



**KINGDOM OF CAMBODIA
NATION RELIGION KING**



REVIEW OF PUBLIC INVESTMENT IN AGRICULTURE IN CAMBODIA

PHNOM PENH, DECEMBER 18th 2019

PREPARED BY THE ANALYTIC UNIT FOR AGRICULTURE SECTOR

THE SUPREME NATIONAL ECONOMIC COUNCIL

**UNDER AGRICULTURE SERVICES PROGRAMME FOR INNOVATION, RESILIENCE
AND EXTENSION PROGRAMME (ASPIRE)**

OUTLINE

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- Introduction and Motivation of Study

2.

- Research Objectives and Analytical Framework

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- Current Status of Public Spending in Agriculture

4.

- Impact of Public Spending in Agriculture

5.

- Analysis of Efficiency of Public Spending and Challenges

6.

- Conclusion and Policy Recommendations

1. Introduction and Motivation of Study

SIGNIFICANT ROLES OF AGRICULTURE IN SOCIO-ECONOMIC DEVELOPMENT

Annual Economic Growth

(1999-2018): 7.7%

Annual Growth of Agriculture

(2004-2013): 5.0%

Agriculture Contribution to Growth:

- 1.8% to 10.3% of Economic Growth (2004-2008)
- 1.0% to 5.6% of Economic Growth (2009-2013)

Contribution to Poverty Reduction:

- 60% to Poverty Reduction from 50% in 2007 to 21% in 2011.
- 44.7% to Poverty Reduction from 18.9% in 2012 to 9.4% in 2017.

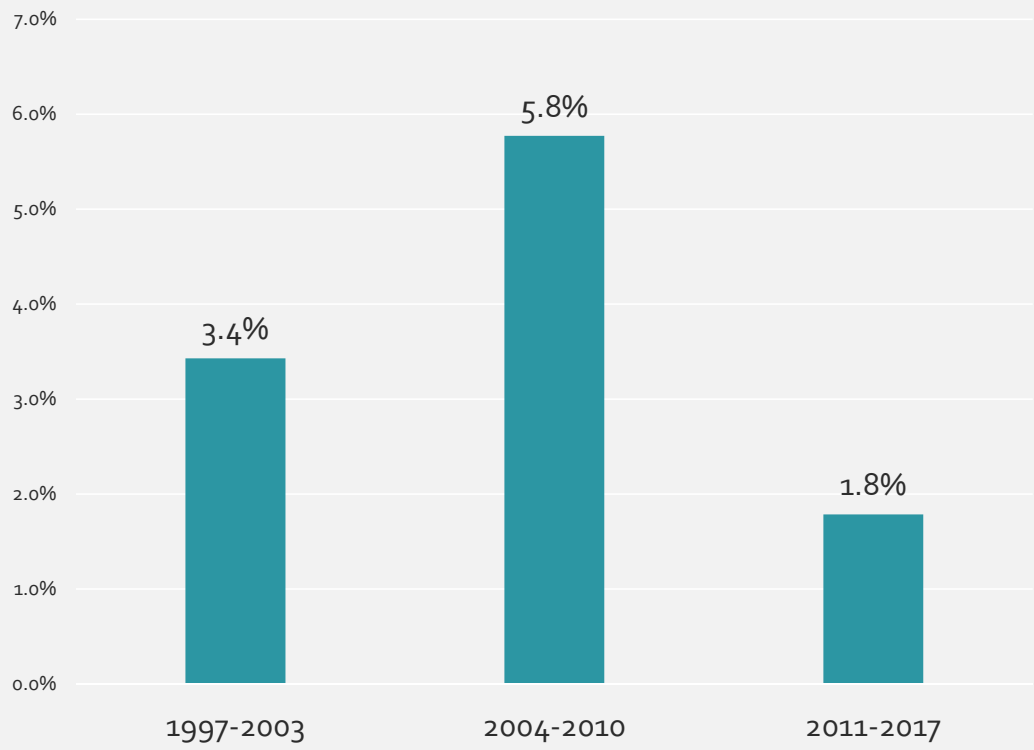
Support Food Security and Nutrition:

- Transformed from net imported food in 1990s to self-sufficient country.
- Reduction of % of Undernourished from 32% in 2000 to 14.2% in 2016

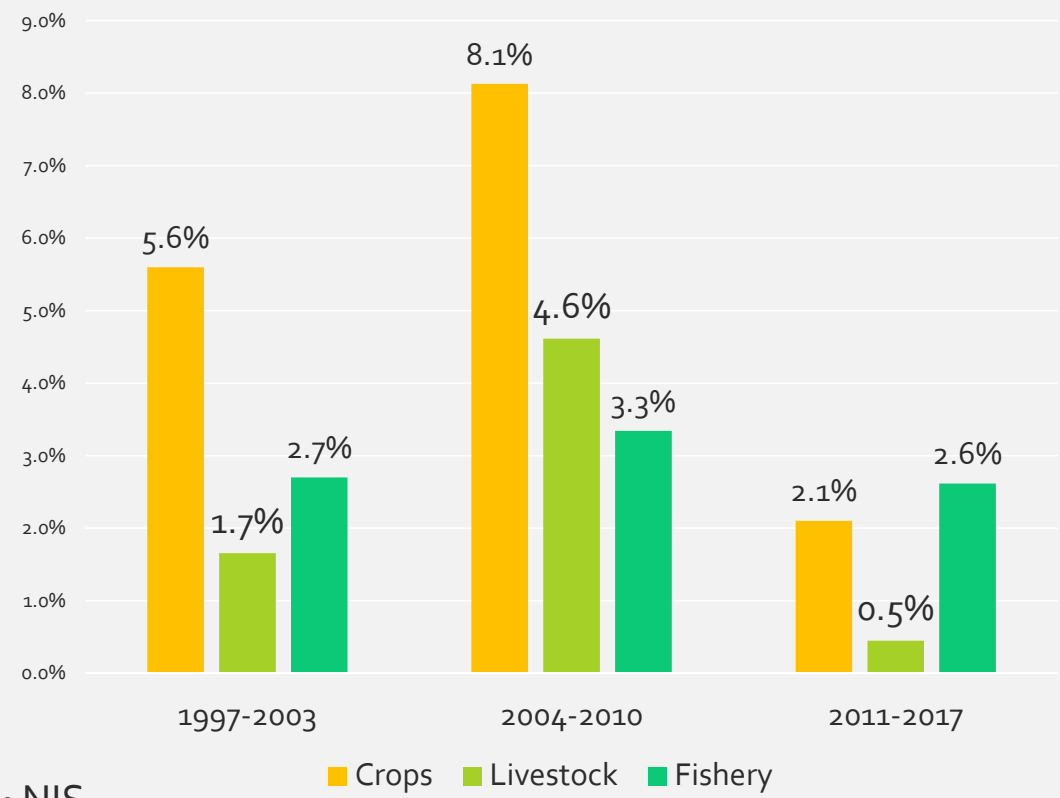
1. Introduction and Motivation of Study (Cont.)

GROWTH OF AGRICULTURE HAS BEEN ON DECELERATING TREND OVER THE LAST 7 YEARS.....

Annual Growth of Agriculture by Time Period



Annual Growth of Agriculture Sub-Sector by Time Period

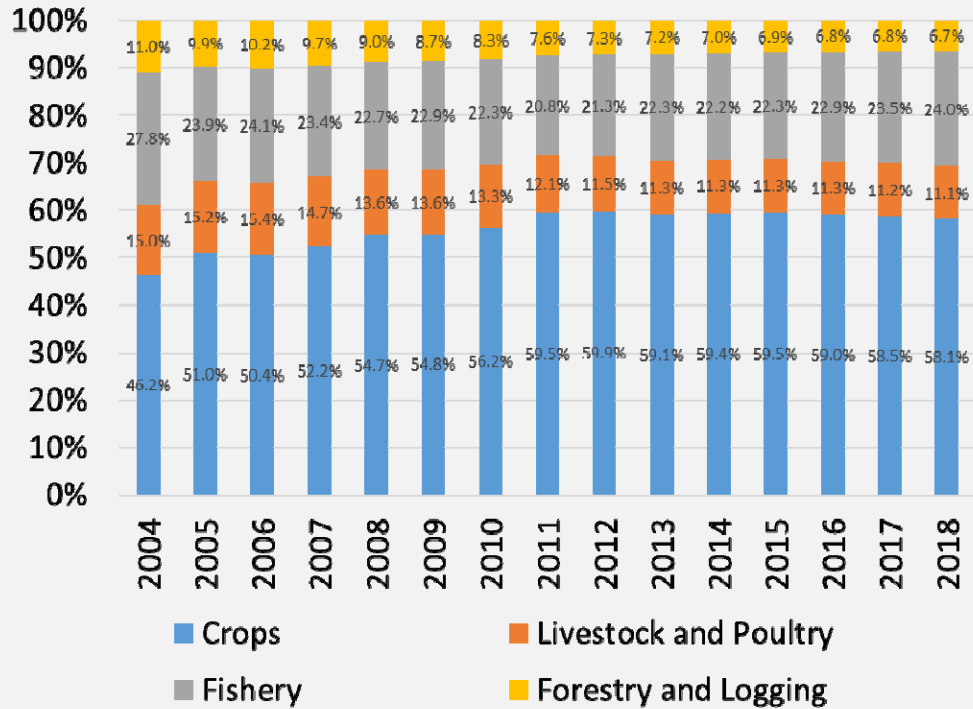


Source: NIS

1. Introduction and Motivation of Study (Cont.)

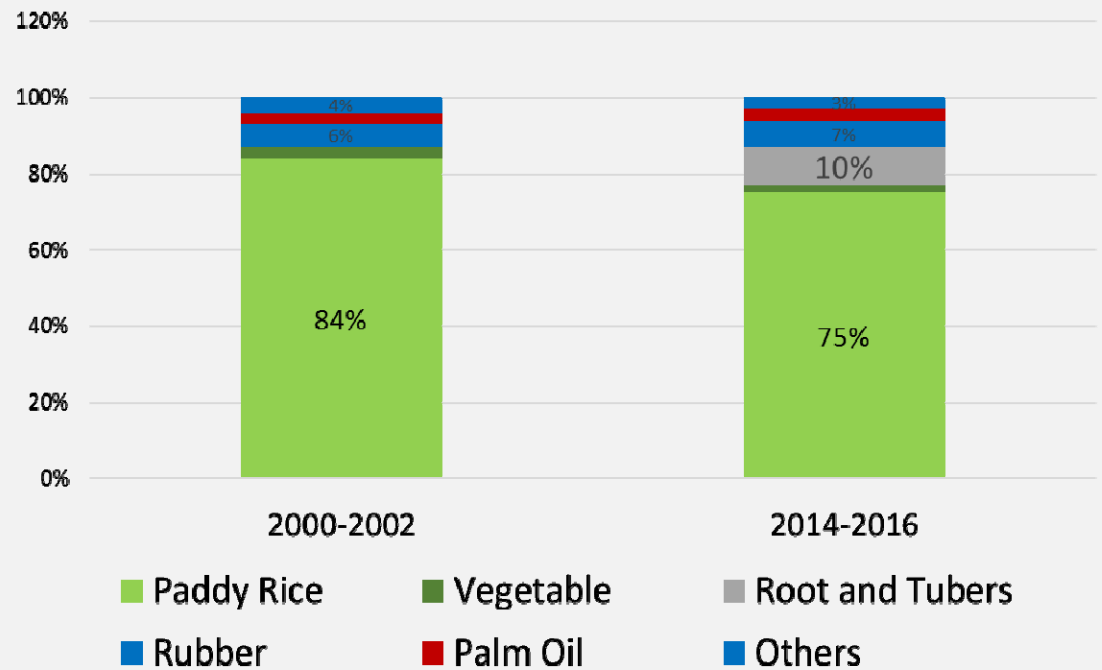
COMMERCIALIZATION DEMONSTRATED PROGRESS BUT BIG ROOM FOR IMPROVEMENT....

