workshop to thrash out the methodology.

Skills

- Econometric skills,
- Qualitative and quantitative analytical skills and
- Household survey skills.

Timeframe

Based on resources and quality (6 months from today).

3.2.3 Group 3

Research and development

Case study: Explaining the variation in yield gaps for selected commodities in southern Africa.

Research objective: To assess the constraints of yield gaps for selected commodities.

Approach and methodology

- *Desk study:* review of existing studies and data sources (for example, national systems, FAO, CGIAR, national);
- *Field work:* (validation exercise) – in country using secondary sources and visiting farmers in the focal area to validate and gain some sensitivity to the information you already have. If at all possible focal points should be selected by development domain. This would have to be done through local based organisations such as NGOs, farmer groups, sub-national research centres, and extension officers and
- *Regional and country coverage:* Mozambique and Zambia.

Resources and level of effort

Mozambique:

- Timing will be important – the activity can be viewed as part of the Mozambique ReSAKSS-SA efforts – to feed into the agreed strategy efforts (to have important relevance) – but also how the international / regional efforts are supporting the country;
- Potential existing studies (for example, Coughlin, Gemo, MSU, MINAG, others) – also investigate the PROAGRI study;
- Team structure (study to be lead by Helder):
- one research support (working with MSU), Ms Ag econ. To include literature review, data collection, consultations with MINAG, university,
- by May – preliminary yield gap analysis and desk top findings and
- by September – further analysis plus field work validation (if needed);
- Malawi;
- Zambia and
- Regional (reasons for the variation across countries)

Comments

- Synergies with ‘productivity and commercialisation’ case studies.
- What is the value added? How does this contribute to the 6% growth targets?
- Yield gaps by typology.
- Could be so many explanations (might be better to be selective and control for a few).



Chapter 4

Recommendations and action plan

It was recommended that ReSAKSS-SA forge partnerships with various regional and international entities to effect and conduct research on the identified topics. Most importantly, the workshop provided input for a tentative research work plan to be considered by the steering committee.

It was also proposed that all research activity culminate in a single research report. The title of the proposed report is Options for accelerating agricultural growth in Southern Africa.



Appendices

Agenda

Regional Strategic Analysis and Knowledge Support System for Southern Africa

International Water Management Institute (IWMI) and
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

in collaboration with the

International Food Policy Research Institute (IFPRI)

Technical workshop

Launching regional analysis on “Options for accelerating agricultural growth and poverty reduction in Southern Africa.”

Venue:

IWMI Southern Africa Office, Pretoria, South Africa

Date:

19-20 February, 2007

Participants:

IWMI, ICRISAT and IFPRI, SADC, COMESA and other potential collaborators (local and international)

Objective:

The goal of the technical meeting is to review and launch Activities 2 and 3 of the draft ReSAKSS-SA work plan that was presented and revised at a stakeholder workshop held in Johannesburg (4-5 October, 2005). Activity 2 is ‘*Region-wide options for accelerating agricultural growth and poverty reduction*’, focusing on economic wide policy and investment options that are required to achieve the 6% annual growth rate of agriculture and that enhance the contribution of agriculture to reaching MDG1 in southern Africa from a regional perspective, while Activity 3 is ‘*Options for increasing agricultural productivity*’ which builds on activity 2 to inform on-going key policy debates on future investment and policy alternatives within the agricultural sector at the country and regional level. A most recent version of the draft work plan is attached. The work is now about to begin, and in order to launch it, many components that are complementary between the two activities require further brainstorming to ensure they are well coordinated and integrated. This is in order to fully explore the alternative policy and investment options for agriculture in poorer countries in Southern Africa in order to take advantage of the gains to be had from greater regional economic integration and cooperation, especially in terms of meeting growth, poverty and food security goals.

The expected outcomes of the meeting are details of methodology, timelines, and budgets - all which will need to be worked out and finalized with all potential collaborators involved in this important work. The engagement with local and international researchers is intended to not only validate the relevance of the proposed methodologies and approaches, but to also ensure local expertise is accounted for in the design of the work as well.

