

UNIVERSITY OF TWENTE.

SUSTAINABLE LAND MANAGEMENT IN ETHIOPIA:
RESPONSE TO RURAL HOUSEHOLDS' TENURE INSECURITY,
LAND DEGRADATION AND FOOD INSECURITY

PhD PROPOSAL DEFENSE

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PRESENTATION OUTLINE

- I. Background and Introduction
- II. Problem and literature gaps
- III. Conceptual framework
- IV. Objective of the research
- V. Methodological approach
- VI. Expected outcomes

1.BACKGROUND & INTRODUCTION



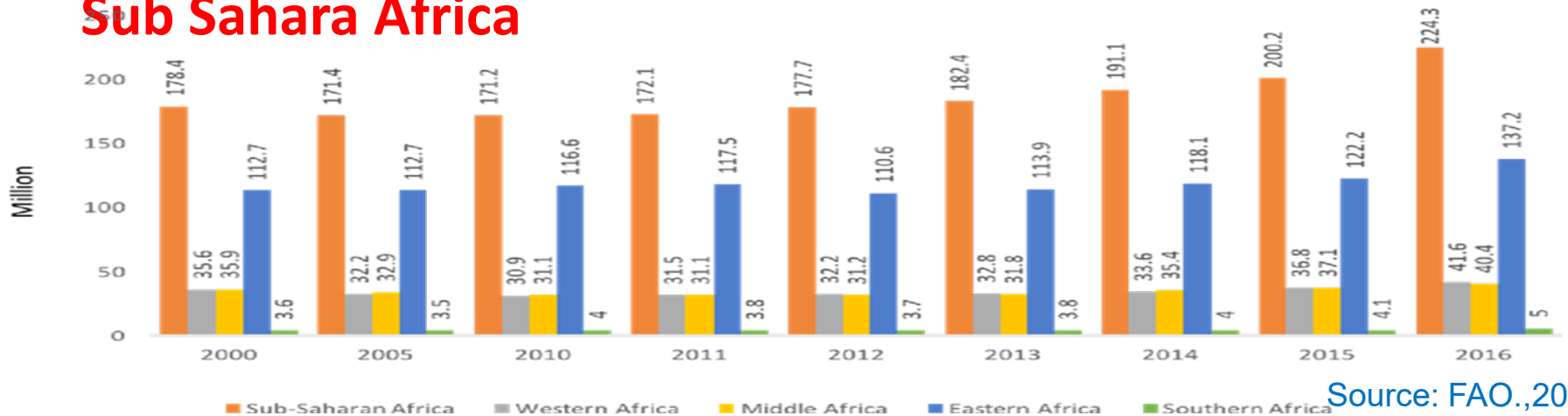
- Human undernourishment has increased globally.
- 821 million undernourished people (FAO, 2017).
- 151 & 50 million under-five year children are wasted & stunted (FAO, 2017).

- Nearly 60 percent of the global ecosystem is degraded (Bennet, 2006).
- In the face of high population growth the land resource unable to feed the 8.2 billion expected by the year 2020 (UN, 2017).



BACKGROUND & INTRODUCTION CONT'D

Sub Sahara Africa



- SSAs' 40,26 and 12 percent of the grass, forest and crop lands are severely degraded (Bao le et al. 2014).
- Undernourishment increased from 173 million in 2000 to 224 million in 2016 (FAO, 2016).
- Under five year children mortality in West Africa is more than 30 percent in areas of high land degradation (Lefory et al. 2000).