Share of Agriculture Sub-Sector



Source: NIS

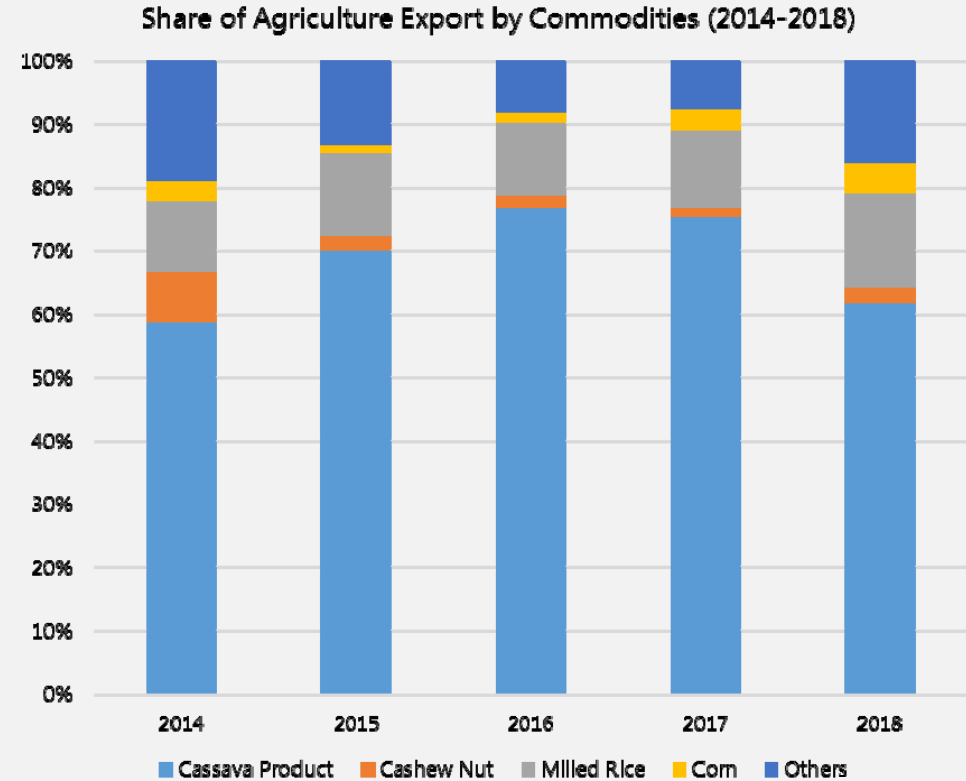
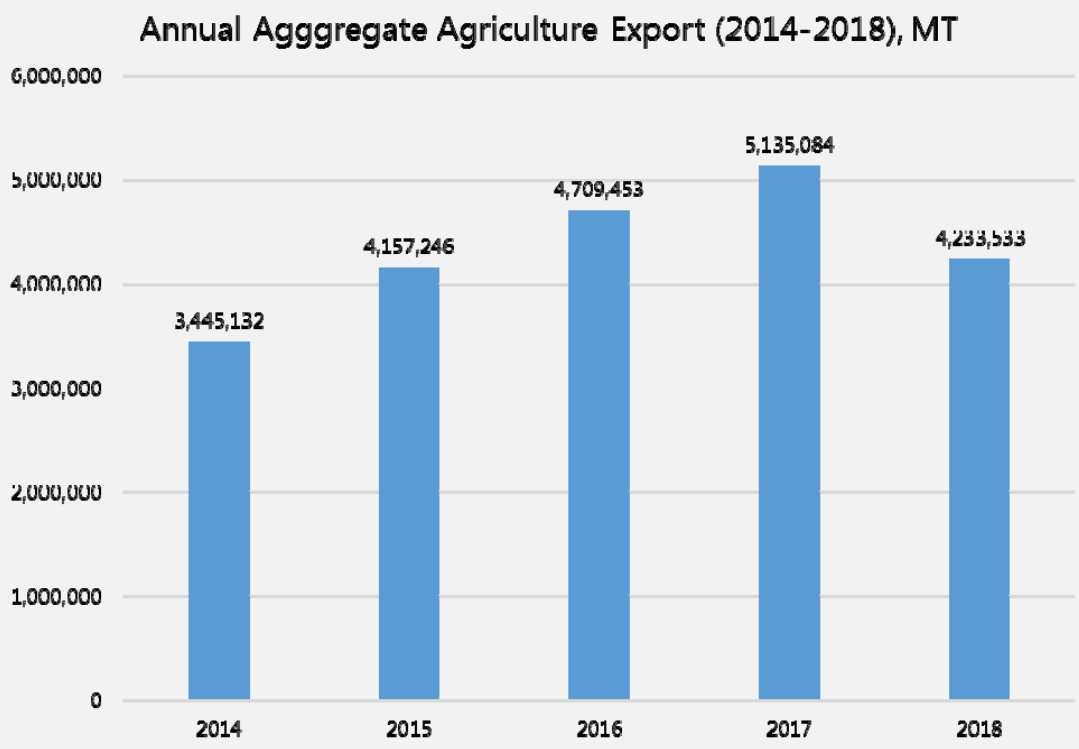
Share of Crops in Gross Cropped Area (2000-2002 and 2014-2016)



Source: IFPR

1. Introduction and Motivation of Study (Cont.)

COMMERCIALIZATION SHOWED REMARKABLE ACHIEVEMENT, BUT HUGE PERCENTAGE OF COMMODITIES ARE NOT PROCESSED.....



Source: MAFF

1. Introduction and Motivation of Study (Cont.)

SLOWER GROWTH WOULD BE LINKED TO OTHER WEAK FUNCTIONALITIES....

(3) **Productivity** of agriculture still has positive growth but on declining trend mainly associated with lack of **access to water** despite increased irrigation scheme, weak **farming technique and technology**, limited investment in **R&D** in quality seeds.

(4) **Public Spending Increase:** The government spending [excluding wage] (MAFF & MOWRAM) on agriculture has significantly increased by 1.8 folds—from USD 54.7 million in 2011 to USD 98.7 million in 2017 while DP funded spending maintained around USD 170 million per annum.

(5) **Many Actors Working in Agriculture Sector but lack of** Harmonization, Coordination and Integration remain the institutional challenges to enhance effective agriculture development among government agencies and development partners at the planning and implementation levels.

1. Introduction and Motivation of Study (Cont.)

AGRICULTURE REMAINS THE IMPORTANT SECTOR IN THE MEDIUM AND LONG TERM....

(6) The Royal Government of Cambodia has regarded **agriculture as the prioritized sector** by incorporating it in Rectangular Strategy Phase4 (RS4) through focusing on:

- (a) Enhancing productivity, quality, and diversification;*
- (b) Upgrading processing industry and commercialization;*
- (c) Promoting livestock and aquaculture;*
- (d) Promoting vegetable production aimed at import substitution;*
- (e) Strengthening the management of economic land concessions;*
- (f) Prioritization of investment in irrigation systems.*

1. Introduction and Motivation (Cont.)

MODALITY OF PUBLIC INVESTMENT NEEDS TO BE REVIEWED....

Modality of Public Investment in Agriculture Should be Reviewed; thus the Study of **“Review of Public Investment in Agriculture in Cambodia”** is very important to look back the satisfied achievement, critical gap of spending efficiencies so that direction of spending could be shaped in the right way...

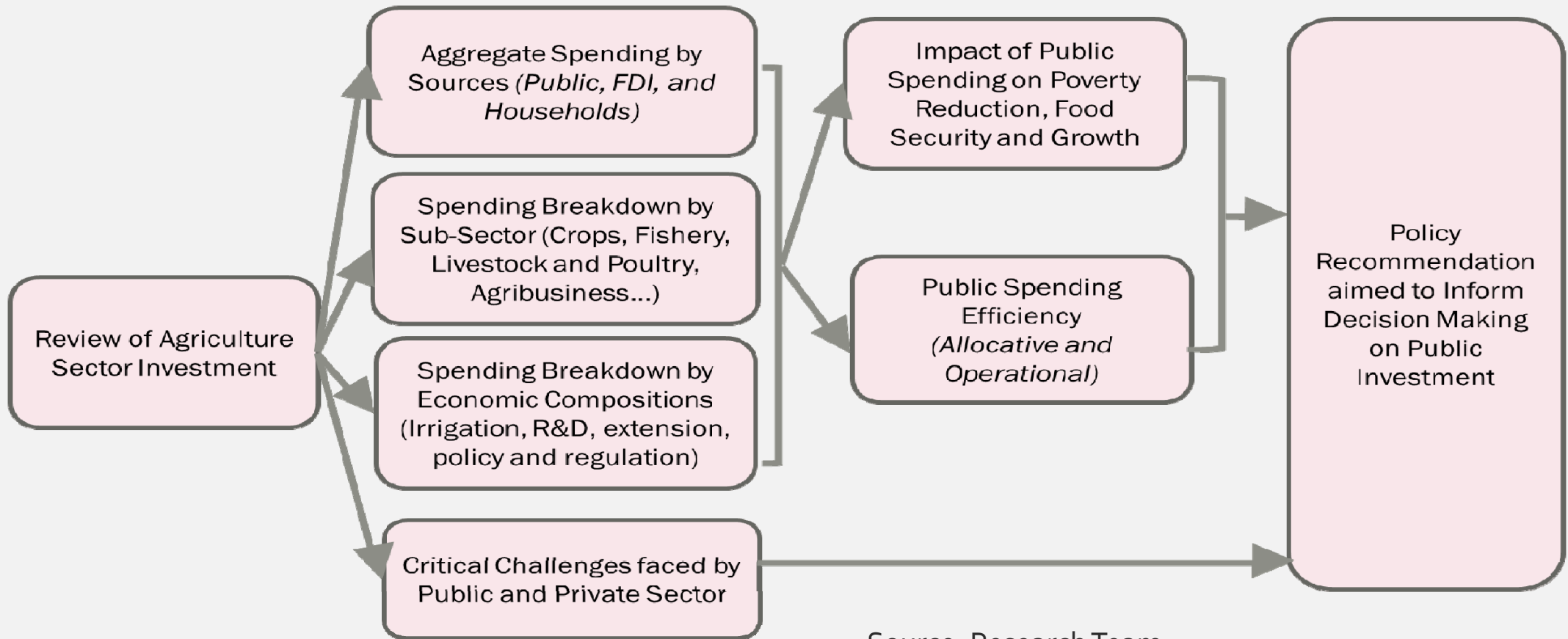
2. Research Objectives and Analytical Framework

RESEARCH OBJECTIVES

- (1). To take stock of public spending and private spending by sources and sectors and economic compositions.
- (2) To assess the impact of public spending in agriculture on overall growth, food security and poverty reduction over the last seven years (2011-2017).
- (3) To assess the degree of efficiency of public spending in agriculture at both allocative and operational level.
- (4) To identify the critical challenges faced by public and private sector.
- (5) To provide policy recommendations aimed to inform decision makings in public investment.