Tentative agenda

Day One: 19 February, 2007; Time: 14:00 -18:00 hours

- Presentation of activity 2 and 3 as an integrated conceptual framework
- Brainstorming discussion and agreement on approaches and overall framework (could flow into next morning if need be)

Day Two: 20 February, 2007; Time: 08:00 -16:00 hours

- Presentation and discussion of proposed country case studies
- Discussion of methodologies, timelines, collaborators
- Presentation of final conceptual framework, deliverables and timelines
- Drawing up TORs and next steps



Integrated case studies

Summary of expert consultation workshop: ReSAKSS-SA research activities 2 & 3 redefined, February 19-20

February 26, 2007

Objective

The objective of this activity is to identify the type of investment and policy options needed to accelerate agricultural growth and poverty reduction in Southern Africa. It will focus on those options that are required to achieve the 6% annual growth rate of agriculture and that enhance the contribution of agriculture to reaching MDG1 in southern Africa from a regional perspective. This activity is also intended to contribute to a better understanding of the opportunities to leverage agricultural growth dynamics, food security and poverty alleviation through regional agricultural and non-agricultural policies and investment priorities. This implies the identification of challenges and opportunities that countries face in the process of regional integration and the optimal integration paths for different countries.

Given that countries in the region have committed themselves to increasing budgetary allocation to agriculture, this activity will also provide guidance on investment prioritisation and the level of investment required to meet the growth targets, including regional investment in agricultural R&D investment. Ultimately, it will enrich the ongoing dialogue and decision-making processes of SADC and its member countries in identifying regional agricultural development priorities needed to stimulate and sustain pro-poor growth and food security in the region. Interaction and discussion with stakeholders will be important to ensure the issues addressed by this activity are timely and consistent with the CAADP early actions and the SADC RISDP priorities.

The purpose of this activity is to find answers to some of these critical questions in a quick and timely fashion in order to support and inform on-going key policy debates on future investment and policy alternatives at the country and regional level (for example, via the CAADP and SADC platforms). Much of the discussion on the issues at both national and regional levels is carried on without sufficient information about available options and often the resultant decisions are less than optimal.

In order to ensure the relevance and timely delivery of outputs this activity in the initial year of work will target a series of short briefing notes rather than longer-term studies. These would highlight what is known from the literature about key policy debates in the region affecting the kinds of public interventions needed to improve agricultural productivity. This is important given that a growing share of public interventions remains short-term oriented, susceptible to reversals, and leading to inconsistencies that discourage private investments.

Research and analytical agenda

An expert consultation workshop was held from February 19-20 to review the proposal in order to refine the research and analytical agenda needed to deliver in an integrated fashion the originally proposed activities 2 and 3. Based on the feedback from the expert group, activities of 2 and 3 were further clarified, and detailed research questions, methodologies and targeted outputs were also defined. An important output from the consultations was a better-integrated work plan and corresponding outputs, resulting in two main inter-linked components that will eventually

generate a single integrated report. The different inputs into the report may also be able to serve as stand alone chapters or single reports for communication purposes.

The overall topic for the integrated work was revised to be *Understanding growth potential and synergy linkages in Southern Africa*. The general goals of the whole research would remain focused on two main areas:

- understanding growth potential by analysing initial conditions and
- understanding synergy and linkages in the region by cross country analysis.

The whole research will be conducted with the combination of:

- spatial perspective analysis;
- descriptive analysis;
- diagnostic case study and
- modelling analysis.

There will be at least two primary components of the regional study that would be inter-linked:

- 1) developing a spatial framework to capture key initial conditions and potential synergy linkages; and
- 2) in-depth case studies to understand the potential in regional dynamics. These are reviewed further below.

Component 1: Develop a spatial framework to capture key initial conditions and potential synergy linkages.

The regional dynamic is the focus of the entire research. However, to do it, we need to first understand opportunities and constraints faced by different countries. For this reason, the spatial perspective analysis will start with country level data and Mozambique, Zambia, and Malawi are the focus countries. Given the importance of South Africa in the region, South Africa is also included in certain relevant issues.

Each of the three countries' economic structure and initial conditions need to be understood from the spatial perspective.

To help understand its economic structure and initial conditions, the following information/data will be spatially analysed:

- distribution of population: urban-rural population densities;
- initial endowments (land, labour, capital/income);
- infrastructure and services, location of markets;
- source of income at the household level and
- any other ways to measure economic structure.

Agriculture is the centre of the entire research. To help understand potential inter-regional linkages in agriculture, the following information/data will be spatially analysed:

- current food availability: supply and demand, surplus and deficits; measure of potential trade;
- agro-ecological conditions;
- yield and other factor productivity;
- input use: fertilizer;
- water resources (which can be drawn from IWMI) and
- land cover, forest resources (which can negatively affect agricultural growth).