II. PROBLEM & LITRATURE GAP

Ethiopia



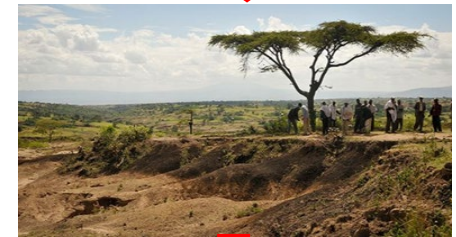
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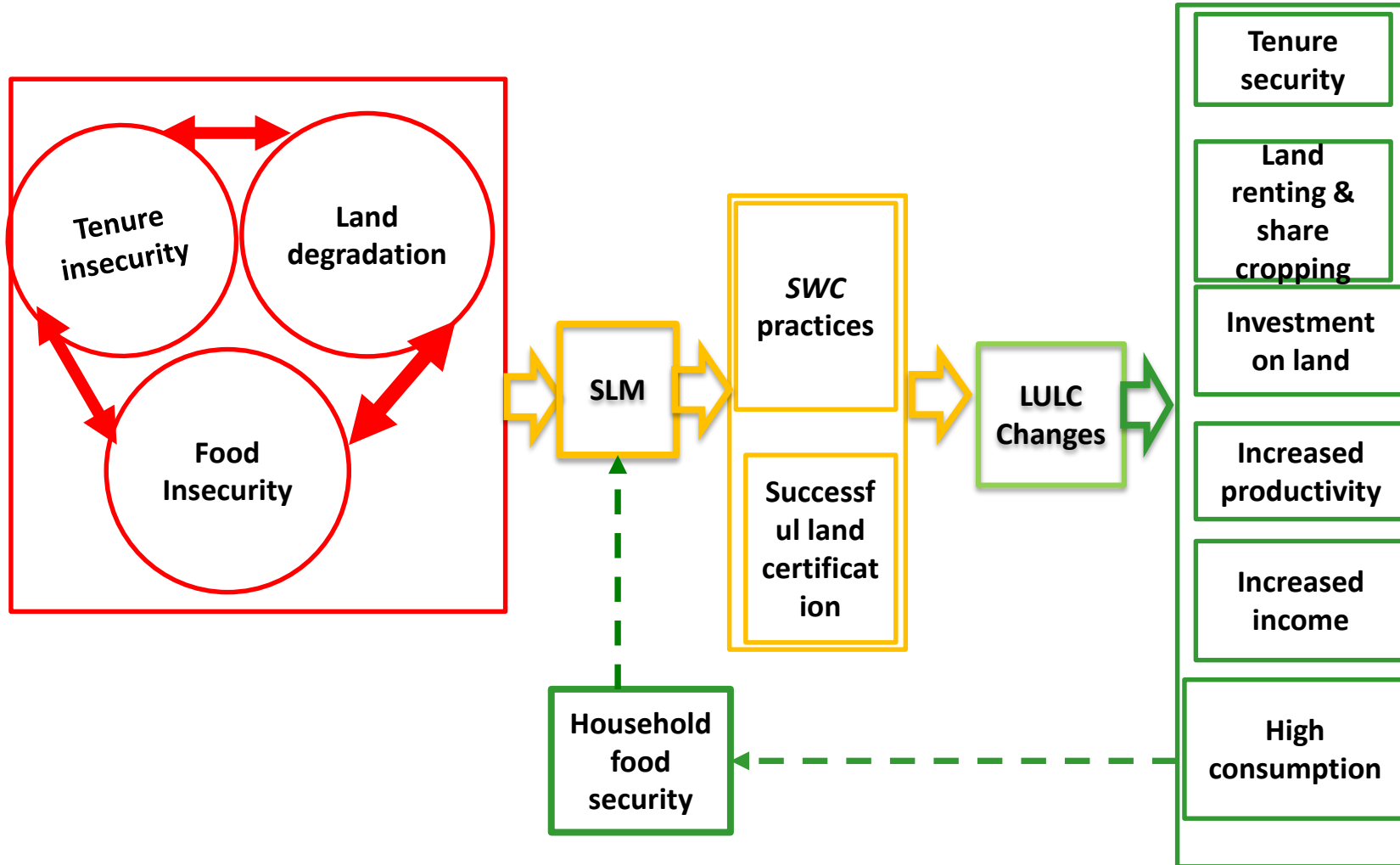


- Land degradation 42 tons/ha/yr. (Hurni, 2000).
- Deforestation rate 62,000 ha/yr (Nyssen et al. 2010).
- 75 percent of all court cases are land and land related (Adal, 2002).
- Insignificant investment on land (Amede, 2003).
- 32 and 10 percent of the people are food insecure and chronically food insecure (FAO et al. 2017).
- Interplay between tenure insecurity, land degradation and food insecurity is not well studied.

BACKGROUND & INTRODUCTION CONT'D

- **Sustainable land management:** a knowledge-based procedure that helps integrate land, water, biodiversity, and environmental management
- **Tenure security:** certainty & protection of landholding
- **Land degradation:** a matter of "***political ecology***", a discipline that combines ecology with political economy.
- **Food security:** availability, accessibility, utilisation & stability

III. CONCEPTUAL FRAMEWORK



IV. RESEARCH OBJECTIVES

Main Objective: To study the impacts of sustainable land management on tenure insecurity, land degradation and food insecurity



- To identify biological & physical SWC practices mainly employed by the households engaged in SLM activities
- To study how land certification contributes to improve tenure security and agricultural productivity
- To investigate major land use land cover changes observed as a result of the adoption of SLM activities
- To explore the food security situation of rural household engaged in SLM activities

V. METHODOLOGY: EXPLORATORY CASE STUDY

JUSTIFICATIONS

- Research approach mainly depends on the nature of the problem, researcher's experience, and the interest of the end users (Creswell, 2014).
- Supports pragmatic way of world thinking which seeks to answer problem-centred, pluralist real world practice, and consequence of actions (Yin, 2009).
- Combines different data collection and analysis methods that help for better triangulation (Creswell, 2014).