2. Research Objectives and Analytical Framework

ANALYTICAL FRAMEWORK: SPENDING, IMPACT, EFFICIENCY AND POLICY DIRECTION...

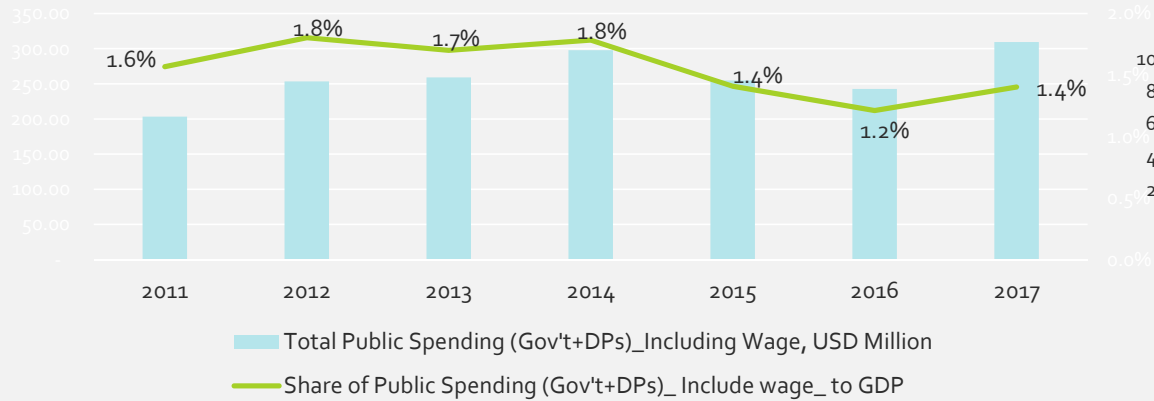


Source: Research Team

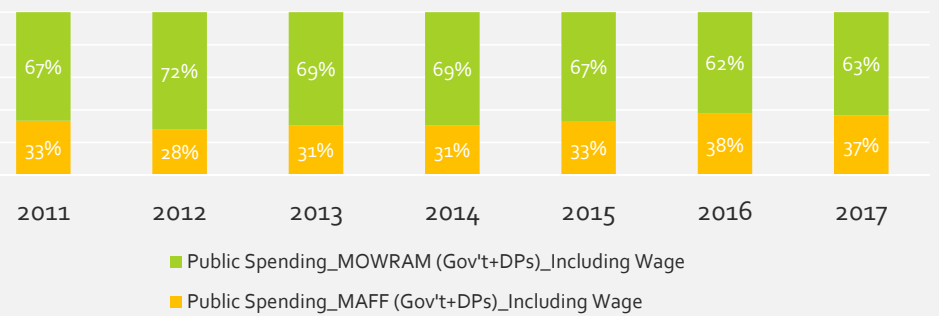
3. Current Status of Spending in Agriculture

TOTAL PUBLIC SPENDING ON AGRICULTURE INCREASED BY 1.5 TIMES OVER THE LAST SEVEN YEARS...

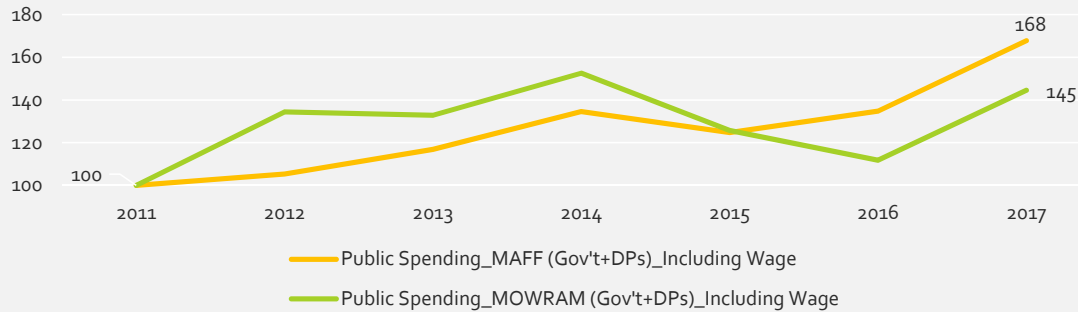
Public Spending (Gov't+DPs) and Share to GDP



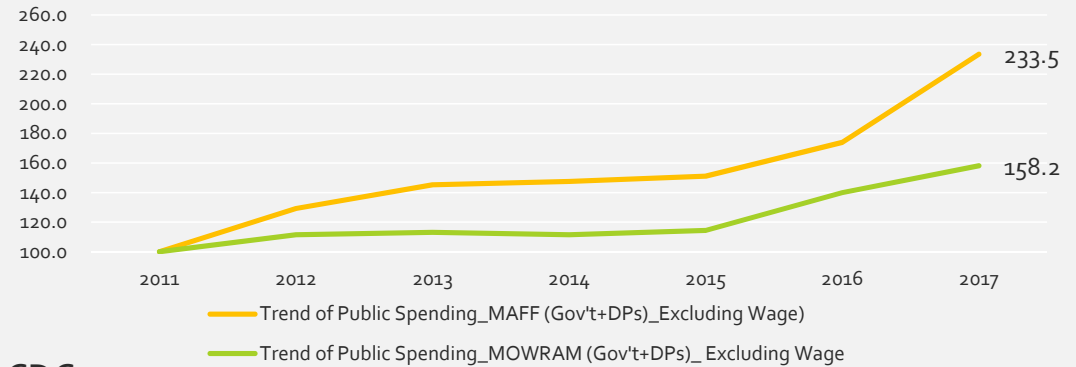
Share of Public Spending of MAFF and MOWRAM, including wage



Trend of Public Spending of MAFF vs. MOWRAM (including wage)



Trend of Public Spending of MAFF vs. MOWRAM (excluding wage)

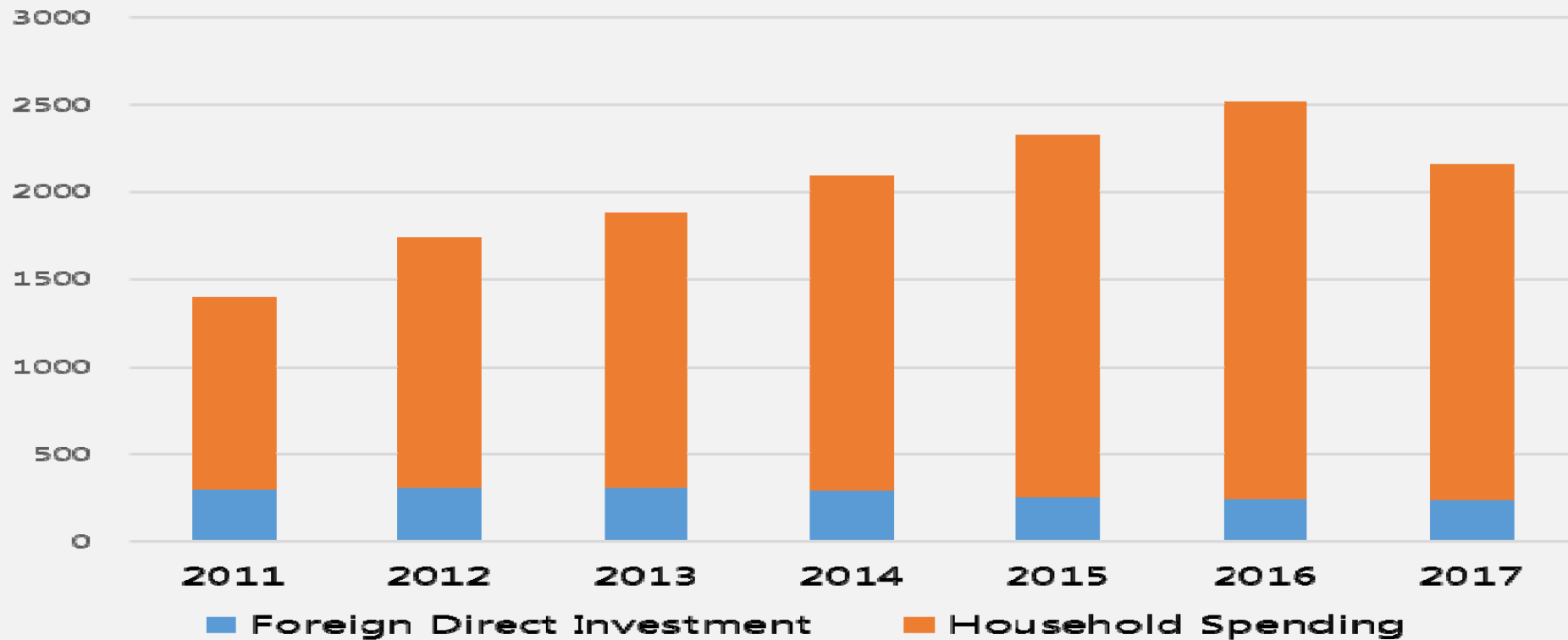


Source: MEF and CDC

3. Current Status of Spending in Agriculture

TOTAL PRIVATE SPENDING INCREASED BY 1.55 TIMES OVER THE LAST SEVEN YEARS..

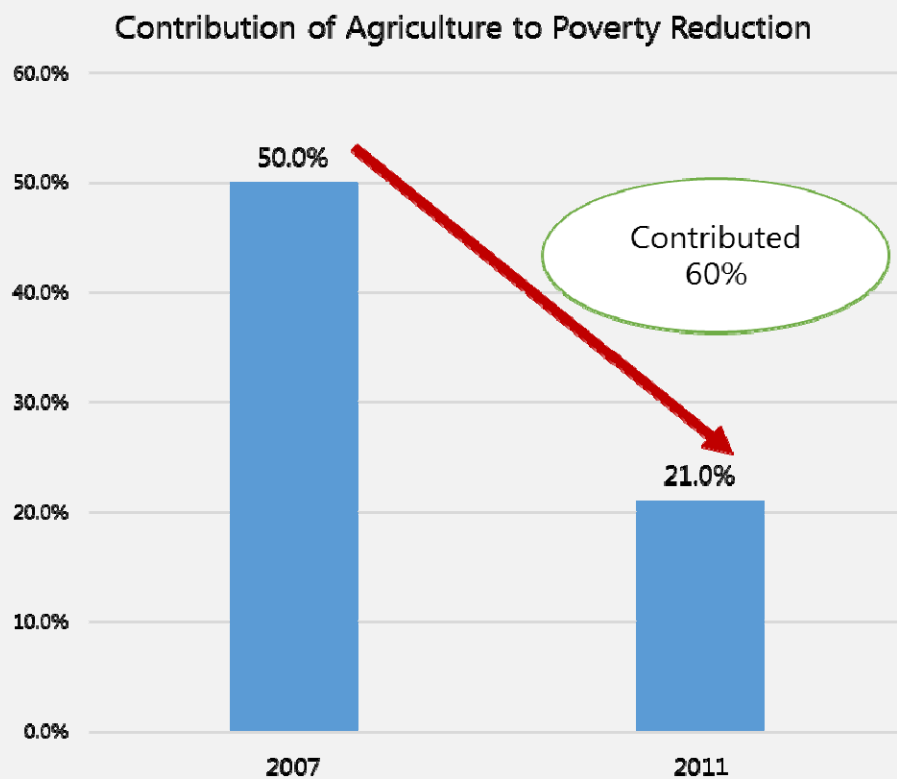
Private Spending [2011-2017], USD Million