Based on above spatial data and information that characterise the initial conditions and economic structure of the region, certain typologies will be developed and such typology analysis can build further in-depth research:

- typology of potential regional trade;
- typology of patterns of capital/labor flows and
- typology of agricultural potential to improve agricultural productivity.

Component 2: In-depth case studies to understand the potential in regional dynamics.

The spatial framework developed in component 1 will become the basis for committing case studies, while the case studies will provide further understanding of regional dynamics and possible policy suggestions for promoting such dynamics.

Each case study has three aspects:

- a good synthesis paper to document existing studies ;
- a broad policy review and
- at least one in depth case study using diagnostic method.

The workshop suggested five case studies. They were:

Case study 1: Potential of intra-regional trade in southern Africa: an analysis at the sub-national level.

Case study 2: Potential factor mobility under full regional integration: linkages between factor mobility and trade policy.

Case study 3: Fertiliser market development: sequencing government and private sector investments in order to enhance household marketed surplus and resource base.

Case study 4: Smallholder supply chain development through contract farming.

Case study 5: Explaining variation in yield gaps for select commodities in southern Africa

The studies from this list were merged into three principal case study themes. This was done to ensure cross-linkages were maintained to contribute to the overall goal of the regional study. Moreover, they will help generate a series of research outputs that can support each other and eventually become part of an integrated report. Researchers from IFPRI and IWMI who attended the workshop spent two days following the workshop to further discuss and integrate the six potential case studies identified by the wider expert group. A number of the case studies merged together well and the following ranking resulted:

- 1) Intra-regional trade;
- 2) Factor mobility (contract farming is merged into this theme) and
- 3) Productivity and new technology (the original two case studies suggested were yield variation and fertiliser markets).

Drawing from the extensive discussions at the workshop, these three case studies are defined in greater detail as follows:

Case Study 1: Potential of intra-regional trade in southern Africa: an analysis at the sub-national Level.

Objectives

To identify potential commodities and sub-national trading regions and actual barriers to trade between these regions in order to understand potential of intra-regional trade

Activities

1. Synthesis of existing case studies

- Focusing on cross-border trade between Mozambique, Malawi, Zambia and South Africa, including both formal and informal trade;
- Pay more attention to recent studies. For each synthesised existing study, the following components should be included:
 - » To find at least one case of bilateral cross-border trade between: Mozambique and Malawi; Mozambique and South Africa; Zambia and Malawi and
 - » Describe in detail the trade flow situation such as: estimated trade flow, main traded agriculture commodities and seasoning pattern, trading prices and linkages with domestic markets in both countries, description of trading channels, traders and relationships with exporting country's farmers and importing country's domestic demand;
- Estimated impact on:
 - » both countries market prices,
 - » supply at the farm level, such as: production patterns, fertiliser use, farm income and
 - » consumer welfare.
- Constraints to increasing such trade in both countries:
 - » supply and demand conditions,
 - » policies,
 - » infrastructure,
 - » credit and financing,
 - » traders capacity and
 - » Recommendations on policy and public interventions, private-public partnerships, and so on.

The following existing studies mentioned in the workshop might be relevant:

FEWSNET – cross-border trade monitoring, source of data (Phumzile Mdadla);

TECHNOSERVE – cross-border trade analysis (ended 1997);

MSU – staple food trade in Malawi, Zambia and Tanzania (Jones Govereh);

TRALAC – comparative advantages studies available on website;

MSU – cross-border trade – maize and cassava (Mozambique);

FAO – monitoring of food trade, aid (Mozambique) and

Bunda –APRU cross border trade (1997).

2. *Policy review*

Focusing mostly on current policy:

- Trade policies related to formal trade including non-tariff trade barriers (focus on intra-regional trade);
- Focus more on trade policies related to cross-border trade and on policies that result in informal trade;
- Trade policies related to seasonal trade patterns;
- Other policies having indirect effect on trade, for example, public investment policies that discourage intra-regional trade and
- Any ongoing policy debate related to intra-regional trade.