METHODOLOGY BY RESEARCH OBJECTIVES

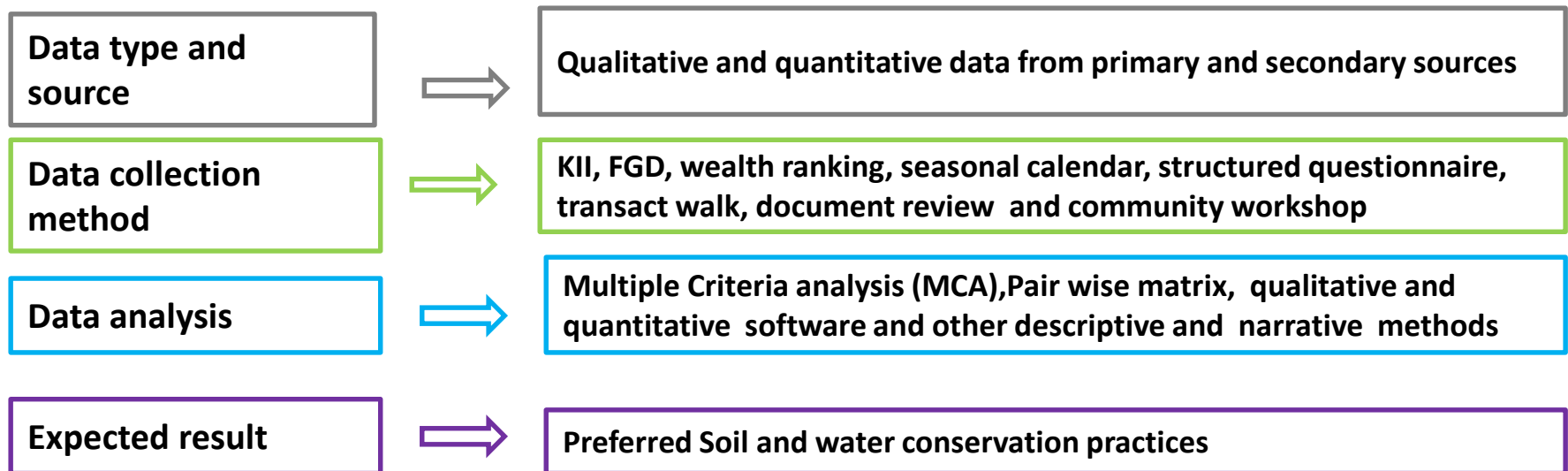
(1) To identify biological & physical soil & water conservation practices mainly employed by the households engaged in SLM activities.



METHODOLOGY BY RESEARCH OBJECTIVES CONT'D

Corresponding Research questions

- 1) What are the prominent biological and physical SWC practices mainly applied by the households engaged in SLM activities?
- 2) What are the drivers for the adoption and sustainability of the preferred SWC practices?



METHODOLOGY BY RESEARCH OBJECTIVES CONT'D

(2) To study how land certification contributes to improve tenure security and agricultural productivity



METHODOLOGY BY RESEARCH OBJECTIVES CONT'D

Corresponding Research questions

- 1) How does the land certification program contribute to tenure security and agricultural productivity?
- 2) What are the prominent factors contributing to successful land certification?

Data type and source



Qualitative and quantitative data from primary and secondary sources

Data collection method



KII, FGD, structured questionnaire, wealth ranking, seasonal calendar, transect walk, document review and community workshop

Data analysis



Exploratory Factor Analysis, qualitative and quantitative software and other descriptive and narrative methods

Expected result



Trends of tenure security and agricultural productivity

METHODOLOGY BY RESEARCH OBJECTIVES CONT'D

(3) To investigate major land use land cover changes observed as a result of the adoption of SLM activities



METHODOLOGY BY RESEARCH OBJECTIVES CONT'D

Corresponding research questions

- 1) What do the LULC dynamics of the study area look like?
- 2) What are the major drivers for the existing LULC changes?