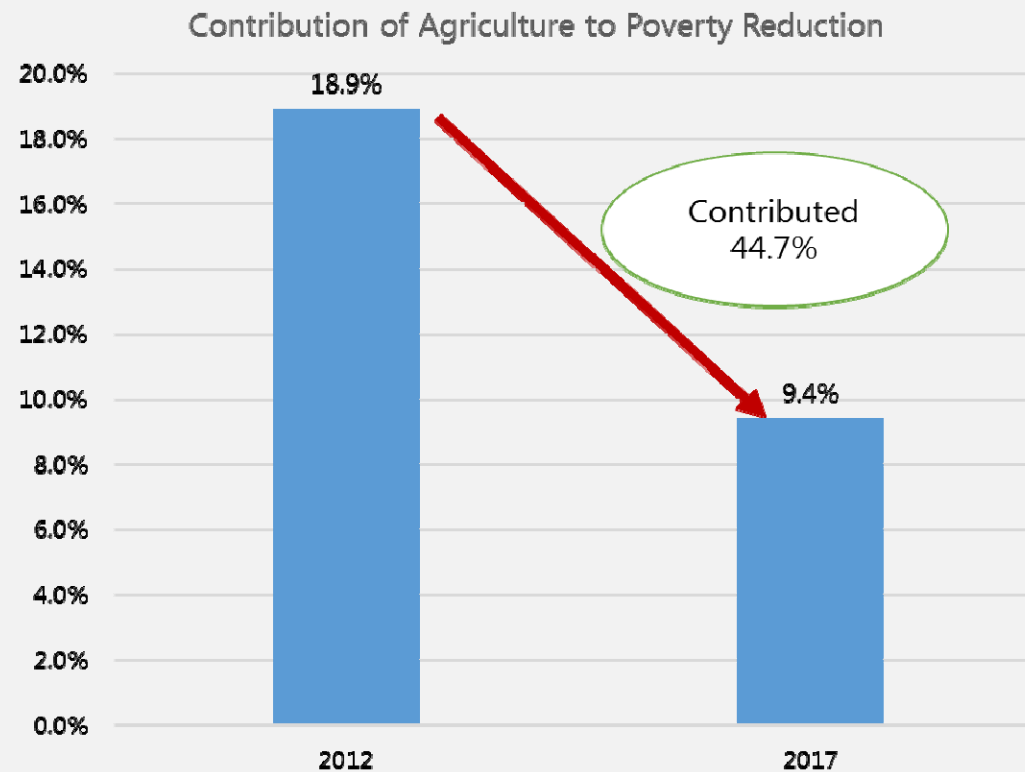
Source: NBC and CSES

4. Impact of Public Spending

IMPACT OF PUBLIC SPENDING ON POVERTY.....



Source: WB Report "Cambodia's Agriculture in Transition 2015"



Source: CSES and Team's Estimate

4. Impact of Public Spending

IMPACT OF PUBLIC SPENDING ON FARMERS' LIVELIHOOD

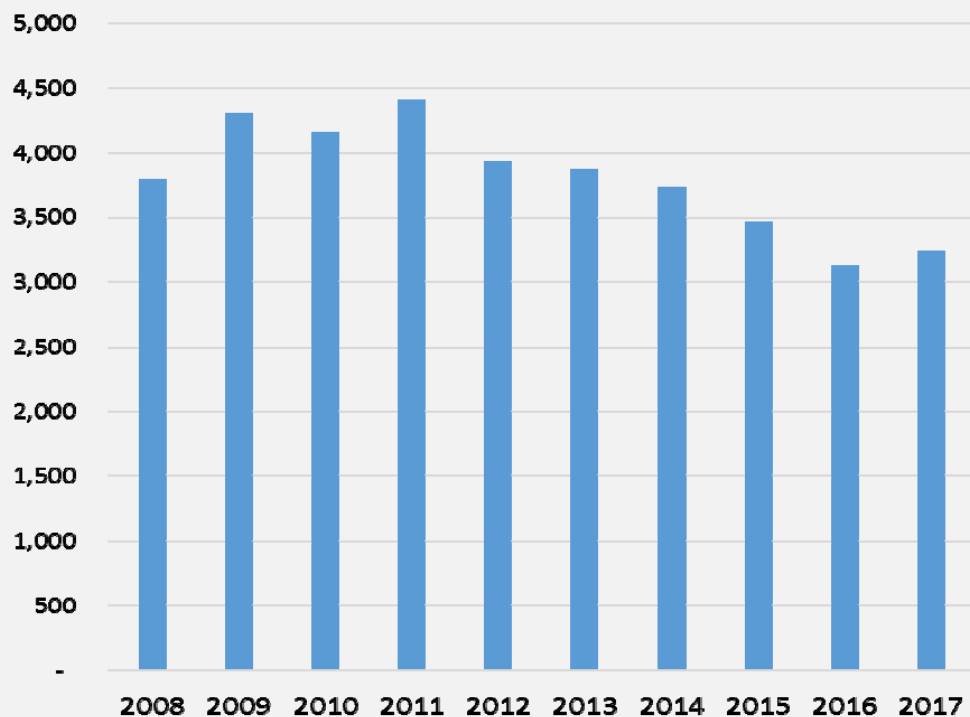
Case Studies of Irrigation Scheme	Pre_Scheme			Post_Scheme		
	Production Yield (ton/ha)	Land Intensity	Livelihood Status	Production Yield (ton/ha)	Land Intensity	Livelihood Status
Kanghort Irrigation Scheme [1400 households in 6 villages in Battambang]	2.25	Once Per Year	Very Low Living Condition	4.5	Twice Per Year	Much Improved
Charit Irrigation Scheme in Pursat [1600 ha]	1.75	Once Per Year	Very Low Living Condition	3.5	Twice Per Year	Much Improved

Source: Field Survey by Research Team

4. Impact of Public Spending

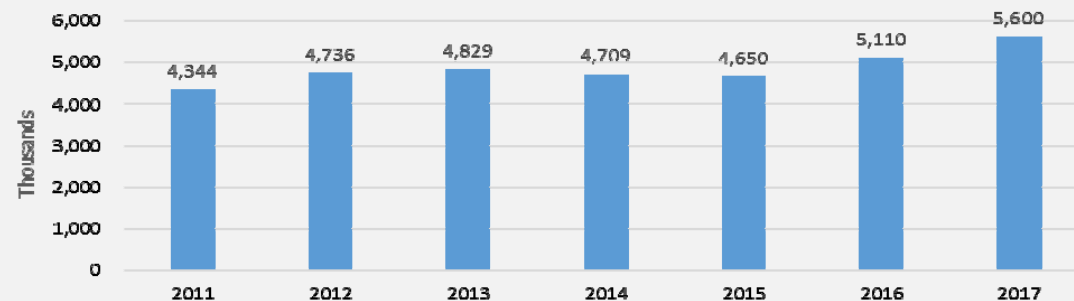
IMPACT OF PUBLIC SPENDING ON EMPLOYMENT AND FOOD SECURITY....

Employment in Agriculture Sector

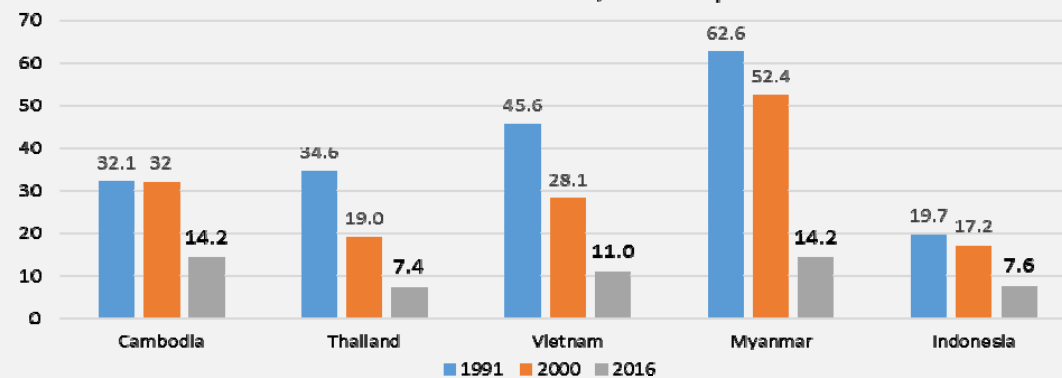


Source: CSES

Annual Surplus of Paddy Rice (2011-2017)



Share of Undernourished, % of Population

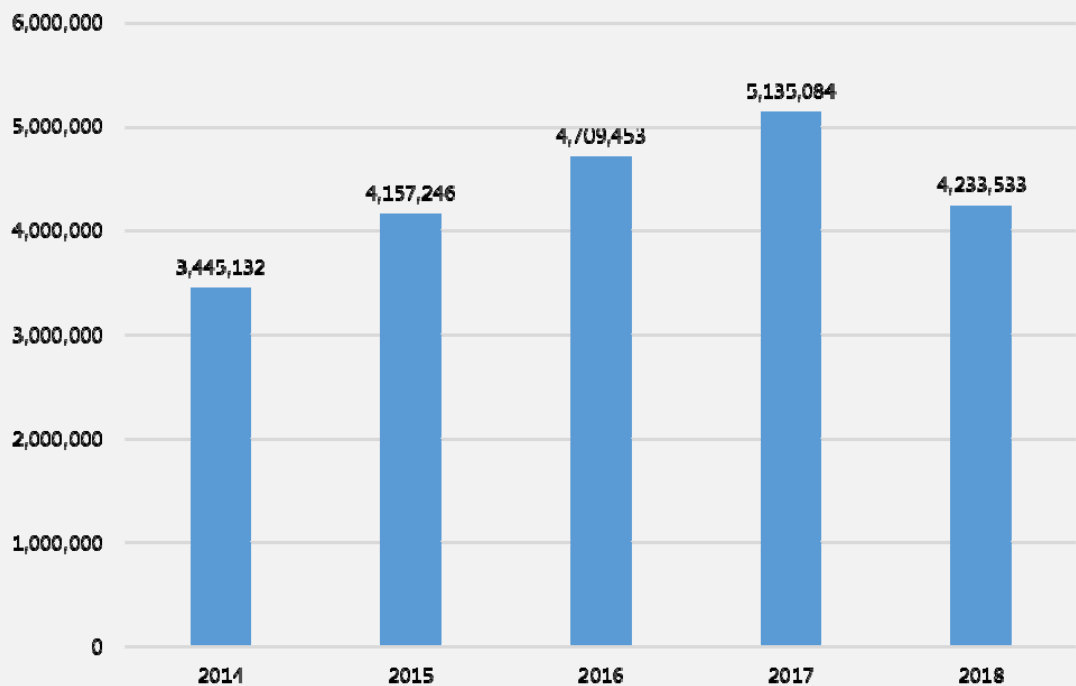


Source: MAFF, FAO

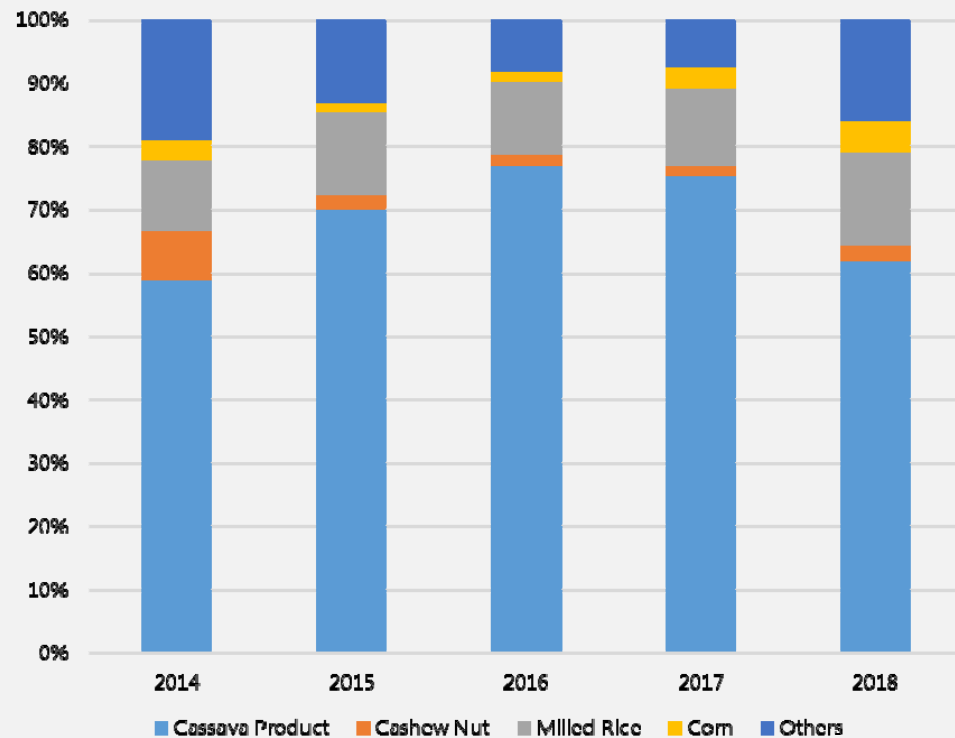
4. Impact of Public Spending

IMPACT OF SPENDING ON AGRICULTURE COMMERCIALIZATION...