3. *Diagnostic case study*

- Identify some specific cross-border trade case (commodity, location) that hasn't been studied in depth;
- The choice of case should be consistent with information from the spatial framework developed for the whole project and
- Case study should provide the following analysis:
 - » Describe in detail the trade flow situation such as: estimated trade flow, main traded agriculture commodities and seasonal pattern, trading prices and linkages with domestic markets in both countries, description of trading channels, traders and relationships with exporting country's farmers and importing country's domestic demand,
 - » Existing market access conditions (infrastructure, cultural and trading traditions),
 - » Assess potential cross-border trade by analyzing supply and demand in both countries,
 - » Estimated impact on:
 - a) both countries market prices,
 - b) supply at the farm level, such as: production patterns, fertilizer use, farm income,
 - c) consumer welfare
- Constraints to increasing such trade in both countries:
 - a) supply and demand conditions,
 - b) policies,
 - c) infrastructure,
 - d) credit and financing,
 - e) traders capacity and
- Recommendations on policy and public interventions, private-public partnerships, and so on.

Methodology

- Combination of descriptive, qualitative and quantitative analysis and
- A small survey might be necessary for activity 3. The following actors should be considered:

- » Different types of traders from both countries such as retailers, wholesale, small scale, medium and large scale,
- » Transportation providers,
- » Border control officials and
- » Farmers both participating and not participating in such trade.

Research team experience requirement

- Economist or agricultural economist familiar with trade issues in Southern Africa;
- Experience in conducting intra-regional trade studies and
- Synthesis writing skills and experience.

Case Study 2: Potential factor mobility in Southern Africa

Objectives

- Understanding the regional impact of public and private investment involving multiple countries and
- Understanding synergy and linkages in the region through factor mobility.

Activities

1&2 Synthesis of existing studies and policy review

- Studies about Malawi, Mozambique and Zambia or about the whole region;
- Focus on cross-country migration, FDI from countries within and outside the region, and capital investment in cross-country supply chains and
- Pay more attention to recent studies.

Migration:

- Description of general trends and patterns;
- For individual countries where people go and from which countries people come in;
- Scale and growth of migration flows (in and out);
- Scale and growth of remittance flows (in and out);
- Sectors attracting labour migration
- Reasons explaining migration at the country, sector, household and individual levels:
 - » Country level: land-locked, land constraints or land abundance, natural resources, income level, war, other dynamic factors,
 - » Sector level: factor intensity, technology, other dynamic factors and
 - » Household and individual: income and assets, job in country of origin, household income and assets, networks, culture, ethnic group, religion, skills, education, age, gender, etc and
- Policies affecting migration focusing mostly on current policy;
- Any ongoing policy debate related to migration.

FDI from South Africa to the region

- Description of general trends and patterns;
- Scale and growth of FDI-SA flows;
- Sectors attracting FDI;
- Characteristics of FDI: multi-national corporations, joint ventures;
- Reasons explaining FDI at the country and sector levels;

- Estimated impact:
 - a) spill over effects, including technology, management skills and know-how,
 - b) linkage effects up and down stream in the industries and the service sector,
 - c) possible negative effects on competitive sector/firms;
- Constraints to increasing FDI:
 - a) supply and demand,
 - b) policies,
 - c) infrastructure and
 - d) institutions;

Focusing mostly on current policy,
Any ongoing policy debate related to FDI and
- Recommendations on policy and public interventions, private-public partnerships, etc.
- FDI from countries outside the region
- Description of general trends and patterns;
- Scale and growth of FDI flows;
- Sectors attracting FDI;
- Characteristics of FDI: multi-national corporations, joint ventures;
- Reasons explaining FDI at the country and sector levels:
- Estimated impact:
 - a) spill over effects, including technology, management skills and know-how,
 - b) linkage effects up and down stream in the industries and the service sector,
 - c) possible negative effects on competitive sector/firms;
- Constraints to increasing FDI:
 - a) supply and demand,
 - b) policies,
 - c) infrastructure and
 - d) institutions;

Focusing mostly on current policy,
Any ongoing policy debate related to FDI;
- Recommendations on policy and public interventions, private-public partnerships, etc.

Cross-country supply chain investment in the region

- Description of general trends and patterns;
- Scale, growth and location;
- Sectors attracting investment;
- Characteristics of investment: multi-national corporations, joint ventures;
- Reasons explaining investment at the country and sector levels;
- Estimated impact:
 - spill over effects, including technology, management skills and know-how;
 - linkage effects up and down stream in the industries and the service sector;
 - For agricultural supply chain focused on smallholder impact such as contract farming, peri-urban agriculture, competition with small scale production and traders;
- Constraints to increasing investment:
 - a) supply and demand,
 - b) policies,
 - c) infrastructure,
 - d) institutions,

Focusing mostly on current policy,

- Any ongoing policy debate related to supply chain investment,
- Recommendations on policy and public interventions, private-public partnerships, etc.