Data type and
source



Qualitative and quantitative data from primary and secondary sources

Data collection
method



KII, FGD, wealth ranking, seasonal calendar, structured questionnaire, transect walk, document review aerial photo, satellite image, topographic map, GPS assisted data collection and community workshop

Data analysis



GIS software, Multiple Criteria Analysis, Exploratory Factor Analysis, and Descriptive and Narrative Static analysis

Expected result



Land use Land Cover Changes

METHODOLOGY BY RESEARCH OBJECTIVES CONT'D

(4) To explore the food security situation of rural household engaged in SLM activities



METHODOLOGY BY RESEARCH OBJECTIVES CONT'D

Corresponding Research questions

- 1) What does the food security situation of the studied households look like?
- 2) What are the determinants of households' food security ?
- 3) What are the major coping & survival strategies employed by households during food shortages?

Data type and source



Qualitative and quantitative data from primary and secondary sources

Data collection method



KII, FGD, wealth ranking, seasonal calendar, transact walk, structured questionnaires ,document review ,and community workshop

Data analysis



Binary logit model, HHFBM,HDDS , HFIIAS and rCSI , and Binary logit method

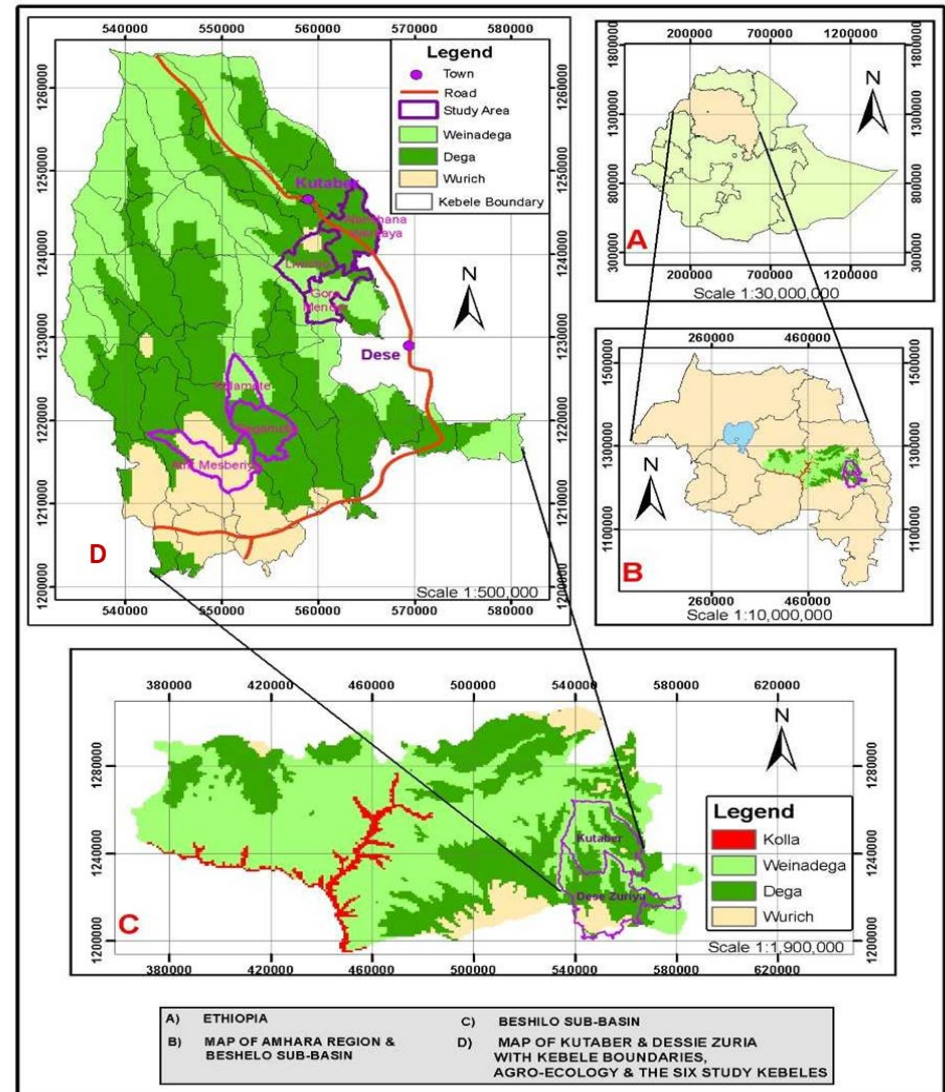
Expected result



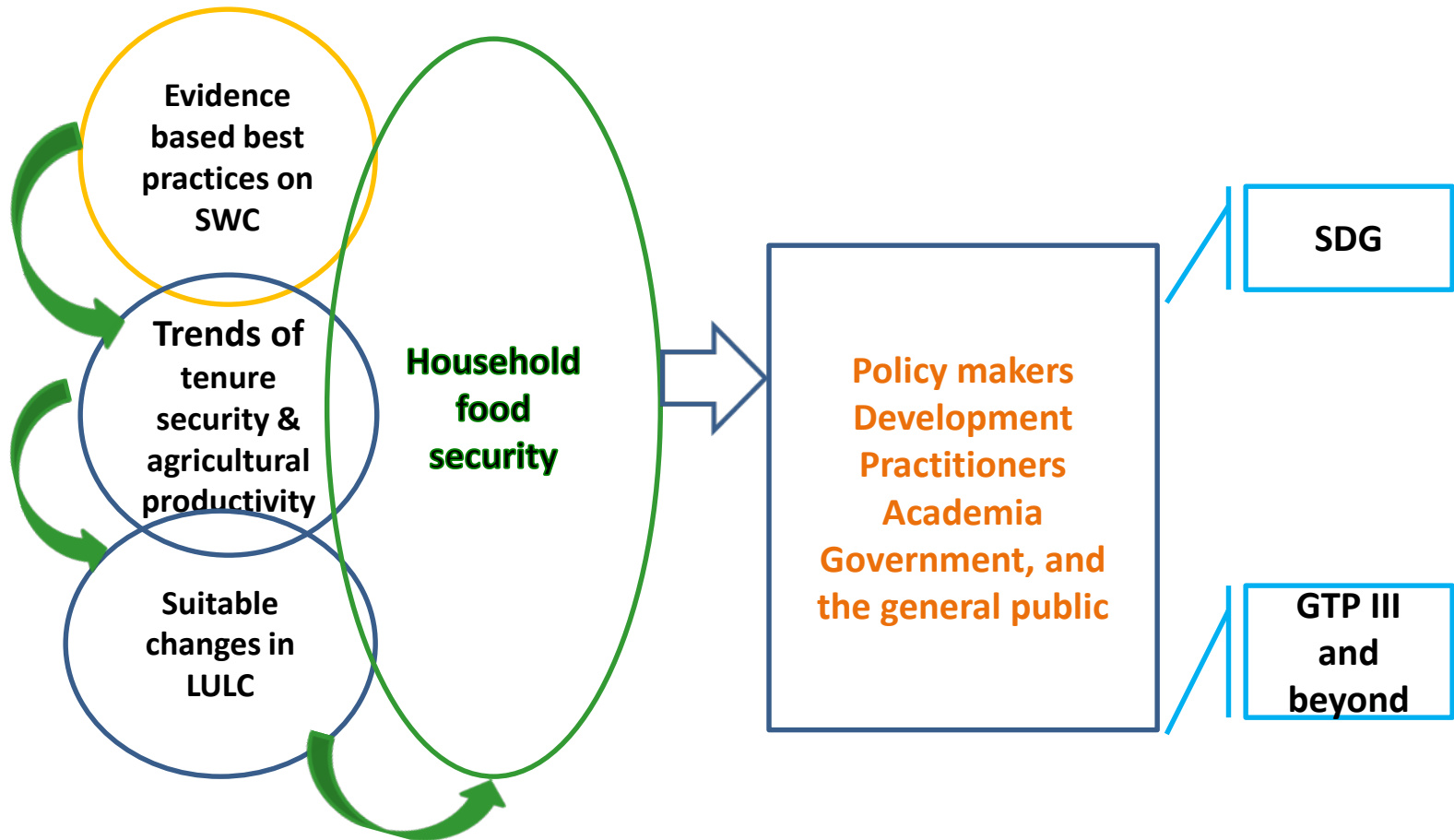
Food security status of households, determinants of households food security and coping and survival strategies

STUDY AREA

- Beshilo sub-basin of the Blue Nile basin.
- Beshilo river is one of the biggest feeder of Blue Nile river drains to Great Ethiopian Renaissance Dam (GERD).
- Undulating terrain and prone to high land degradation.
- Found at the centre of famine corridor of the country.



VI. OUTCOMES OF THE RESEARCH



Bedankt Thank you Asante

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