Annual Aggregate Agriculture Export (2014-2018), MT



Share of Agriculture Export by Commodities (2014-2018)

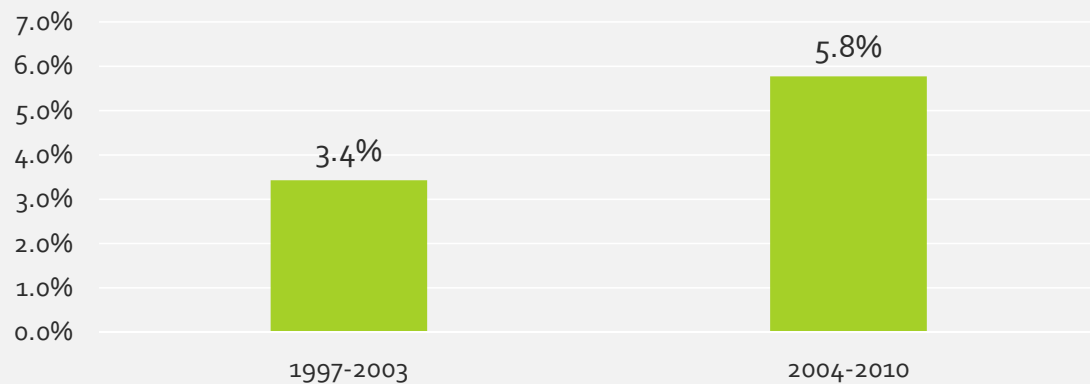


Source: MAFF

4. Impact of Public Spending

AGRICULTURE ACHIEVED VERY REMARKABLE GROWTH DURING 2004-2010....

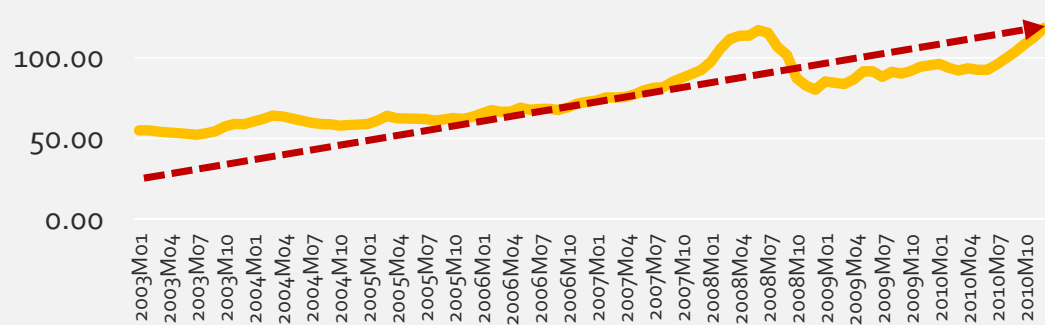
Annual Growth of Agriculture Sector by Time Period



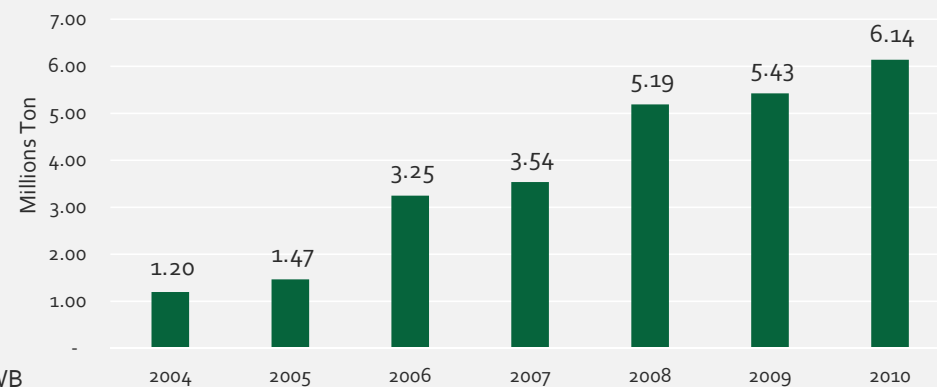
Annual Paddy Rice Production (2004-2010)



Agriculture Price Index (2003-2010), 2010=100



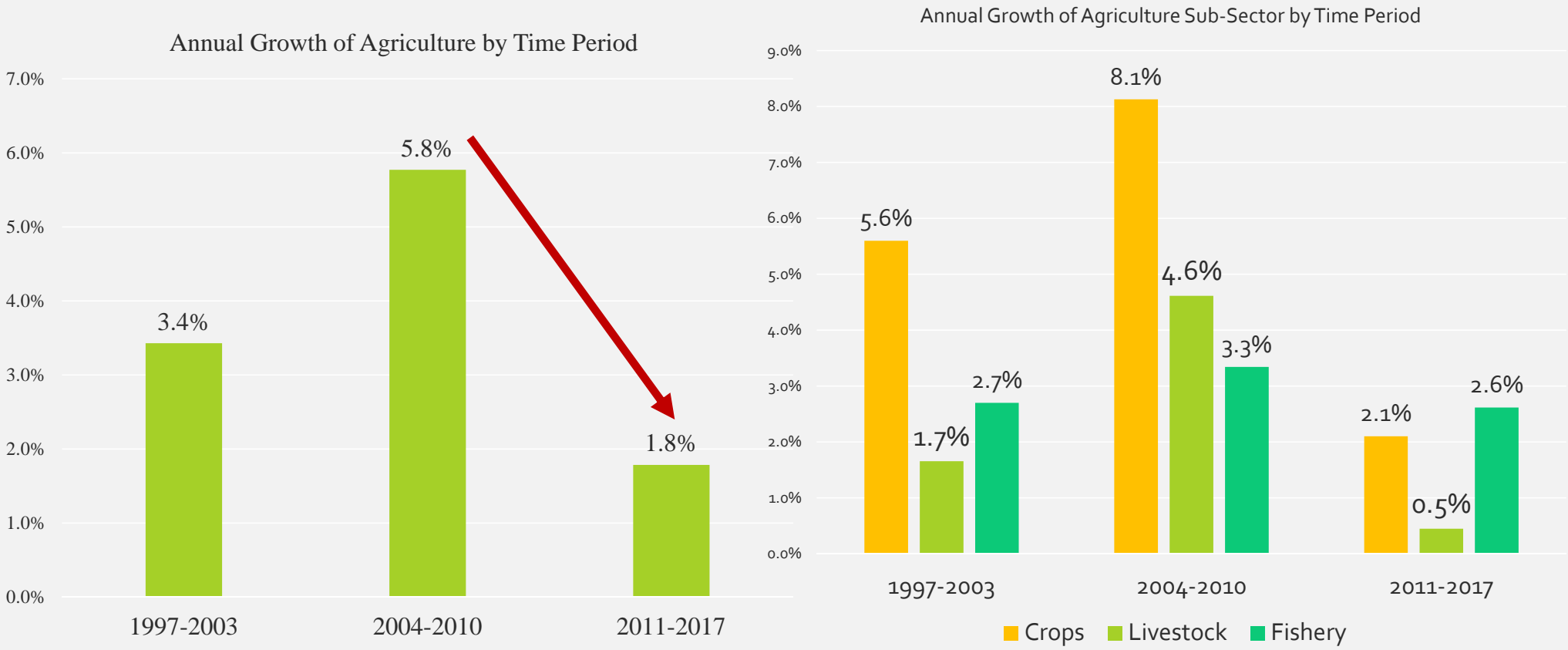
Annual Subsidiary and Industrial Crops Production (2004-2010)



Source: MAFF, NIS and WB

5. Assessment of Efficiency of Public Spending

BUT IT EXPERIENCED MUCH DECELERATING GROWTH DURING 2011-2017...