The following existing studies that were mentioned in the workshop might be relevant:

Labour Ministry (Mozambique) and

Investment Promotion Centre (Mozambique) – private investments especially from South Africa

3. Diagnostic case study

3.1 Multi-country large investment project

Candidates for possible case studies:

Mtwara corridor;

Maputo corridor and

Zambezi waterway.

The following information is needed:

- How was the investment project initiated? What is the role of donors, who made decisions, which government ministries are in charged, how to decide investment scale and location?
- How the project has been implemented? Including financing, domestic or foreign private sector involvement, re-settlement and compensation of affected area?
- Supply of labour for the project and the impact on the labour market.
- What kind of policy and institutions have to be adjusted or harmonised between involved countries?
- Ex-ante evaluation of project impact.
- Potential impact on local economy including economic structure, population, generated second round investment including small business.
- Unexpected policy and institutional barriers and how to overcome them.
- Monitoring and evaluation process.

3.2 Private sector driven investment (contract farming and the supply chain)

Focus on agriculture related sector (agri-processing, supermarkets and high value export supply chain).

Focus on investment coming from South Africa; studied country can be Zambia or Mozambique:

- Description of the investment process:
- Scale, growth and location:
- Characteristics of investment: multi-national corporations, joint ventures;
- Reasons explaining investment at the country level;
- Estimated impact:
 - a) spill over effects, including technology, management skills and know-how,
 - b) linkage effects up and down stream in the industries and the service sector;
- Focused on smallholder impact such as contract farming, peri-urban agriculture, competition with small scale production and traders:
 - » contract farmer's characteristics (land holding size, assets, household head education level, gender, family size, access to irrigation, access to infrastructure),
 - » production technology and knowledge,
 - » credit and input supply,

- » product quality control,
- » contract types and enforcement, government regulations,
- » types of relationship between farmers and the agribusiness,
- » price, information and risk,
- » asymmetric power along the chain (negotiation power of smallholder),
- » involvement of smallholder organizations,
- » income distribution along the chain and
- » income comparisons between contract and non-contract farming;
- Policy to encourage investment in smallholder contract farming and the supply chain:
 - » focusing mostly on current policy and
 - » any ongoing policy debate related to contract farming and the supply chain and
- Recommendations on policy and public interventions, private-public partnerships, etc.

Methodology

- Combination of descriptive, qualitative and quantitative analysis and
- A small survey might be necessary for activity 3.2 using primary interview with agribusiness, exporters, and farmer groups.

Research team experience requirement

- For activities 1 & 2: Economist or agricultural economist familiar with migration, FDI or supply chain and contract farming in Southern Africa; synthesis writing skills and experience;
- For activity 3.1: Experience in conducting public investment project studies and
- For activity 3.2: Experience in supply chain or contract farming analysis.

Case Study 3: Understanding the constraints and opportunities for improved technologies in smallholder agriculture in Southern Africa.

Objectives

- To review the evidence on the extent of diffusion and spill over of improved technologies for select commodities (e.g. maize and cassava) within and across countries in the region;
- Building on the spatial framework and analysis developed for the regional study, potential food surplus areas versus deficit ones will be examined within a geographical focal area, examining both internal and cross-border differences in order to determine the exchange potentials and management of the future growth of supply and demand across the region and
- Focus on technology applied to a few important high-yield varieties to understand the farm-level constraints to the adoption and use of high-yield related technologies through a bottom-up approach.

Activities 1&2 Synthesis of existing studies and policy review

Opportunities and constraints to diffusion and spill over of high-yield varieties and related technologies.

Required information includes:

- Key staple food commodities that feature predominantly in smallholder agriculture and can be traded regionally, and which have experienced widespread adoption in the past (e.g. maize);

- Yield variation over *time and space* across the region in recent years;
- Linkages between technology adoption and yield trends;
- Linkages between technology adoption and infrastructure investments, extension services, credits, farmer organisation, market development, and information;
- Extent of adoption (share of land and households);
- Patterns of adoption (e.g. agro-ecology, access to markets, household characteristics such as education level, family size, gender, etc.);
- Dissemination channels (e.g. public and private);
- Potential and actual yield impacts of technology;
- Cost-benefit analyses where data are available;
- Identification of reasons for *limited success* of broad and effective adoption of high-yield varieties; possible reasons include:
 - » Risk associated with agro-climatic and price variability,
 - » Access to irrigation and water harvesting,
 - » Presence of key infrastructure (e.g. roads),
 - » Access to input and output markets,
 - » Input and output prices,
 - » Efficiency of input delivery systems,
 - » Rural services and institutions (e.g. credit, extension),
 - » Policy factors and
- Policy recommendations for promoting high-yield technologies e.g. risk management, input market development, private-public partnerships.

The following existing studies that were mentioned in the workshop might be relevant starting points.

Commercialisation studies

- MSU study on cassava commercialisation in Malawi, Zambia, Tanzania and Mozambique;
- FANRPAN study on seed and fertiliser marketing; fertilizer vouchers (in Malawi, Mozambique and Zambia);
- Mozambican Ministry of Planning and Development study (led by Channing Arndt and Rafael Waiene) on smallholder commercialisation in Mozambique;
- Mozambique study of agricultural intensification by EconPolicy Group, August 2006;
- MSU study on maize, rice intensification;
- IFDC study on seed and fertiliser marketing and fertiliser vouchers;
- FANRPAN review of contract farming (Malawi, South Africa, Zambia) with Univ. of Pretoria (Prof. J. Kirsten);
- MSU study of contract farming for cotton (Zambia, Mozambique);
- NEPAD review of contract farming; and
- AGRICONSULT comprehensive study on rice (Mozambique, 2004).

Fertiliser studies

- MSU study on fertiliser in Malawi and Zambia;
- FANRPAN review of fertiliser marketing in Malawi, Mozambique, Zambia;
- IFDC study on fertiliser in Malawi, Zambia, Mozambique and
- African Centre for Fertiliser Development – studies in Malawi, Zambia and Mozambique.

R&D/extension studies

- SADC concept note on yield gap analysis;
- MSU work on fertiliser use, profitability and conservation farming;
- IITA study on cassava, sweet potatoes in Malawi and Mozambique;
- ICRISAT work in the 1990s;
- CIMMYT study on maize and
- Africa rice congress (2006) contact: Ashura Kihupi.

2 Detailed case studies

2.1 Farm-level technology use and productivity

Candidate countries:

Mozambique,
Zambia and
Malawi

This study will focus on identifying major constraints to technology uptake and impact, using household-level data in one or more countries. Under the spatial framework developed for the regional work (i.e. “development domains”), the case study will focus on geographical areas within countries, which are categorised with respect to different potential for growth and trade (e.g. “high potential area with potential to increase surplus” versus “deficit area with potential to grow”).

For each case study, at least one high-yielding variety and related technology will be emphasised. One study should focus on hybrid maize in order to understand the constraints to growing hybrid varieties.

The following information is needed from each case study:

- Input use and impacts, by domain (for all domains studied);
- Access to infrastructure and services (e.g. irrigation, roads, extension, credit);
- Access to markets;
- Farming system and production characteristics;
- Biophysical endowments, including climatic risks;
- Price volatility and
- Institutional conditions (e.g. cooperatives).

Further desegregation of analysis by household income levels is useful, if possible.

Methodology

- Combination of descriptive, qualitative and quantitative analysis (including econometric analysis of input use and impacts under different conditions)
- Inclusion of geographically varying parameters (from survey instrument and/or from a GIS)

Research team experience requirement

- For activity 1: Economist or agricultural economist familiar with high-yielding technologies in Southern Africa; synthesis writing skills and experience and
- For activity 2: Economist or agricultural economist familiar with high-yielding technologies in Southern Africa; able to conduct analysis in a geographically explicit framework; experience with household level survey data.

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The ReSAKSS-SA aims to identify and assess strategic options for agricultural growth particularly poverty alleviation in southern Africa. ReSAKSS-SA supports review and learning processes in the region to contribute to the successful implementation of agriculture and rural development strategies with particular emphasis on Comprehensive Africa Agriculture Development Programme (CAADP) and Southern Africa Development Community Regional Indicative Strategic Development Plan (SADC RISDP). ReSAKSS-SA is jointly implemented by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and the International Water Management Institute (IWMI), in collaboration with the International Food Policy Research Institute (IFPRI), regional and national partners.

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