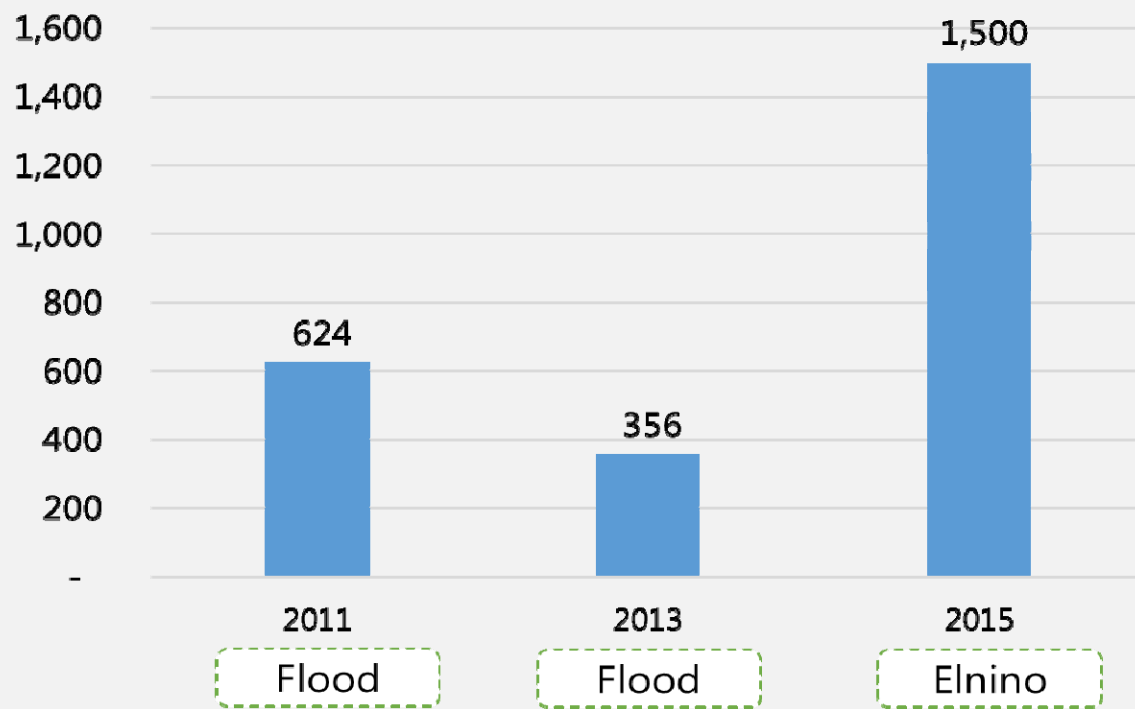


Source: MAFF, NIS

5. Analysis of Public Spending Efficiency

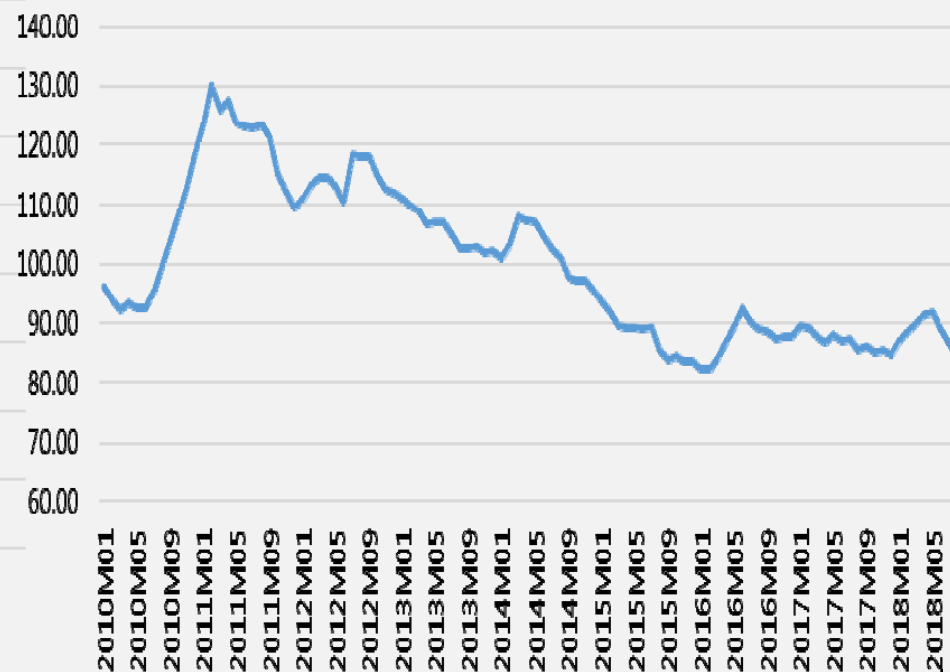
DROP OF AGRICULTURE COMMODITIES PRICES AND EXTREME WEATHER CONDITION WERE TWO OF MANY KEY FACTORS.....

Economic Loss and Damage Caused by Flood and Drought, USD Million



Source: NCDM and ADB

Agriculture Price Index (2010=100)

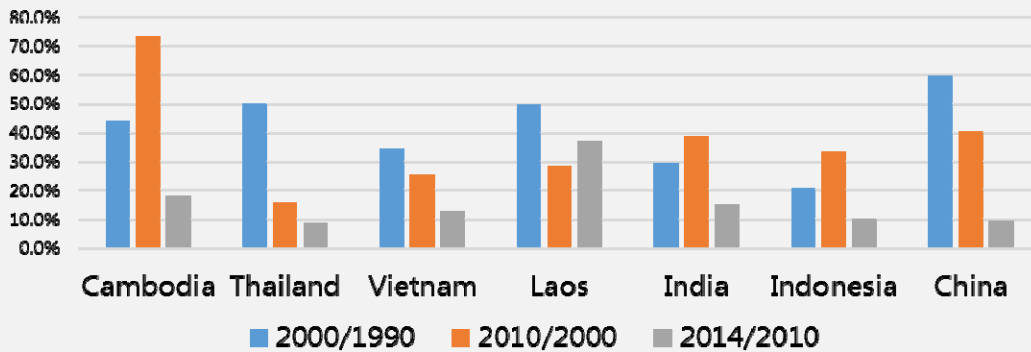


Source: World Bank

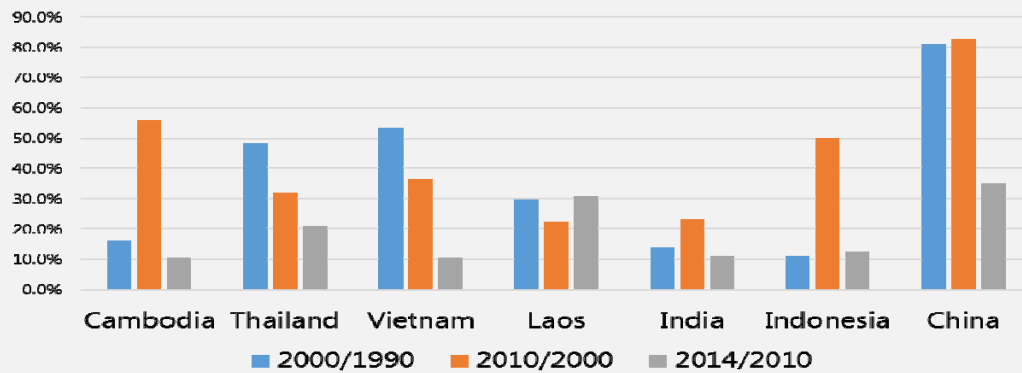
5. Analysis of Public Spending Efficiency

BUT DECELERATING GROWTH OF AGRICULTURE PRODUCTIVITY WAS THE KEY FACTOR TO EXPLAIN THIS TREND....

Growth of Land Productivity by Country

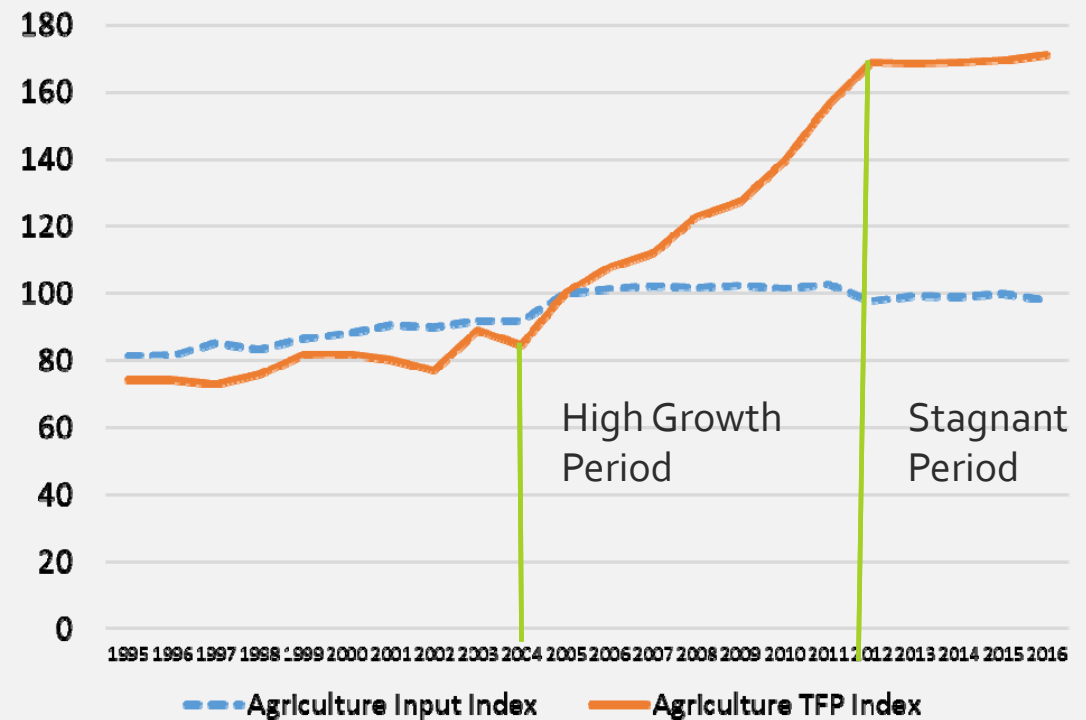


Growth of Labor Productivity by Country



Source: GFPR 2018

Agriculture Inputs Index and Agriculture TFP Index (2005=100)

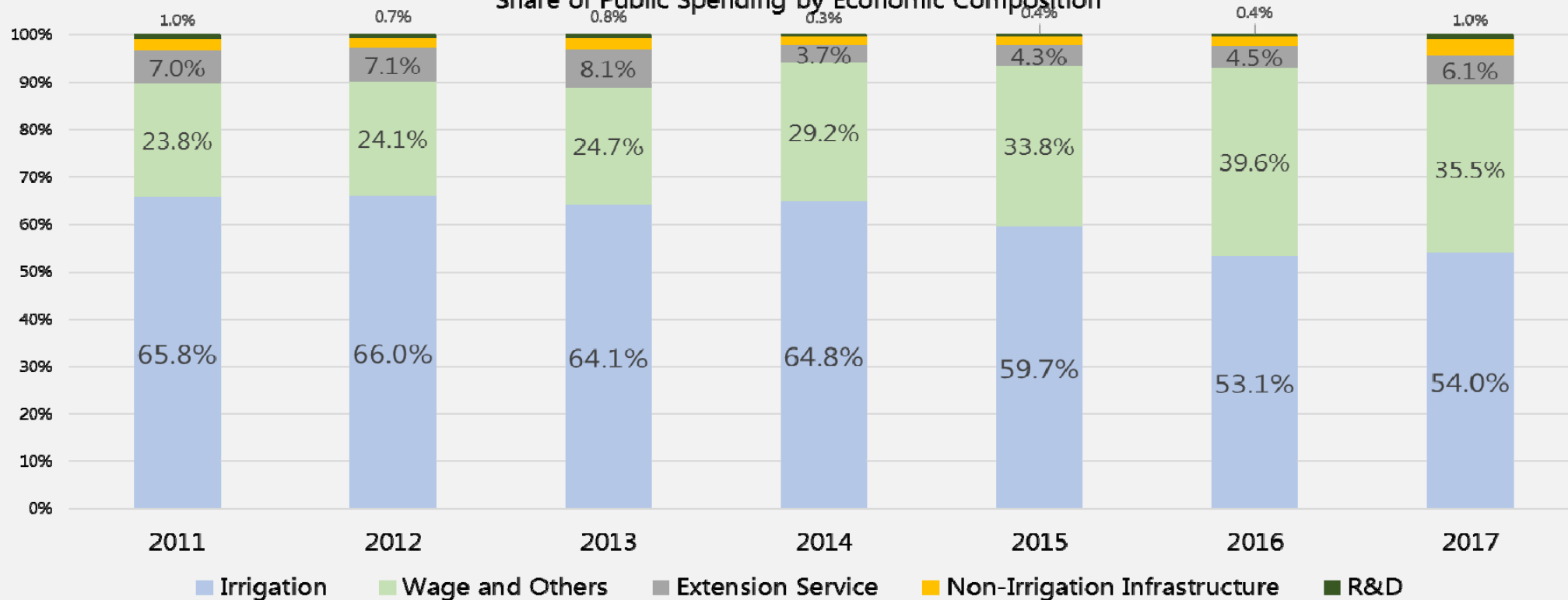


Source: USDA

5. Analysis of Public Spending Efficiency

MORE THAN 2/3 OF PUBLIC SPENDING WAS ALLOCATED TO IRRIGATION....

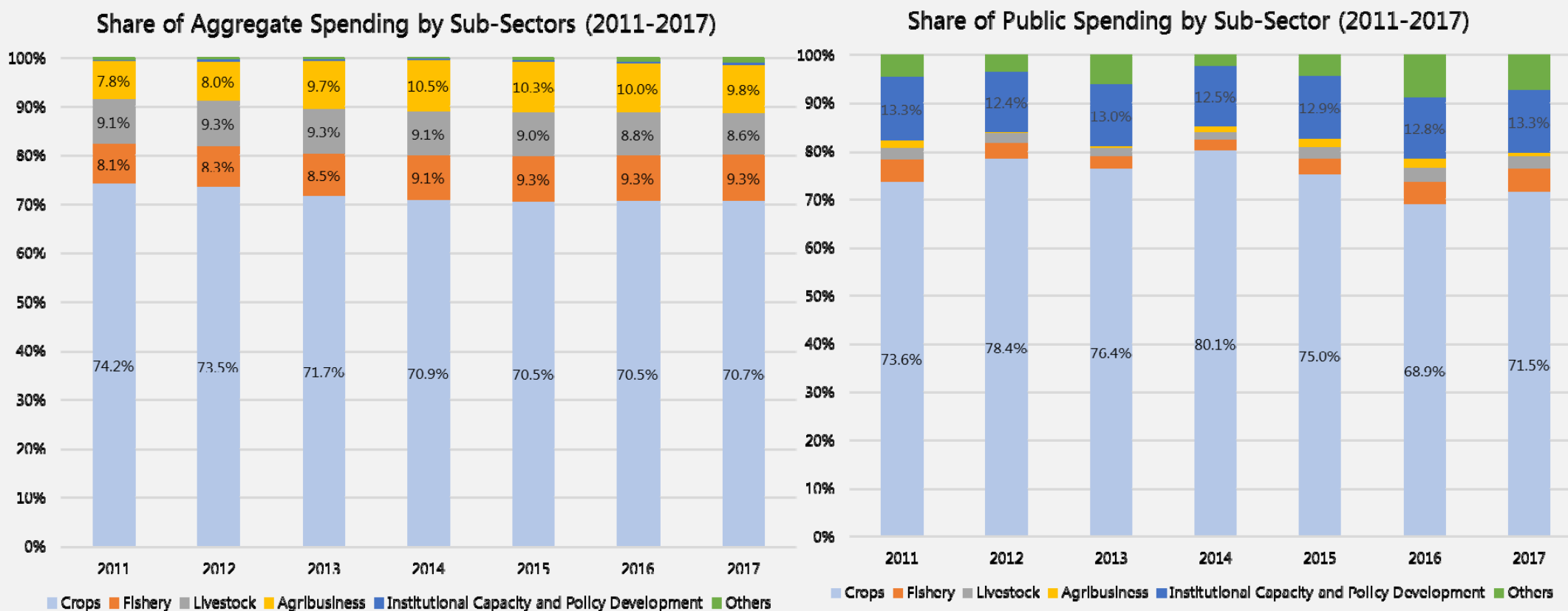
Share of Public Spending by Economic Composition



Source: MEF, CDC and Field Consultation

5. Analysis of Public Spending Efficiency

SPENDING (EITHER AGGREGATE OR PUBLIC) HAS BEEN CONCENTRATED IN CROPS...

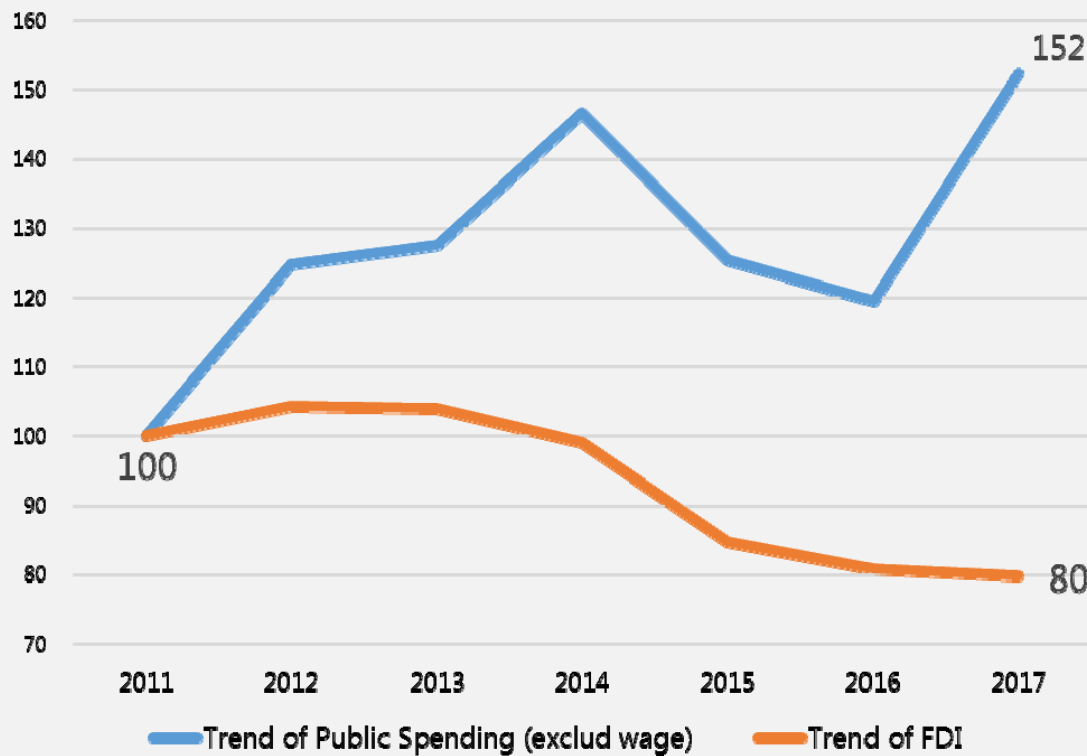


Source: MEF, CDC, NBC and Field Consultation

5. Analysis of Public Spending Efficiency

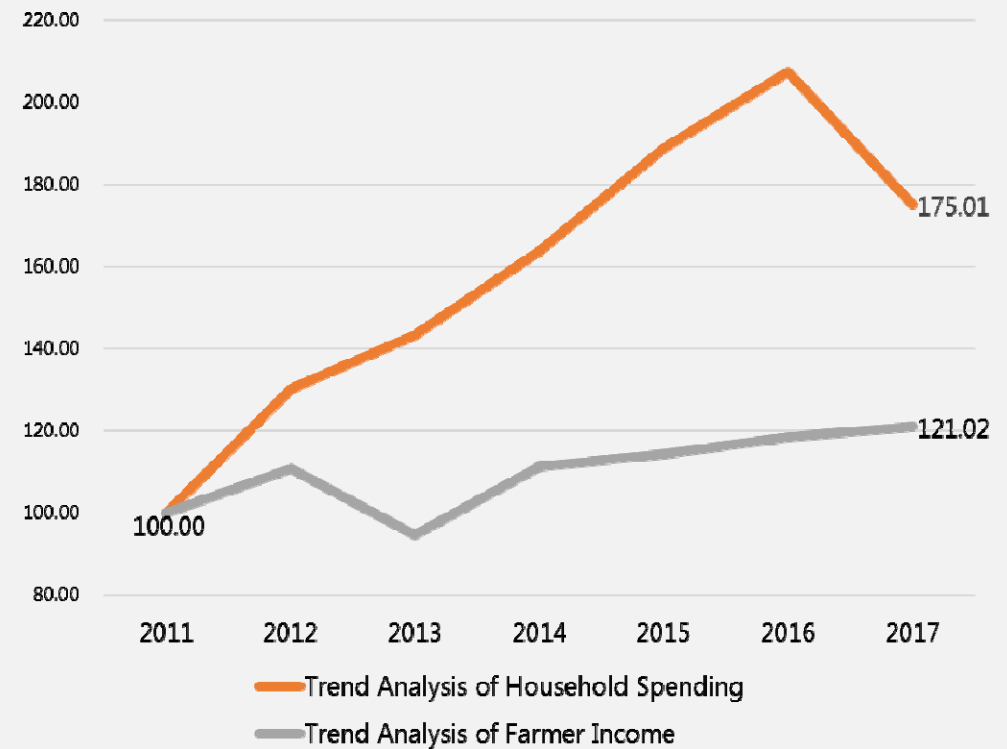
LOWER EFFICIENCY WAS REFLECTED DIVERGING TREND (PUBLIC SPENDING AND FDI) AND (HOUSEHOLD SPENDING AND INCOME).....

Trend Analysis of Public Spending and FDI



Source: MEF and CDC

Trend Analysis of Household Spending and Household's Income



Source: CSES

5. Analysis of Public Spending Efficiency

.... WHICH WERE ATTRIBUTED TO CRITICAL CHALLENGES ...

Critical Challenges in Public Sector:

- (1) Lack of small irrigation scheme connected to rice field, farmers need to spend much money on water pumping.
- (2) Lack of farming technique caused farmers to apply inappropriate agriculture inputs;
- (3) Huge post harvest loss (around USD 300 million/year) due to inappropriate mechanization.
- (4) Lack of economies of scale due to small scale farms without proper organizing as community.

Critical Challenges Faced by Private Sector:

- (1) Lack of law enforcement and trust in agriculture land concession, and contract farming;
- (2) Relatively weak trade facilitation particularly in the aspects of business registration and numerous inspections done by government agencies;
- (3) Lack access to water and gap in water management at the local level
- (4) High cost of energy,
- (5) Weak supporting infrastructure, and
- (6) Lack of rural road connectivity

5. Analysis of Public Spending Efficiency

MACRO CHALLENGES OF PUBLIC SPENDING EFFICIENCY...



6.1. Conclusion

REMARKABLE IMPACT BUT QUESTIONABLE EFFICIENCY

Impact of Spending

Poverty Reduction, Improved Food Security, Increased Agriculture Commercialization, Created Job, Resilience to External Shock

Spending Efficiency

Decelerating sectorial growth, slower growth of productivity, slower income growth of household.

Resource Allocation

Prioritization of resources allocation—irrigation scheme, research and development (R&D), extension services and non-irrigation infrastructure.

Critical Challenges

Public Sector: Institutional capacity and coordination, linkage, slower productivity growth, weak commercialization and processing.
Private Sector: Trade facilitation, cost of doing business, and weak infrastructure.

6.1.Conclusion

INCREASE EFFICIENCY AND CREATING CONDUCTIVE BUSINESS ENVIRONMENT.....

Strategic Direction1

- **1. Increasing efficiency of public investment** by critically targeting to agriculture productivity under the constraint of limited resource endowment.

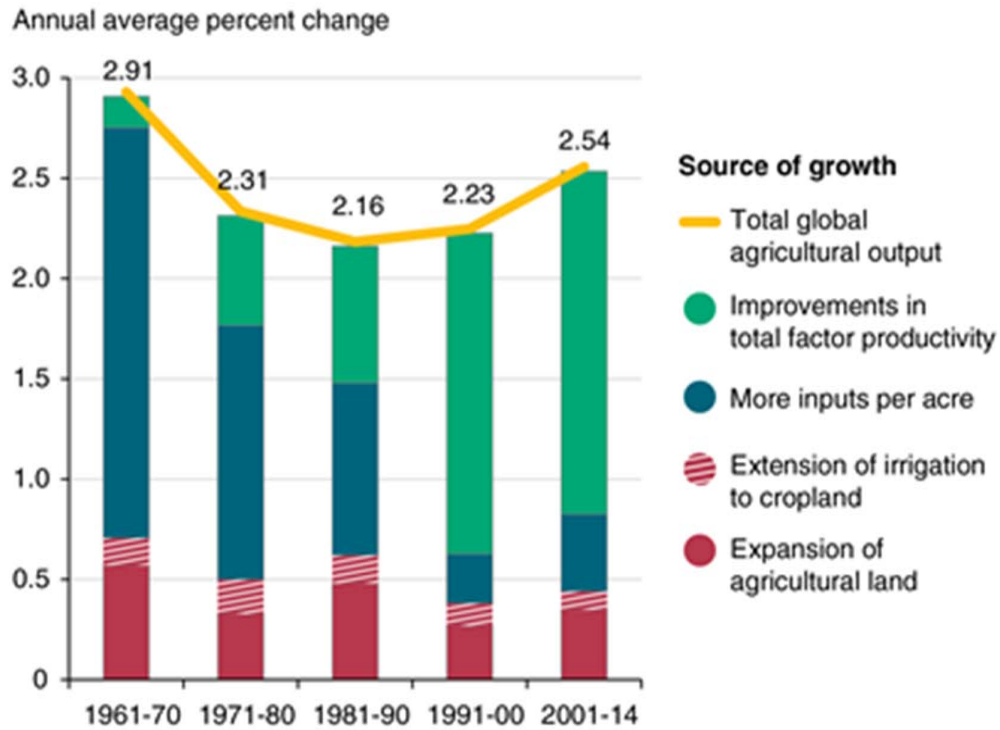
Strategic Direction2

- **2. Promoting public investment and implementing the institutional reform packages** which create the conducive environment for private sector to invest in agriculture sector specially downstream stage—agro processing and commercialization.

6.1.Conclusion

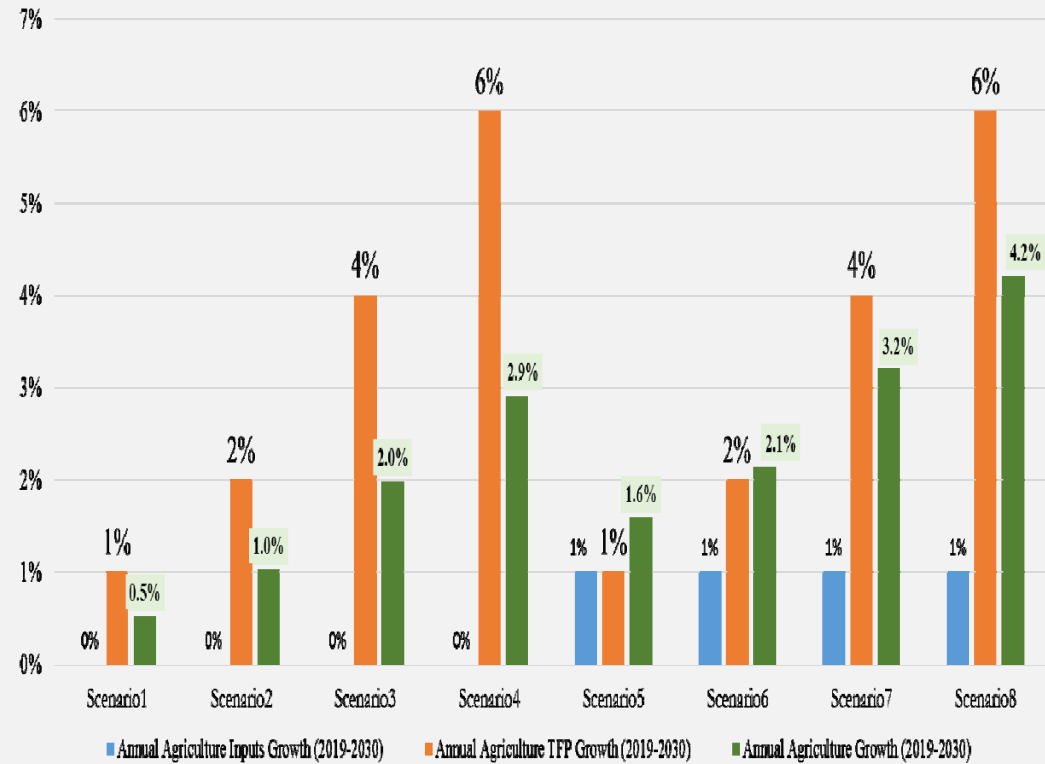
BOOSTING AGRICULTURE PRODUCTIVITY, ESPECIALLY TFP GROWTH IS THE KEY TO BOOST AGRICULTURE GROWTH.....

Sources of growth in global agricultural output, 1961-2014



Source: USDA

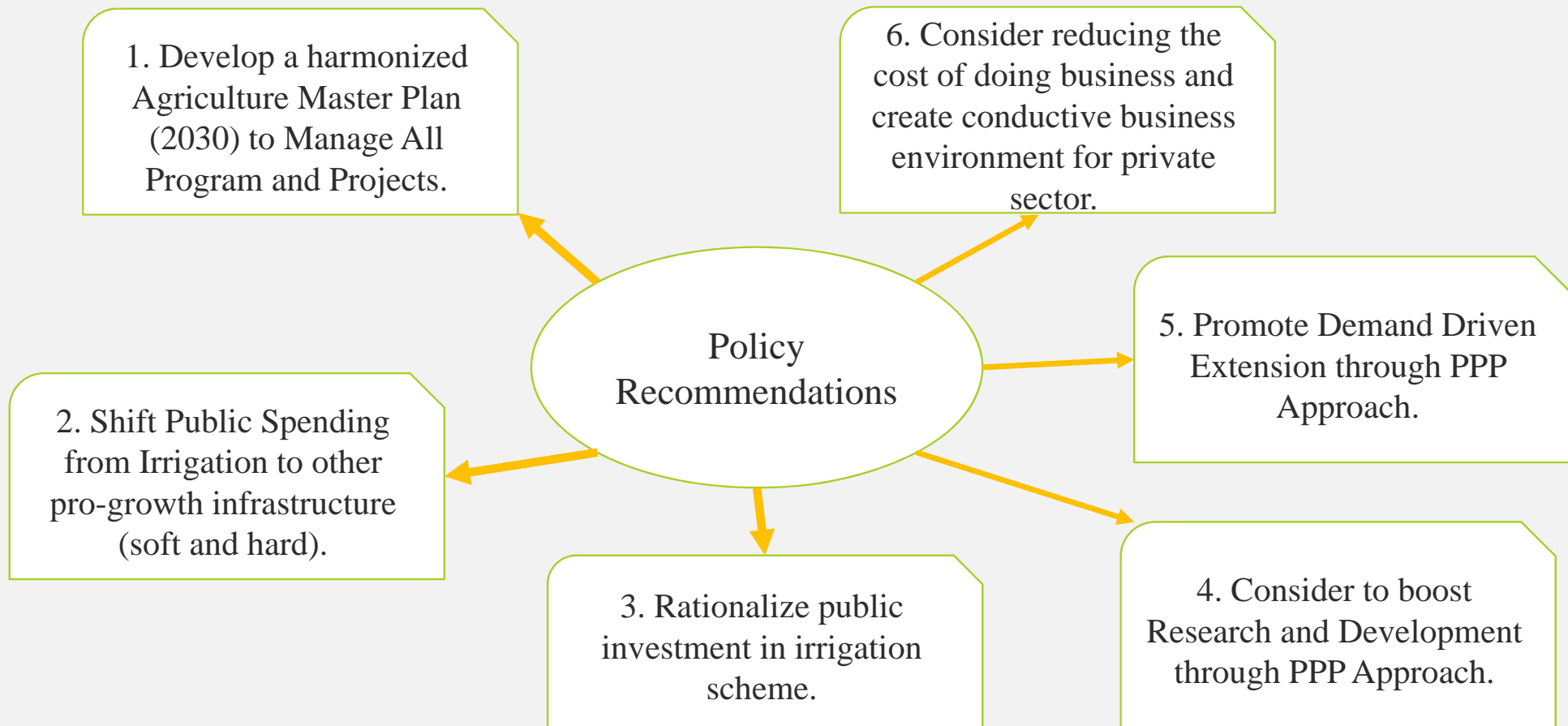
Simulated Annual Growth of Agriculture Sector with Different Scenarios



Source: Research Team's Estimate based on Data of USDA

6.2. Policy Recommendations

MODALITY OF PUBLIC SPENDING NEEDS TO BE REVISED.....



■ ANNEX

1. INCREASING EFFICIENCY OF PUBLIC INVESTMENT

- 1. **Shift the public investment from large scale irrigation scheme to small scale ones** in harmonized and well-coordinated manner; **doing rationalization of various irrigation projects**—eventually reprioritizing from paddy rice toward other potential crops such as vegetable, fruits, and other industrial crops; and **increase linkage of irrigation schemes** financed by government's budget, and development partners' budget.
- 2. **Increase the investment in strategic non-irrigation infrastructure and logistic system** to support the whole agriculture value chain such as warehousing, cool storage, regional quality laboratory facilities for both agriculture inputs and output inspections.

1. INCREASING EFFICIENCY OF PUBLIC INVESTMENT

3. Increase public investment in Research and Development (R&D) in good quality seeds—not only rice but also potential crops such as mango, cashew, cassava, corn, and other industrial crops, good quality fingerlings, and animal breeds, and other innovative modern farming technique, which are responding to the market demand.

4. Continue to increase public investment in market demand-driven agriculture extension services through PPP Approach by which the government agency (MAFF) develop consistent and innovative agriculture extension delivery framework, monitor, and assess the quality of extension services delivered to farmers, while the private sector and civil organizations, outsourcing from the government plays important roles to provide direct and targeted extension services to farmers.

1. INCREASING EFFICIENCY OF PUBLIC INVESTMENT

- **5. Further increase public investment in agriculture diversification** toward higher value added agriculture products with strong market demand.
- **6. Improve the quality of implementation** by strengthening the planning, institutional capacity and programs.

2. PROMOTING PUBLIC INVESTMENT AND IMPLEMENTING THE INSTITUTIONAL REFORM PACKAGES WHICH CREATE THE CONDUCTIVE ENVIRONMENT FOR PRIVATE SECTOR

- 1. Conduct the feasibility study of establish SME Special Economic Zone or SME Cluster for Agro Processing** based on the potential of respective region. The zones could be located in four regions—Region1 (Battambang, Pailin, Banteay Meanchey); Region2 (Kratie, Thbong Khmom, Steung Treng, Mondul Kiri and Rattanak Kiri), Region3 (Kampot, Kampong Speu, Takeo and Koh Kong), Region4 (Prey Veng, Kandal, Svay Rieng and Kampong Cham).
- 2. Promote sound agriculture business environment by improving trade facilitation** which is related to law enforcement of economic land concession scheme, business registration, inspection, quality certification, enhancing fair playing field among local and foreign investors, accelerating the enforcement of contract farming between private companies and farmers or agriculture cooperatives so that they could ensure the stability of raw material supply.

2. PROMOTING PUBLIC INVESTMENT AND IMPLEMENTING THE INSTITUTIONAL REFORM PACKAGES WHICH CREATE THE CONDUCTIVE ENVIRONMENT FOR PRIVATE SECTOR

- **(3) Further reduce the cost of doing business** by cutting the cost energy, improving the quality of infrastructure and connectivity, reducing logistic cost, and promoting affordable access to finance especially for smallholder farmers.

Thanks for Kind Attention